



Solaris Common Desktop Environment: User's Guide

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Contents

Preface	33
1 Basic Skills	39
Mouse Skills	39
▼ To Click	39
▼ To Double-Click	40
▼ To Drag	40
▼ To Duplicate	41
Desktop	42
CDE Desktop	42
Working With Files	43
Running Applications	45
Running Applications from the Front Panel	46
Running Applications from the Workspace Menu	46
Running Applications from Application Manager	46
Running Applications from Drop Zones on the Front Panel	47
Running Applications from File Manager	47
Running Applications from a Terminal Emulator Window	48
Working with Windows	48
Window Frame Controls	48
▼ To Open an Application Window (Mouse)	49
▼ To Open an Application Window (Keyboard)	50
▼ To Close an Application Window	50
▼ To Turn a Window into an Icon (Mouse)	50
▼ To Turn a Window into an Icon (Keyboard)	51

▼ To Restore a Window from an Icon (Mouse)	51
▼ To Restore a Window from an Icon (Keyboard)	51
▼ To Move a Window or Window Icon (Mouse)	51
▼ To Move a Window or Window Icon (Keyboard)	51
▼ To Resize a Window (Mouse)	52
▼ To Resize a Window (Keyboard)	52
▼ To Move a Window or Icon to the Foreground or Background (Mouse)	53
▼ To Move a Window or Icon to the Foreground or Background (Keyboard)	53
Copying and Pasting Text into Windows	53
Using Workspaces	54
▼ To Display Another Workspace (Mouse)	55
▼ To Display Another Workspace (Keyboard)	55
▼ To Place a Window in Other Workspaces (Mouse)	55
▼ To Place a Window in Other Workspaces (Keyboard)	56
▼ To Rename a Workspace (Mouse)	56
▼ To Rename a Workspace (Keyboard)	56
Using Controls in Application Windows	57
Push Buttons	57
Check Boxes and Radio Buttons	58
To Scroll the Contents of a Window	59
Selecting List Items	59
Text Fields	60
▼ To Edit Text in a Field (Mouse)	61
To Edit Text in a Field (Keyboard)	62
Using Menus	62
Window Menu	63
Workspace Menu	64
▼ To Choose a Workspace Menu Item	65
▼ To Choose a Window Menu Item (Mouse)	66
▼ To Choose a Window Menu Item (Keyboard)	66
▼ To Choose a Menu Item with the Mouse	66
▼ To Choose a Pull-Down Menu Item With the Keyboard	67
▼ To Choose a Pop-up Menu Item With the Keyboard	67
Using Tear-Off Menus	67
Basic Keyboard Skills	68
Leaving the Desktop	69
▼ To Log Out	69

▼ To Lock Your Display	70
Composing Special Characters	70
Euro Currency Symbol	71
Getting Help	72
Help Menu	73
▼ To Display the Help Manager	73
2 Starting a Desktop Session	75
Starting and Ending a Desktop Session	75
▼ To Log In to a Desktop Session	76
▼ To Log Out	76
▼ To Use a Session in a Different Language	76
Starting a Failsafe Session	77
▼ To Log In to a Failsafe Session	77
▼ To Log Out of a Failsafe Session	77
Starting a Command-Line Session	77
▼ To Log In to and Out of a Command-Line Session	77
Using a Home Session	78
▼ To Save a Home Session	78
▼ To Automatically Start the Home Session at Login	78
▼ To Choose between the Current and Home Session for Each Session	79
3 Getting Help	81
Requesting Help	81
Press F1 — The Help Key	82
Using an Application's Help Menu	82
Using Help Manager	83
Using Help Windows	85
Selecting Help Topics	87
Using the Topic Tree	87
Using Hyperlinks	88
Moving between Help Topics	89
Help Pop-up Menu	90
Location Indicators	90
Knowing Where You've Been	91
Searching for Specific Information	92

▼ To Search for Topics Using the Help Index	94
Browsing Help on Your System	95
▼ To Open Help Manager	95
▼ To Duplicate a Help Window	97
Displaying Documentation Online	98
Displaying a Man Page	99
▼ To Display a Man Page	99
Printing Help Topics	101
▼ To Print a Help Topic	101
Printing Configuration	102
Modifying Help Window Colors	103
▼ To Change Help Window Colors for an Application	103
4 Using the Front Panel	105
Front Panel Elements	106
Main Panel	106
Subpanels	106
The Workspace Switch	107
Basic Front Panel Skills	107
▼ To Activate a Front Panel Control	107
▼ To Open a Subpanel	107
▼ To Close a Subpanel	108
Front Panel Pop-Up Menus	109
Front Panel Drop Zones	112
Front Panel Help	113
▼ To Move the Front Panel or a Subpanel	113
▼ To Minimize the Front Panel	114
Tour of the Front Panel	114
Main Panel	115
Links Subpanel	118
Cards Subpanel	119
Files Subpanel	120
Applications Subpanel	123
Mail Subpanel	124
Personal Printers Subpanel	124
Tools Subpanel	125
Hosts Subpanel	127

Help Subpanel	128
Trash Subpanel	132
Front Panel Applications	132
Changing the Default Web Browser	132
▼ To Display a Different Clock	133
Working With Bookmarks	134
Using Find Web Page	135
Using Encryption	135
Using Compression	136
Using Archiving	137
Using Suggestion Box	137
Using Workstation Information	138
Customizing the Front Panel	138
▼ To Put a Subpanel Control in the Main Panel	139
▼ To Add an Application or Other Icon to a Subpanel	139
Adding and Removing Subpanels	140
▼ To Replace a Control in the Main Panel	140
▼ To Remove All User Customizations	141
Customizing Workspaces	141
▼ To Rename a Workspace	141
▼ To Add Workspaces	141
▼ To Remove Workspaces	142
▼ To Customize the Controls in the Workspace Switch	142
Front Panels and Multiple Screens	144
5 Managing Files with File Manager	145
Introducing the File Manager Window and Desktop	146
Basic File System Concepts	147
Files	147
Folders	147
Objects	148
Paths	148
Basic File Management Skills	149
Object Selection	150
▼ To Drag and Drop a File or Folder	151
▼ To Display a Pop-up Menu (Mouse)	152
▼ To Display a Pop-up Menu (Keyboard)	153

▼ To Rename a File or Folder (Mouse)	153
▼ To Rename a File or Folder (Keyboard)	154
▼ Getting Help on a File or Folder	154
▼ To View a File or Folder's Information	154
Opening a File or Folder	155
Manipulating Files and Folders	156
▼ To Create a New File or Folder	156
▼ To Move a File or Folder (Mouse)	157
▼ To Move a File or Folder (Keyboard)	157
▼ To Copy a File or Folder (Mouse)	157
▼ To Copy a File or Folder (Keyboard)	158
Symbolic Links	158
Navigating to Folders and Subfolders	159
▼ To Change to Another Folder	159
▼ To Go to Your Home Folder	160
▼ To Change to the Parent Folder	160
▼ To Open a Terminal Window in the Current Folder	160
Executing an Action for a File or Folder	160
▼ To Execute the Default Action	161
▼ To Execute Other Actions	161
Deleting Objects to the Trash Can	162
▼ To Open the Trash Can Window	162
▼ To Put an Object in the Trash Can	162
▼ To Put Back a File or Folder from the Trash Can	162
▼ To Delete a File or Folder Permanently	163
File and Folder Ownership and Security	163
Basic Permissions	163
Basic User Types	164
Examples	164
▼ To View a File or Folder's Permissions	165
▼ To Modify Basic Permissions	165
▼ To Change File or Folder Ownership	166
▼ To Browse and Edit Properties of Multiple Files and Folders	166
Access Control Lists	167
▼ To View an Access Control List	168
▼ To Add an Access Control List Entry	169
▼ To Change an Access Control List Entry	170

▼ To Delete an Access Control List Entry	171
Permissions Mask	175
▼ To Modify the Mask	175
Using File Manager Objects on the Desktop	176
Workspaces in the Desktop	176
Pop-up Menus	176
▼ To Put a File or Folder on the Workspace Backdrop	177
▼ To Display the Pop-up Menu for a Workspace Object (Mouse)	177
▼ To Display the Pop-up Menu for a Workspace Object (Keyboard)	177
▼ To Remove an Object from the Workspace	178
Using File Finder	178
▼ To Open File Finder	178
▼ To Find a File or Folder by Name	179
▼ To Find a File by Contents	182
Finding a File by File Properties	182
Customizing File Manager Views	184
▼ To Configure the Headers	184
▼ To Configure How Icons are Placed	185
Using the Tree View	185
▼ To Display the Tree View	187
▼ To Display the Folder View	187
▼ To Change How Objects Are Represented	187
▼ To Change the Order in Which Icons Are Sorted	188
▼ To Re-Sort (Clean Up) Objects	189
▼ To Save the Current Preferences as Your Default	189
Hiding Files and Folders	189
▼ To Show or Hide Files and Folders	189
▼ To Specify Which Data Types Are Hidden	190
Icon Browsing	190
▼ To Change the Icon Display Area Size	191
Using Removable Media with File Manager	192
Dragging and Dropping Files and Folders	192
Supported Formats	193
Removable Media Manipulation Skills	194
6 Using Removable Media Manager	197
Starting Removable Media Manager	197

Supported Media Classes	198
Viewing Additional Information About a Device	198
▼ To Change the Viewing Option	198
Properties	199
▼ To View the Properties of a Device	199
Formatting and Slicing Devices	200
▼ To Format a Device	200
▼ Creating Solaris Slices	201
To Protect a Device	202
▼ To View a Device's Protection	202
▼ To Disable Protection	202
▼ To Enable Protection	202
▼ To Change Your Password	204
7 Using Window Manager Enhancements	205
Graphical Workspace Manager	205
Starting the Graphical Workspace Manager	206
Graphical Workspace Manager Tasks	207
▼ To Add a Workspace	207
▼ To Delete a Workspace	208
▼ To Rename a Workspace	208
▼ To Switch to a Different Workspace	208
▼ To Cascade All Windows in a Workspace	208
▼ To Tile All Windows in a Workspace	208
▼ To Open the Options Dialog	209
▼ To Minimize a Window	209
▼ To Close a Window	209
▼ To Terminate an Application	210
▼ To Move a Window to a Different Workspace	210
▼ To Occupy Workspace(s)	210
▼ To Unoccupy Workspace	210
Graphical Workspace Manager Options Dialog	210
Window List	212
Starting the Window List	212
Performing Window List Tasks From the Window Menu	213
Performing Window List Tasks from the Option Menu	216
Window List Options	217

Workspace Manager	218
Starting Workspace Manager	219
Using Workspace Manager Controls	220
▼ To Display the Workspace Switch Area on the Front Panel	220
▼ To Synchronize Workspaces Across Screens	220
▼ To Set the Number of Workspaces	220
▼ To Restore the Default Settings	220
8 Using Application Manager	221
To Open Application Manager	221
Application Manager Windows	222
Menus and Commands	224
To Run an Application	224
Setting up Applications	225
▼ To Put an Application Icon in the Front Panel	225
▼ To Put an Application Icon on the Workspace Backdrop	226
▼ To Create a Personal Application Group	227
▼ To Add Applications to a Personal Application Group	227
▼ To Update Application Manager	227
Advanced Application Manager Concepts	228
File Names in Application Manager	228
Folder Location of Application Manager	228
Creating Personal Actions and Data Types	229
Registering Applications	231
9 Customizing the Desktop Environment	233
Introducing Style Manager	234
Customizing Screen Appearance	235
Color Palettes and Color Flashing	235
Fonts	241
Backdrops	243
Customizing System Behavior	244
▼ To Change Keyboard Behavior	244
▼ To Change Mouse Behavior	245
▼ To Change Beep Settings	246
Screen without Lock Extensions	246

Screen with Lock Extensions	248
Windows	249
Customizing Startup and Logout	250
▼ To Change How Your Next Session Starts	251
▼ To Set a Home Session	251
▼ To Set Your Logout Confirmation Preference	252
10 Using Mailer	253
Starting Mailer	253
Logging In to Your IMAP Inbox	255
Using the Mailer Main Window	255
Viewing Your Mail Messages	256
▼ To Read a Mail Message	257
▼ To Change the Character Set of an Incoming Message	257
Sorting Mail Messages	258
Acting on Your Mail Messages	258
▼ To Reply to a Message	258
▼ To Forward a Message	259
▼ To Edit an Incoming Message	259
▼ To Save an Incoming or an Outgoing Message as Text	259
▼ To Append a Message to A Text File	260
▼ To Delete a Mail Message	260
▼ To Undelete a Mail Message	260
▼ To Destroy Deleted Messages When Closing the Mailbox	261
Searching for Mail Messages Within a Mailbox	261
Using Views	266
Sending Mail Messages	268
Using Aliases	268
▼ To Address, Compose, and Send a Mail Message	269
To Change the Character Set of an Outgoing Message	271
Using a Template to Compose a Mail Message	272
Using a Draft to Compose a Mail Message	273
▼ To Include Multiple Messages in a New Message	274
▼ To Include a Text File in a Mail Message	275
Using a Signature	275
▼ To Create an Automatic Reply (Vacation Message)	276
Sending Mail Messages in MIME or Sun Mail Tool Format	277

Editing and Formatting Outgoing Messages	278
Editing Text	278
Formatting Text	279
▼ To Find or Change Text	280
▼ To Check Spelling	280
Creating and Using Mailboxes	281
▼ To Create a Mailbox	281
▼ To Rename a Mailbox	281
▼ To Open a Mailbox	282
▼ To Close a Mailbox	282
Filing Messages in Other Mailboxes	282
▼ To Delete a Mailbox	283
▼ To Change the Default Mailbox Directory	284
Customizing the Open, Move, and Copy To Menus	284
Printing Mail Messages	285
▼ To Print a Copy of a Message with Default Options	285
▼ To Print a Message with Specific Options	286
▼ To Print a Message Using Drag and Drop	286
Working with Attachments	286
▼ To View an Attachment	287
▼ To Print an Attachment	287
▼ To Add an Attachment	287
▼ To Save an Attachment to Your File System	288
▼ To Attach a File from File Manager	288
▼ To Attach a Calendar Appointment	289
Customizing Mailer	289
▼ To Display Message Numbers in Your Mailbox	290
▼ To Change the Character Marker for Included Text in a Reply	290
▼ To Set How Often Mailer Checks for Messages	290
▼ To Add Custom Fields to the Format Menu	290
▼ To Customize Mail Notification	291
Configuring the Appearance of the Toolbar	291
Using the File Selection Dialog Box	292

11 Printing 295

Your Default Printer	295
▼ To Determine the Default Printer	295

▼ To Change the Default Printer	296
Printing Files	296
Submitting a File to a Printer	297
▼ To Print Using the Front Panel	297
▼ To Print Using File Manager	298
▼ To Print Using Print Manager	298
Setting Print Options Using the Print Dialog Box	299
Printer Applications	300
Print Manager	300
Printer Jobs Application	302
Displaying Print Job Information	303
▼ To Open a Printer Icon	303
▼ To Close a Printer Icon	303
▼ To Find a Print Job	303
▼ To Cancel a Print Job	304
Print Job Properties	304
Printers and the Front Panel	305
▼ To Change the Front Panel Printer	306
▼ To Add a Printer to the Personal Printers Subpanel	306
Changing the Print Manager Display	306
▼ To Change How Printers and Print Jobs Are Displayed	307
▼ To Change the Update Frequency	307
▼ To Determine Which Jobs Are Displayed	307
▼ To Display the Print Manager Message Line	308
▼ To Display the Print Manager Problem Flag	308
▼ To Determine Which Printers Are Shown	308
Printer Properties	309
▼ To Show a Printer's Properties	309
▼ To Change a Printer's Icon	309
▼ To Change a Printer's Icon Label	310
12 Using Text Editor	311
Opening and Closing Text Editor	311
▼ To Open Text Editor	312
▼ To Close Text Editor	312
Text Editor Window	313
▼ To Display the Status Line	314

Opening and Saving Documents	314
▼ To Create a New Document	314
▼ To Save a Document to a New File	315
▼ To Save a Document to the Original File	316
Opening an Existing Document	316
Working with Backup Versions	318
Entering Text	319
▼ To Enter New Text	319
Using Wrap To Fit	319
Entering Special Characters	320
Moving the Cursor in a Document	320
▼ To Go to a Specific Line	321
▼ To Scroll a Document	321
Selecting Text	322
▼ To Select Text with the Mouse	322
Secondary Selection	322
▼ To Select Text with the Keyboard	323
Editing Text	324
Editing Keys	324
Menu Shortcut Keys	324
UNIX Key Bindings	325
▼ To Set Overstrike Mode	325
▼ To Type Over Text	326
▼ To Delete Text	326
▼ To Clear Text	326
▼ To Undo an Edit	326
▼ To Copy Text	327
▼ To Move Text (Cut and Paste)	327
▼ To Include a File	327
Correcting Misspelled Words	328
▼ To Correct Misspelled Words	329
Customizing Spelling Checker Dictionaries	331
Using Drag and Drop	335
▼ To Move Text Using Drag and Drop	335
▼ To Copy Text Using Drag and Drop	335
▼ To Include a File Using Drag and Drop	335
Searching a Document	336

▼ To Find Text	336
▼ To Find and Change Text	337
▼ To Find and Delete Text	337
Formatting and Printing Documents	337
▼ To Format a Document	338
▼ To Print an Open Document	338
▼ To Print a Closed Document	339
Recovering a File	340
▼ To Recover a File	340
Text Editor and Other Applications	340
Using Text Note	341
▼ To Type a Text Note	341
▼ To Put a Note on the Workspace	342
▼ To Remove a Note from the Workspace	342
File Naming	342
13 Using Calendar	343
Calendar Startup	343
Calendar Main Window	345
Calendar Tool Bar	345
Calendar Views	347
Day View	347
Week View	348
Month View	349
Year View	350
Appointments	351
▼ To Schedule a Basic Appointment	351
▼ To Set Appointment Options	352
▼ To Change an Appointment	353
▼ To Delete an Appointment	353
▼ To Find an Appointment	353
▼ To View an Appointment List	354
To Do Items	355
▼ To Insert a To Do Item	356
▼ To Change a To Do Item	356
▼ To Delete a To Do Item	356
▼ To View a To Do List	357

Marking To Do Items Completed	358
Printing Calendars, Appointment, or To Do Lists	358
▼ To Print Current Day, Week, Month, or Year Views	359
▼ To Print Your Appointment or To Do List	359
▼ To Change the Print Options for a Single Print Job	359
Browsing Calendars on a Network	360
▼ To Add or Delete Calendars in the Browse List	360
▼ To Determine Whether You Have Access to Other Calendars	361
Scheduling Appointments on Other Calendars	361
▼ To Schedule a Group Appointment	362
▼ To Mail Reminders to a Group Using Calendar	362
▼ To Create an Appointment Message Using a Mail Program	363
▼ To Drag an Appointment From Mailer to Calendar	364
▼ To Drag an Appointment From File Manager to Calendar	364
▼ To Drag an Appointment From Calendar to Mailer	365
▼ To Drag an Appointment from Calendar to File Manager	365
Customizing Calendar	366
▼ To Change Appointment Editor Defaults	366
Changing the Display Settings	367
Changing Access and Permissions	368
▼ To Change the Printer Settings for Future Print Jobs	372
▼ To Change the Date Format	373
▼ To Change the Default Time Zone	373
Other Calendar Tools	373
sdtcm_admin	374
sdtcm_convert	375
dtdcm_editor	377
dtdcm_lookup	378
dtdcm_insert	379
dtdcm_delete	379
Using Federated Naming with Calendar	380
Calendar Naming	380
Calendar Registration	381
Naming Service Dependencies	381
Build Dependencies	381
Runtime Dependencies	381

14	Using Terminal	383
	Default Desktop Terminal Emulator	383
	Starting a Terminal Window	384
	▼ To Close a Terminal Window	387
	Using a Terminal Window	388
	▼ To Start Applications in a Terminal Window	388
	▼ To Enter a Command	388
	▼ To Copy and Paste Text	389
	▼ To Resize the Window Contents	389
	Running dtterm on Another System	389
	Using the -display Option	390
	Using rlogin	390
	Using remsh	390
	Using the Terminal menu item in Address Manager	391
	Customizing dtterm	391
	Displaying the Menu Bar	391
	Displaying the Scroll Bar	392
	dtterm Global Options	393
	dtterm Terminal Options	398
	Terminal Control Characters	402
	▼ To Set Terminal Control Characters	403
	Changing the Default Terminal Emulator	403
15	Using Icon Editor	405
	Introducing Icon Editor	405
	Startup	406
	Basic Drawing Tasks	407
	▼ To Open an Existing Icon	407
	▼ To Start a New Icon	408
	▼ To Clear an Icon	408
	▼ To Draw an Image	408
	Drawing Tools	409
	▼ To Undo a Drawing Operation	410
	Saving Icon Files	411
	Icon Size Conventions	411
	▼ To Save the Icon	412
	▼ To Save the Icon with a New Name	412

Color Usage	412
Advanced Drawing Tasks	413
▼ To Select an Area of the Icon	413
▼ To Cut a Region of the Icon	414
▼ To Copy a Region of the Icon	414
▼ To Move a Region of the Icon	414
▼ To Rotate Part of the Icon	415
▼ To Flip (Mirror) Part of the Icon	415
Resizing Icons	415
Hotspots	416
Screen Captures	416
Modifying the View of an Icon	417

16 Using Image Viewer 419

Starting and Quitting Image Viewer	419
▼ To Start Image Viewer from the Workspace Programs Menu	420
▼ To Start Image Viewer from Application Manager	420
▼ To Start Image Viewer from the Command Line	420
▼ To Exit Image Viewer	421
Viewing Images	421
▼ To Open an Image File	421
▼ To Open an Image File Using Drag and Drop	421
▼ To View an Image in Gray Scale or Color	422
▼ To Move the Image within the View Window	422
▼ To Change an Image Orientation in the View Window	422
▼ To Display Information about an Image	423
Editing Images	423
Using the Palette Tools	424
▼ To Display the Palette Automatically	424
▼ To Select a Region to Save as a New File	425
▼ To Rotate an Image	426
▼ To Flip an Image	426
▼ To Scale an Image	427
▼ To Undo an Edit Operation	427
Saving Images	427
▼ To Save an Edited Image in the Same File	428
▼ To Save an Image as a New File	428

Viewing PostScript Files	428
▼ To Open a PostScript File from the File Menu	429
▼ To Open a PostScript File Using Drag and Drop	429
▼ To View a PostScript File in Black and White or Color	429
▼ To Page through a PostScript File	430
▼ To View a Specific Page of a PostScript File	430
▼ To Reverse Page Order	431
▼ To Change the Size of the Displayed Page	431
▼ To Save a PostScript Page as a Bitmap Image	432
Printing	432
Print Dialog Box	432
▼ To Print (With Options)	434
▼ To Preview a File to Be Printed	434
▼ To Print a Document	435
▼ To Print a Page from a Document	435
▼ To Print an Image File	435
Image Viewer File Formats	435
Using Snapshot	437
▼ To Start Image Viewer Snapshot	437
▼ To Take a Snapshot of a Window	437
▼ To Take a Snapshot of a Region	438
▼ To Take a Snapshot of the Screen	438
▼ To Take a Delayed Snapshot	438
▼ To Hide the Snapshot Dialog Box While Taking a Snapshot	439
▼ To Save a Snapshot	439

17 Using Video and Audio 441

Video	442
Overview	442
Java Media Player Main Window	442
Supported Media Formats	445
Using the Java Media Player	447
Starting and Quitting Audio	450
▼ To Start Audio From the Front Panel	450
▼ To Start Audio From the Command Line	450
▼ To Start Audio From the Workspace Programs Menu	451
▼ To Exit Audio	451

Audio Main Window	451
Voice Notes	452
Displaying the Waveform Window	453
▼ To Display the Waveform Window	453
▼ To Start Audio With the Waveform Displayed	453
Opening and Playing Audio Files	454
▼ To Open an Audio File	454
▼ To Open an Audio File With Drag and Drop	455
▼ To Specify Play Options	455
▼ To Play an Audio File	457
Recording With Audio	458
▼ To Specify Record Options	458
▼ To Create a Recording	460
▼ To Save an Audio File or a Recording	461
▼ To Specify Input and Output Device Options	461
▼ To Display Information About an Audio File	464
Audio Control	465
Menus	465
Using the Tabs	467
Master Output	468
Controlling Master Recordings	469
Controlling the Master and Application Output	470
Recording Using the Master and Application Input	471
Using the Status Dialog	472
18 Using Address Manager	477
Cards	477
Items on the Search Menu	477
To Open Address Manager	483
Searching	484
▼ To Find an Address Card	485
▼ To Find a Host Card	486
▼ To Find an Alias Card	487
Performing Actions on Cards	487
Performing Actions on Address Cards	487
Performing Actions on Alias Cards	488
Performing Actions on Host Cards	489

Working With Cards	491
▼ To Create a Personal Address Card	491
▼ To Create a Personal Alias Card	492
▼ To Edit a Personal Address Card	493
▼ To Put a Card on the Workspace	493
Printing Cards	494
Browsing Your Card Folders	494

19 Using Process Manager 495

About Processes	495
Tips for Finding Errant Processes	495
Sampling, Displaying, and Saving Process Information	496
▼ To Open Process Manager	497
▼ To Display Subsets of the Processes	497
▼ To Find a Process	498
▼ To Change the Sort Order of the Display	498
▼ To Change the Sampling Interval	499
Copying and Saving	500
Performing Actions on a Selected Process	501
Sending Kill Signals to a Process	501
▼ To Look Up the Owner of a Process	503
▼ To Show the Ancestry for a Process	503
▼ To Trace Child Processes	504
▼ To Trace System Calls	505
▼ To Show the Stack for a Process	505
▼ To Debug a Process	506

20 Using Performance Meter 507

To Open Performance Meter	507
Choosing the Host and Parameters to Display	508
▼ To Specify the Host to Be Monitored	509
▼ To Change the Parameters Displayed	509
Choosing How the Parameters Are Displayed	510
▼ To Show/Hide the Menu Bar	510
▼ To Show/Hide the Line Chart or Area Chart	510
▼ To Change the Orientation of the Charts	511

	▼ To Choose Line Charts or Area Charts	511
	Working With Colors and Thresholds	512
	▼ To Change Chart Colors	512
	▼ To Change the Threshold Value for a Parameter	513
	Logging Samples and Choosing the Sample Interval	513
	▼ To Save Sample Information to a Log File	514
	▼ To Change the Sample Interval	514
21	Using Hotkey Editor	515
	To Start Hotkey Editor	515
	Creating a Hotkey	517
	To Create a Hotkey for an Application, Action, or Document	517
	To Create a Hotkey for a Workspace Management Function	520
	To Create a Hotkey for a Multi-Monitor Management Function	521
	Editing a Hotkey	523
	To Edit a Hotkey for an Application, Action, or Document	523
	To Edit a Hotkey for a Workspace Management Function	524
	To Edit a Hotkey for a Multi-Monitor Management Function	526
	Deleting and Recovering Hotkeys	527
	To Delete a Hotkey	527
	To Undo the Previous Action	527
	To Redo the Previous Action	527
	To Revert to a Previous Hotkey	527
22	Using Personal Digital Assistant (PDA) Synchronization	529
	Accessing PDA Sync Software	529
	Configuring Synchronization	530
	Setting Synchronization Properties	531
	Configuring Conduits	531
	Calendar	532
	Memo	533
	Address	535
	System	535
	Mail	536
	Installer	538
	Adding a Conduit	539

Configuring the Log	541
Viewing the Log	543
Printing the Log	544
Starting Synchronization	544
Checking Status	545

23 Power Management 547

Value of Power Management	547
Types of Power Management	548
Device Power Management	548
Suspend-Resume	548
Hardware Support for Power Management Features	549
Power Management Features on Different Hardware Systems	549
System Architecture Distinctions and Default Settings	550
Power Management Software	551
Dtpower Software	551
Basic Dtpower Settings and Configurations	552
Accessing Dtpower	552
Overview of the Dtpower GUI	553
Power Saving Schemes	554
Customizing Power Schemes	555
Power Management of Overall System	556
Power Management of Monitors	557
Power Management of Disk Drives	559
Using the Suspend-Resume Feature	560
Choosing to Use Suspend-Resume	560
Suspending and Resuming Your System Manually	562
System AutoShutdown and AutoWakeup Controls	568
Troubleshooting Power Key Problems	572
Troubleshooting Suspend Failures	572
Troubleshooting a Shortage of Disk Space	576
Disabling the Screen Lock	577

A Keyboard Shortcuts for the Desktop 579

Menu Shortcuts	579
Keyboard Focus and the Highlight	580

Moving the Keyboard Focus	580
Opening and Closing Windows	581
▼ To Open an Application Window	582
▼ To Close an Application Window	582
▼ To Select a Window or Icon	583
▼ To Turn a Window into an Icon (Minimize)	583
▼ To Restore a Window from an Icon	583
▼ To Move a Window or Window Icon	583
▼ To Resize a Window	584
▼ To Scroll a Window's Contents	584
▼ To Select a List Item	584
▼ To Display a Pull-down Menu	585
▼ To Use a Pop-up Menu	585
▼ To Use the Window Menu	585
▼ To Switch to Another Workspace	585
▼ To Rename a Workspace	586
▼ To Move among Windows	586
▼ To Display a Window in Other Workspaces	586
▼ To Choose a Front Panel Control	587
▼ To Choose a Subpanel Control	587
▼ To Move the Front Panel	587
Online Help Keyboard Navigation	588
▼ To Get Help in Any Window	588
▼ To Choose a Help Topic Hyperlink	588
B Running Localized Sessions	589
Default Language at Login	589
Logging In to a Language-Specific Session	590
Creating or Editing a Language-Specific File	590
▼ To Create or Edit a Language-Specific File	590
Using a Language-Specific Terminal Emulator	591
Specifying Fonts	591
Font Specification	592
Font Set Specification	592
Changing Fonts	592
▼ To Specify Fonts from the Command Line	593
▼ To Specify Fonts within a Resource File	593

Choosing Your Input Method and Keyboard	594
Using Input Method Modifiers	594
Specifying the Input Method Style	594
Changing the X Keyboard Map at the Server	595

C Compose Key Sequences 597

D Locale Notes 603

Thai Locale	603
CDE 1.3 Library Features	604
Thai Text Manipulation	604
Thai Fonts	607
Printing	609
Hebrew Locale	613
Typing Hebrew Text	614
Editing Hebrew Text	614
Printing Hebrew Text	614

E Access for Users With Disabilities 617

Starting AccessX	618
AccessX Windows	618
The AccessX Main Window	618
Displaying the Status of Buttons and Keys	619
Getting a Beep When a Feature is Turned On or Off	620
Setting the Automatic Shutoff Timer	620
Getting On-Line Help	621
The Settings Window	621
Individual Features	622
StickyKeys	622
MouseKeys	624
ToggleKeys	626
RepeatKeys	626
SlowKeys	627
BounceKeys	628
Keystrokes for AccessX Features	629

Glossary 631

Index 647

Figures

FIGURE 1-1	CDE Desktop	42
FIGURE 1-2	Location of Files Subpanel	43
FIGURE 1-3	Front Panel and Application Manager	46
FIGURE 1-4	Window Frame Controls	49
FIGURE 1-5	Workspace Menu with Applications Submenu Displayed	64
FIGURE 1-6	Euro Currency Symbol	71
FIGURE 3-1	CDE application Help menu	82
FIGURE 3-2	Help Manager control	83
FIGURE 3-3	Help Subpanel	85
FIGURE 3-4	Types of help windows	85
FIGURE 3-5	Resizing the topic tree	88
FIGURE 3-6	Hyperlink formats	89
FIGURE 3-7	Help pop-up menu	90
FIGURE 3-8	History dialog box	91
FIGURE 3-9	Index Search dialog box	92
FIGURE 3-10	Top-level view in Help Manager	95
FIGURE 3-11	File Manager help viewed in Help Manager	97
FIGURE 3-12	Man Page action icon	99
FIGURE 4-1	Main Panel and an Open Subpanel	106
FIGURE 5-1	Drag icon showing the object being dragged	151
FIGURE 5-2	Sample Pop-up Menu	153
FIGURE 5-3	File Finder With All Search Criteria Displayed	183
FIGURE 5-4	File Manager Tree View	185
FIGURE 5-5	Icon with Icon Browsing Enabled (Left) and Disabled (Right)	190
FIGURE 7-1	Graphical Workspace Manager Main Screen	205
FIGURE 7-2	Graphical Workspace Manager – Workspace Menu	207

FIGURE 7-3	Graphical Workspace Manager — Window Menu	209
FIGURE 7-4	Graphical Workspace Manager Options Dialog Box	210
FIGURE 7-5	Window List Main Screen	212
FIGURE 7-6	Window List Window Menu	214
FIGURE 7-7	Window List Option Menu	216
FIGURE 7-8	Window List – Options Dialog	217
FIGURE 7-9	Workspace Manager Main Screen	219
FIGURE 8-1	Application Manager control	221
FIGURE 8-2	Personal Applications Group in Applications Manager	222
FIGURE 8-3	Action (Application) Icons in the Desktop_Apps Application Group	223
FIGURE 8-4	Opening an Application Window from Application Manager	224
FIGURE 8-5	Installing an Application (Action Icon) in the Front Panel	226
FIGURE 8-6	Create Action Window	229
FIGURE 9-1	Style Manager Front Panel control	234
FIGURE 9-2	Style Manager controls	234
FIGURE 9-3	Number of Colors Dialog Box	235
FIGURE 10-1	Mailer icon showing new mail	253
FIGURE 10-2	Mailer icon showing read mail	254
FIGURE 10-3	Mailer icon showing no mail	254
FIGURE 10-4	Mailer main window	255
FIGURE 10-5	Mailer Search dialog box	264
FIGURE 10-6	Mailer Compose window	269
FIGURE 10-7	Mailer Find/Change dialog box	280
FIGURE 10-8	Example of an attachment icon	287
FIGURE 10-9	File Selection dialog box	292
FIGURE 12-1	Text Editor window	313
FIGURE 12-2	Save As dialog box	315
FIGURE 12-3	Open a File dialog box	316
FIGURE 12-4	Document file icon	317
FIGURE 12-5	Include a File dialog box	328
FIGURE 12-6	Spell dialog box - Version 1	329
FIGURE 12-7	Spelling Checker dialog box - Version 2	330
FIGURE 12-8	Personal Dictionary dialog box	331
FIGURE 12-9	Personal Dictionary Import dialog box	332
FIGURE 12-10	Personal Dictionary Export dialog box	333
FIGURE 12-11	Main Dictionary dialog box	334
FIGURE 12-12	Find/Change dialog box	336

FIGURE 12-13	Format Settings dialog box	338
FIGURE 12-14	Print dialog box	339
FIGURE 12-15	Text Editor with modified File menu	340
FIGURE 13-1	Access List and Permissions dialog box – Version 1	368
FIGURE 13-2	Access List and Permissions dialog box – Version 2	370
FIGURE 15-1	Icon Editor main window	405
FIGURE 15-2	Icon Editor drawing tools	409
FIGURE 16-1	Image Viewer icon	420
FIGURE 16-2	Image Information dialog box	423
FIGURE 16-3	Palette dialog box	424
FIGURE 16-4	Print dialog box	432
FIGURE 16-5	Snapshot window	437
FIGURE 18-1	Alias Menu in the New Message Window in Mailer	482
FIGURE 18-2	Address Manager Application Window.	483
FIGURE 18-3	Actions Menu for an Address Card	487
FIGURE 18-4	Actions Menu for an Alias Card	488
FIGURE 18-5	Actions Menu for a Host Card	489
FIGURE 19-1	Process Manager showing process entries containing the string “audio”.	496
FIGURE 20-1	Performance Meter Displaying All Parameters	510
FIGURE 22-1	Configuring Synchronization	530
FIGURE 22-2	Setting Synchronization Properties	531
FIGURE 22-3	Configuring Conduits	531
FIGURE 22-4	Configuring the Calendar Conduit	532
FIGURE 22-5	Configuring the Memo Conduit	533
FIGURE 22-6	Configuring the Address Conduit	535
FIGURE 22-7	Configuring the System Conduit	536
FIGURE 22-8	Configuring the Mail Conduit	537
FIGURE 22-9	Configuring the Installer Conduit	538
FIGURE 22-10	Adding an Application	539
FIGURE 22-11	Adding a Conduit	539
FIGURE 22-12	Importing a Conduit	540
FIGURE 22-13	Associating Conduits	540
FIGURE 22-14	Configuring the Log	541
FIGURE 22-15	Configuring the Log Properties	541
FIGURE 22-16	Viewing the Log	543
FIGURE 22-17	Printing the Log	544
FIGURE 22-18	Naming Your PDA	544

FIGURE 22-19	Assigning Your PDA a Password	545
FIGURE 22-20	Checking Synchronization Status	545
FIGURE 23-1	The Dtpower Icon	552
FIGURE 23-2	The Dtpower Basic Window	553
FIGURE 23-3	Pulldown List of Power Saving Schemes	555
FIGURE 23-4	The Dtpower Basic Window	556
FIGURE 23-5	Quick Edit Tab	556
FIGURE 23-6	Pull-Down List for Disks Idle Time	558
FIGURE 23-7	Example of Power Key Location on Sun Type 5 and Type 6 Keyboards	564
FIGURE 23-8	Power Key Location on Sun Compact 1Keyboard	564
FIGURE 23-9	Default Confirmation Window for Power Key Suspend	564
FIGURE 23-10	Default Confirmation Window for Standby Switch	566
FIGURE 23-11	Autoshutdown Configuration for All Day	568
FIGURE 23-12	Autoshutdown Window	569
FIGURE 23-13	Suspend Failed Pop-up Window	572
FIGURE 23-14	Power Off Failed Pop-up Window	574
FIGURE D-1	Logical Buffer and Display Before Text Insertion	605
FIGURE D-2	Logical Buffer and Display After Text Insertion	605
FIGURE D-3	Logical Buffer and Display Before Text Deletion	605
FIGURE D-4	Logical Buffer and Display After Text Deletion	606
FIGURE E-1	The AccessX Main Window	618
FIGURE E-2	The Status Menu	620
FIGURE E-3	The Help Menu	621
FIGURE E-4	The AccessX Settings Window	621
FIGURE E-5	Mouse Button Equivalents for a Numeric Keypad	624

Preface

Solaris Common Desktop Environment: User's Guide describes the basic features of the Common Desktop Environment (CDE). It describes how to use the desktop and desktop applications.

Note – In this document the term “IA” refers to the Intel 32-bit processor architecture, which includes the Pentium, Pentium Pro, Pentium II, Pentium II Xeon, Celeron, Pentium III, and Pentium III Xeon processors and compatible microprocessor chips made by AMD and Cyrix.

Who Should Use This Book

This book is intended for users who have Solaris Common Desktop Environment installed on their workstation and who plan to use it as their default desktop. To use this book, you should also be familiar with a three-button mouse, graphical user interfaces, and typing commands at a command-line prompt.

Before You Read This Book

You should first read the following book:

- *Solaris Common Desktop Environment: User's Transition Guide*

How This Book Is Organized

This book contains the following chapters:

- Chapter 1 describes the basic skills you need to work with the Common Desktop Environment, keyboard navigation, and some common interface aspects of the desktop.
- Chapter 2 describes how to log in to and out of the desktop, and how to set the session that will appear at login.
- Chapter 3 explains how to get help about an application and how to navigate within the help viewer.
- Chapter 4 describes the Front Panel, a special desktop window that contains a set of controls for doing common tasks. It explains the Front Panel controls and how to customize the Front Panel.
- Chapter 5 explains how to work with files and folders in the graphical user interface File Manager. It describes basic skills, navigation, manipulating and finding files and folders, and the Trash Can.
- Chapter 8 explains how to run applications using Application Manager, the main repository for applications in CDE.
- Chapter 9 explains how to use Style Manager to customize the look and behavior of your desktop. It also describes how to set personal environment variables.
- Chapter 10 describes how to send and receive electronic mail messages through Mailer, and how to add and retrieve attachments.
- Chapter 11 explains how to print through the desktop, and how to change the default printer.
- Chapter 12 describes the desktop Text Editor, which you can use to create and edit short documents such as memos, mail messages, or resource files.
- Chapter 13 explains how to use Calendar to set appointments for yourself or a group, and how to create To Do lists.
- Chapter 14 explains how to display and customize terminal emulator windows on the desktop.
- Chapter 15 explains how to create files for use as desktop icons or backdrops.
- Chapter 16 describes how to capture snapshots and to view, edit, print, and translate the file formats of monochrome and color images and multiple page documents such as PostScript files.
- Chapter 17 describes how to use Audio to record or play audio files.
- Chapter 18 describes how to find cards containing information about users, hosts, and systems, and how to perform related actions.

- Chapter 19 describes how to display the process running on your workstation, and how to investigate and kill these processes.
- Chapter 20 describes how to monitor activity levels on your system, and how to identify errant behavior.
- Chapter 21 describes how to use the Hotkey Editor to create, modify, or delete CDE hotkeys.
- Chapter 22 describes how to synchronize your PDA with your desktop information.
- Appendix A describes desktop keyboard navigation
- Appendix B describes how to change the language for your desktop session, and how to change fonts for different languages.
- Appendix C lists the keyboard commands needed to compose special characters (for the ISO Latin-1 code set only).
- Appendix D describes the display, manipulation, and printing of text using CDE and the Thai and Hebrew locales.
- Glossary is a list of words and phrases found in this book and their definitions.

Related Books

Once you've read this book, you may want to read more detailed information on the desktop in *Solaris Common Desktop Environment: Advanced User's and System Administrator's Guide*.

Ordering Sun Documents

Fatbrain.com, an Internet professional bookstore, stocks select product documentation from Sun Microsystems, Inc.

For a list of documents and how to order them, visit the Sun Documentation Center on Fatbrain.com at <http://www1.fatbrain.com/documentation/sun>.

Accessing Sun Documentation Online

The docs.sun.comSM Web site enables you to access Sun technical documentation online. You can browse the docs.sun.com archive or search for a specific book title or subject. The URL is `http://docs.sun.com`.

Typographic Conventions

The following table describes the typographic changes used in this book.

TABLE P-1 Typographic Conventions

Typeface or Symbol	Meaning	Example
AaBbCc123	The names of commands, files, and directories; on-screen computer output	Edit your <code>.login</code> file. Use <code>ls -a</code> to list all files. <code>machine_name% you have mail.</code>
AaBbCc123	What you type, contrasted with on-screen computer output	<code>machine_name% su</code> Password:
<i>AaBbCc123</i>	Command-line placeholder: replace with a real name or value	To delete a file, type <code>rm filename</code> .
<i>AaBbCc123</i>	Book titles, new words, or terms, or words to be emphasized.	Read Chapter 6 in <i>User's Guide</i> . These are called <i>class</i> options. You must be <i>root</i> to do this.

Shell Prompts in Command Examples

The following table shows the default system prompt and superuser prompt for the C shell, Bourne shell, and Korn shell.

TABLE P-2 Shell Prompts

Shell	Prompt
C shell prompt	machine_name%
C shell superuser prompt	machine_name#
Bourne shell and Korn shell prompt	\$
Bourne shell and Korn shell superuser prompt	#

Basic Skills

This chapter introduces you to the windows and controls in CDE, and shows you how to perform tasks you will use everyday, for example, dragging an object using a mouse, re sizing a window, and the like.

For information about logging in to the desktop, refer to Chapter 2.

- “Mouse Skills” on page 39
- “Desktop” on page 42
- “Running Applications” on page 45
- “Working with Windows” on page 48
- “Using Workspaces” on page 54
- “Using Controls in Application Windows” on page 57
- “Using Menus” on page 62
- “Basic Keyboard Skills” on page 68
- “Leaving the Desktop” on page 69
- “Getting Help” on page 72

Mouse Skills

▼ To Click

- **Press and release mouse button 1 without moving the mouse.**
By default, mouse button 1 is the left button.



Tasks that you perform by clicking include:

- Selecting a window or icon, making it *active* or *selected*
- Choosing a button in a dialog box or a control in the Front Panel
- Choosing a hyperlink within a help window or mail message

▼ To Double-Click

- **Press and release mouse button 1 twice in rapid succession, without moving the mouse.**

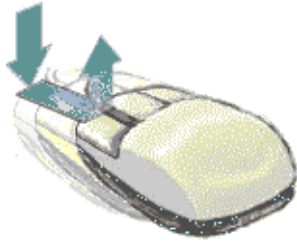
Here are some tasks you perform by double-clicking:

- Starting the default action for a File Manager or workspace icon
- Restoring a window icon (displaying the whole window again)
- Closing a window to remove it from the workspace—double-click the Window menu button in the upper left corner of the window frame

▼ To Drag

To move a window or drop an icon, use the *press-drag-release* motion.

- **Point to the window's title bar or anywhere on the icon, press and hold mouse button 1, drag the mouse, then release the button.**



Tasks you perform by dragging and dropping include:

- Moving windows and icons on your screen
- Moving or copying files and folders within File Manager
- Dragging a slider within a scroll bar to scroll the contents of a window
- Printing a file by dropping its icon on the Printer control in the Front Panel

▼ To Duplicate

1. **Select the required text by holding down mouse button 1 and dragging the cursor over it.**
2. **Release mouse button 1.**
3. **Point the mouse at the location to which you wish to duplicate the text, and click mouse button 2.**
By default, mouse button 2 is the middle mouse button. The text is copied to the new location without removing it from its original location.
4. **(Optional) Repeat step 3 and duplicate the text in other locations.**

Desktop

CDE uses windows and other objects to represent applications, files, and services available to the user. When you log into CDE, the CDE *desktop* is displayed.

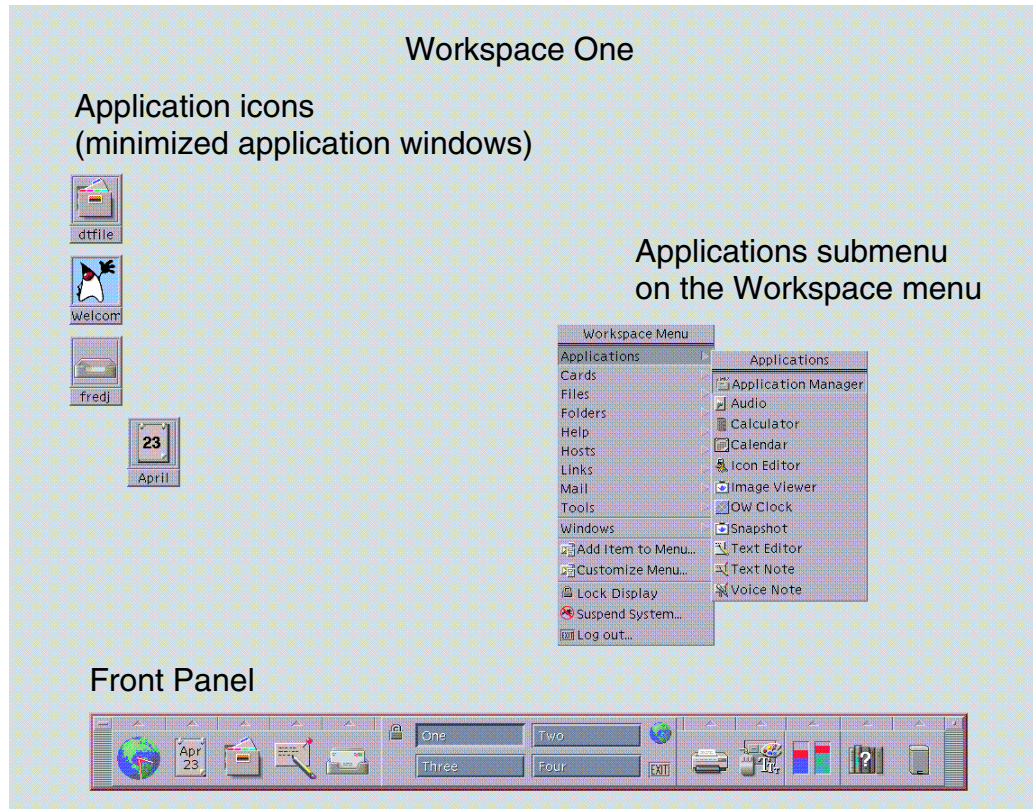


FIGURE 1-1 CDE Desktop

CDE Desktop

The CDE desktop comprises a *Front Panel* sitting over a selected *workspace*, or screen background. The Front Panel displays information about your workstation, and enables you to run applications, to log out, and to switch between workspaces. Applications that are running are represented by windows and icons on the workspace. You can also run commands from a *Workspace menu*, which is displayed when you click mouse button 3 on an unused part of the workspace backdrop.

Front Panel

The Front Panel (see Chapter 4) is a collection of frequently used controls and desktop services available in every workspace.

Workspaces

Workspaces are like separate screens or desktops. You can only display one workspace at a time, but applications in all workspaces can run simultaneously.

By default, four workspaces named One through Four are available. To display another workspace, you click its button in the *workspace switch* in the center of the Front Panel.

Tip – You can specify whether an application is displayed on one or all workspaces by clicking mouse button 3 on its window frame and selecting an item from the pop-up menu.

Workspace Menu

When you click mouse button 3 on an unused area of a workspace, the Workspace menu (see Figure 1–1) is displayed. It includes items on the Front Panel and Application Manager. Most applications are on the Applications menu.

Working With Files

The Files subpanel gives you access to file-related devices and applications.

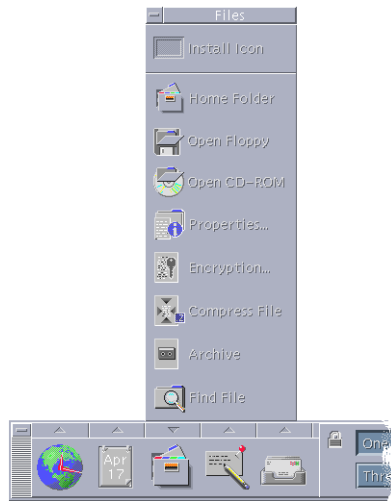
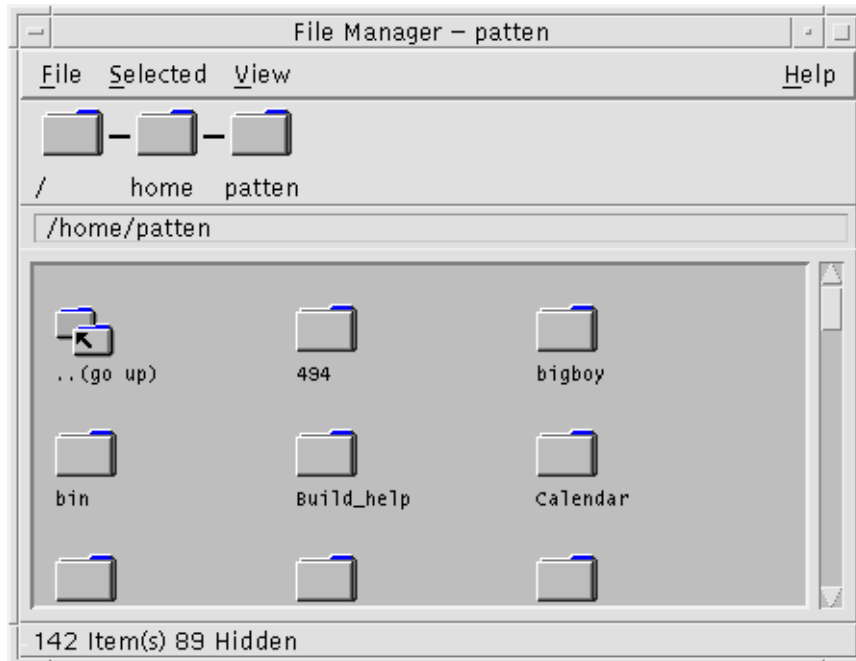


FIGURE 1-2 Location of Files Subpanel

CDE provides full-functioned File Manager and File Finder applications. In File Manager and File Finder, files and folders are represented by icons that indicate their types.



Clicking on mouse button 3 displays options for the selected object, and double-clicking an object invokes the default action for that object. For example, double-clicking a compressed file expands it, and double-clicking an audio file plays it.

Task or Feature	Methods
To find a file	Select Find File on the Files subpanel
To carry out an action on a file	Click mouse button 3 on the file and choose the action from the pop-up menu Drag and drop the file on an appropriate drop zone Click a control on the Files subpanel
To print a file	Drop a file on the printer control on the Front Panel
To access a floppy diskette or CD-ROM	Select Open Floppy or Open CD-ROM on the Files subpanel

Deleting Files

CDE provides a *trash can* or wastebasket facility. The Trash Can is a temporary store for objects (files and folders) to be deleted. You can move selected objects to the Trash Can using drag and drop, by mapping certain menu items, or by pressing the Delete key. Once in the Trash Can, the objects no longer appear in their original folder.

To permanently remove the deleted files in CDE, you use the Empty Trash Can control on the Trash subpanel.

Running Applications

CDE provides the following methods of running applications:

- The Front Panel and the Workspace menu provide access to collections of commonly used applications.
- Where an application is not available from the Front Panel or the Workspace menu, you will probably find it in Application Manager.
- You can run certain applications by dropping files or data on their drop zones in the Front Panel.

- Terminal emulator windows and the File Manager application also enable you to run applications, but this requires a little more understanding of commands, files, and folders.

Note – You can also add applications to the Front Panel, Workspace menu, and Application Manager.

Running Applications from the Front Panel

The Front Panel contains a number of controls, or program icons. Some are on the main panel, which is displayed by default, and others are on subpanels, which can be displayed by clicking a tab marked by a triangle.

You run an application by clicking mouse button 1 on its control.

For instructions on running applications from the Front Panel or for adding and manipulating controls on the Front Panel, see “Front Panel Applications” on page 132 and “Customizing the Front Panel” on page 138.

Running Applications from the Workspace Menu

The Workspace menu is displayed when you press mouse button 3 on any unused part of the workspace backdrop. You can run an application by dragging to its menu item and releasing the mouse button.

Running Applications from Application Manager

You can open Application Manager by clicking its control on the Applications subpanel on the Front Panel. Application Manager contains several application groups, such as desktop tools, and OpenWindows applications. These groups can be opened by clicking their icons in the Application Manager main window.

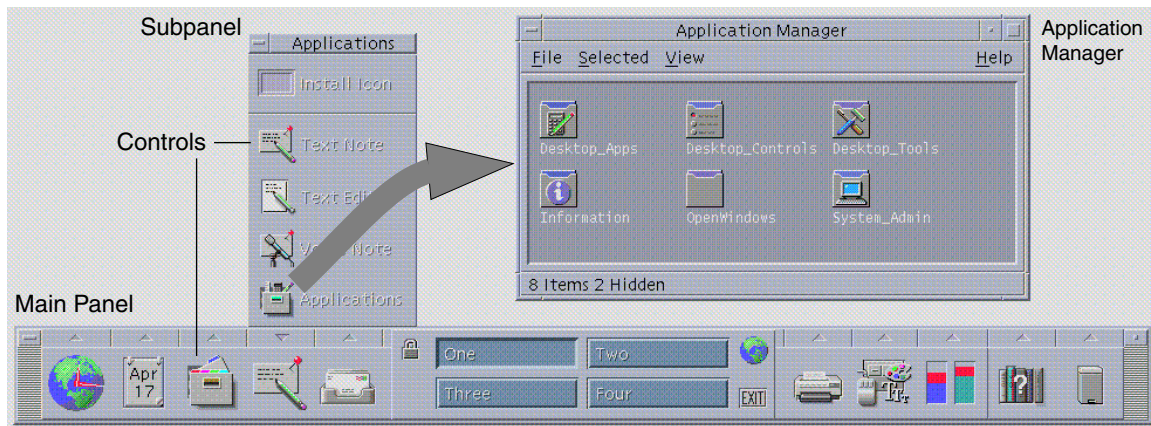


FIGURE 1-3 Front Panel and Application Manager

To run an application in an Application Manager window, you double-click its program icon.

Running Applications from Drop Zones on the Front Panel

Certain controls on the Front Panel—such as the Printer, Mailer and Web Browser controls—act as drop zones (see “Front Panel Drop Zones” on page 112) that activate the relevant application when you drag and drop appropriate text or files on them. For example, if you drop a file on the Mailer control, Mailer displays a New Message window with the file attached to the new message.

For instructions on drop zones, see “Front Panel Drop Zones” on page 112 and “Tour of the Front Panel” on page 114.

Running Applications from File Manager

You can run an application by clicking its application icon in a File Manager window. For example, you can run Image Viewer by clicking the file `SDTimage` in the folder `/var/dt/appconfig/appmanager/user-hostname-0/Desktop_Apps/` where `user-hostname-0` is a folder specific to your user ID.

If an application uses data files, it may be configured so that the application can be started from File Manager by clicking one of its data files. For example, double-clicking a bitmap file (a file whose name ends with `.bm`) runs Icon Editor.

For instructions on running applications from File Manager see “Executing an Action for a File or Folder” on page 160.

Running Applications from a Terminal Emulator Window

A terminal emulator is an application whose window provides a command-line interface to your system—for example, operating system commands, script names, or commands that run applications.

All applications have a command that you can type to start them. The application’s documentation usually describes how to use the command.

The desktop provides a terminal emulator called `dtterm`. Your system may include other terminal emulators. To open a terminal emulator window, click the This Host control in the Hosts subpanel.

For more information on using `dtterm`, see Chapter 14.

Working with Windows

This section describes how to open, close, and manipulate windows in a workspace.

Window Frame Controls

A window’s frame provides controls with which you can:

- Focus attention on a window, making it active (indicated by its frame changing color) for input from your mouse or keyboard
- Move a window
- Minimize a window into an icon
- Size a window
- Close a window, removing it from the desktop
- Display a window in other workspaces

Refer to Chapter 9 for information about settings that make windows active.

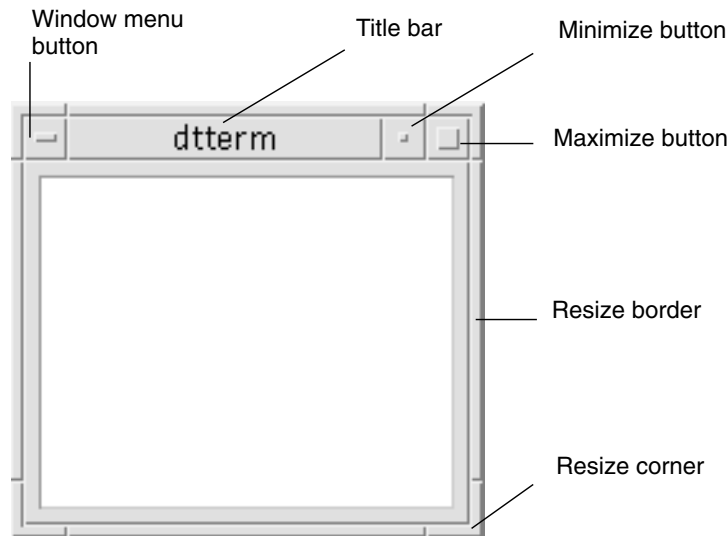


FIGURE 1-4 Window Frame Controls

Click the Window menu button to display the Window menu.

To close a window and remove it from the desktop, double-click the Window menu button or display the Window menu and choose Close.

Click the minimize button to turn the window into a window icon. To restore a window from its icon, double-click the icon.

Click the maximize button to display the window in its largest allowable size. Return the window to its former size by clicking the maximize button again.

The title bar shows the name of the application that owns the window. Select a window by clicking its title bar. You can move a window by dragging its title bar.

Drag a window's resize corner or border to resize the window.

For information on keyboard navigation and windows, see "Opening and Closing Windows" on page 581 in Appendix A.

▼ To Open an Application Window (Mouse)

- Click the application's control in the Front Panel.
- *Or*, from within Application Manager, double-click the application's icon.

- *Or*, from within Application Manager, double-click the application's icon.
- *Or*, from the Workspace Programs submenu, choose the item with the application name.

You can also select an icon in a File Manager or Application Manager window by clicking it and then choose an action for the selected icon from the Selected menu.

▼ To Open an Application Window (Keyboard)

From the Front Panel:

1. Press **Alt+Tab** to move the keyboard focus to the Front Panel.
2. Press the arrow keys to move the highlight within the Front Panel and select a control.
3. Press **Spacebar** or **Return** to choose the control and open the application's window.

▼ To Close an Application Window

Closing an application window removes it from all workspaces. Closing an application is the same as quitting an application on other systems.



Caution – Before closing an application window, save your work. In most applications you can do this by choosing **Save** from the File menu.

- Choose **Close** from the application's File menu.
- *Or*, double-click the Window menu button (in the upper left corner of the application's window).
- Press **Alt+Tab** to move the highlight to the window you want to close and press **Alt+F4**.

▼ To Turn a Window into an Icon (Mouse)

To save screen space, you can minimize windows into window icons. This keeps the windows easily available and programs running in them continue to run.

- **Click the window's minimize button.**



▼ To Turn a Window into an Icon (Keyboard)

1. Press **Alt+Spacebar** to display the Window menu.
2. Choose **Minimize**:
 - Press **Down Arrow** until you select **Minimize**, then press **Return**.
 - Or, press **N**, the menu's mnemonic for **Minimize**.

▼ To Restore a Window from an Icon (Mouse)

- **Double-click** the icon.

▼ To Restore a Window from an Icon (Keyboard)

1. With keyboard focus on the icon, press **Alt+Spacebar** to display the Window menu.
2. Press **Down Arrow** to select **Restore**, then press **Return**.

▼ To Move a Window or Window Icon (Mouse)

1. Point to the window's title bar or icon.
2. Drag the window or icon to its new location.

▼ To Move a Window or Window Icon (Keyboard)

1. Press **Alt+Spacebar** to display the Window menu.
2. Press **M**, the menu's mnemonic for **Move**.

3. Press the arrow keys to relocate the window or icon.

Hold down Control while you press an arrow key to speed up the movement of the window or icon.

4. When you've moved the window or icon to where you want it, press Return.

To cancel the move operation, press Esc.

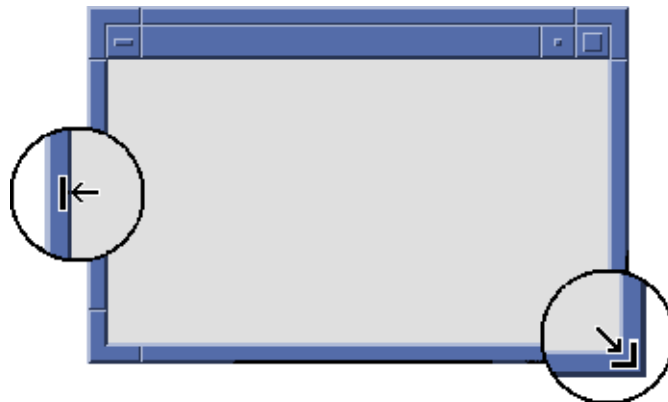
▼ To Resize a Window (Mouse)

1. Place the pointer on a window's border or corner.

The pointer changes to a resize arrow.

2. Drag the border or corner. An outline appears to show you the window's new size.

3. Release the mouse button when the outline shows the window's desired size.



Stretch or shrink
a window by
dragging its
border or corner

▼ To Resize a Window (Keyboard)

1. Press Alt+Spacebar to display the Window menu.

2. Press S, the menu's mnemonic for Size.

3. Press the arrow keys to stretch or shrink the window.

Hold down Control while you press an arrow key to size the window faster.

4. When the outline shows the size you want, press Return.

To cancel the resize operation, press Esc.

▼ To Move a Window or Icon to the Foreground or Background (Mouse)

1. Click a visible part of the window's frame or anywhere on the icon.
2. Choose **Shuffle Up** or **Shuffle Down** from the **Workspace** menu.

▼ To Move a Window or Icon to the Foreground or Background (Keyboard)

- To bring the bottom window or icon in a workspace forward, press **Alt+Up Arrow**.
- To place the top window in the background, press **Alt+Down Arrow**.
- To cycle through and select the windows and icons in a workspace, press **Alt+Tab** or **Alt+Esc**.
- To cycle through and select the windows and icons in reverse order, press **Shift+Alt+Tab** or **Shift+Alt+Esc**.

Copying and Pasting Text into Windows

Copying and pasting eliminates the need to retype text.

You can copy from and paste text into:

- Text fields
- Terminal emulator windows
- Text Editor windows
- Mailer Compose windows

You can also copy text from a Mailer message view and a Help Viewer window and paste it into Text Editor, terminal emulator, and Mailer Compose windows.

▼ To Select the Text To Be Copied

1. Move the pointer to the start of the text to be pasted.
2. Drag to the end of the text to be pasted, then release the mouse button, leaving the text highlighted.

▼ To Paste Text

1. Place the text insertion cursor in the target location.
2. Click mouse button 2 to paste the text.

Note – To deselect text, click in an empty area of the window that has the text selected, or press Esc.

For related information, refer to:

- Chapter 3
- Chapter 12
- Chapter 14

Using Workspaces

Workspaces are like separate screens or windows. To help organize your desktop, you can have separate workspaces for different groups of related tasks. For example, a workspace you've named Reports could contain the tools you use to prepare reports, such as a spreadsheet, desktop publisher, and graphics applications. You might set up other workspaces according to your projects.

This section describes how to display workspaces, place windows in specific workspaces, and rename workspaces.

For information about using your keyboard for desktop navigation, refer to Appendix A.

▼ To Display Another Workspace (Mouse)

- Click the workspace's button in the workspace switch of the Front Panel.



▼ To Display Another Workspace (Keyboard)

1. Press **Alt+Tab** until the keyboard focus, as shown by the highlight, is on the Front Panel.
2. Press the arrow keys to move the highlight to the button for the workspace you want to display.
3. Press **Return**.

▼ To Place a Window in Other Workspaces (Mouse)

1. Click the **Window** menu button.
The Window menu appears.
2. Choose **Occupy Workspace** from the Window menu.
3. In the Workspaces list of the Occupy Workspace dialog box, select the workspaces in which you want the window to appear.
 - To select more than one contiguous workspace name in the list, hold down **Shift** while you click.
 - To select discontinuous workspace names in the list, hold down **Control** while you click.
 - Click a selected workspace to deselect it.
 - To place the window in every workspace, click the **All Workspaces** button.
4. Click **OK**.

▼ To Place a Window in Other Workspaces (Keyboard)

1. To display the Window menu, press **Alt+Spacebar**.
2. Press the **Down Arrow** key to select **Occupy Workspace**, then press **Return**.
The Occupy Workspace dialog box appears.
3. Press **Tab** until the keyboard focus, as shown by the highlight, is in the **Workspaces** list.
4. Select the workspaces in which you want the window to appear:
 - Press **Down Arrow** or **Up Arrow** to move through the list.
 - To select more than one workspace, press **Shift+Down Arrow** or **Shift+Up Arrow**.
5. Press **Return**.

▼ To Rename a Workspace (Mouse)

1. Click the **Front Panel** button for the workspace whose name you want to change.
That workspace is displayed.
2. Click the workspace's **Front Panel** button again.
The button becomes a text field.
3. Edit the workspace's name in the text field.
4. Once you've renamed the workspace, press **Return**.

▼ To Rename a Workspace (Keyboard)

1. Press **Alt+Tab** until the keyboard focus, as shown by the highlight, is on the **Front Panel**.
2. Press the arrow keys to move the highlight to the button for the workspace you want to rename.
3. Press **Shift+F10** to display the workspace button's pop-up menu.
4. Press the **Down Arrow** key to select the **Rename** item, then press **Return**.
The button becomes a text field.
5. Edit the workspace's name in the text field.

6. Once you've renamed the workspace, press Return.

Using Controls in Application Windows

Windows and dialog boxes contain controls that help you work with applications. You use controls to manipulate objects, select choices, or type information.

This section describes various types of controls you'll come across while using the desktop. Here's a list of the most common controls:

- *Buttons* initiate commands, start actions, or specify options and settings. Types of buttons include push buttons and radio buttons.
- *Check boxes* specify options and settings.
- *Text fields* provide areas where you can type information.
- *Lists* display a scrollable list of choices from which you can select.
- *Sliders* provide incremental selection from a range of values.
- *Scroll bars* enable you to scroll through a window's contents.

Push Buttons

Choosing a push button immediately performs the associated command or action. For example, choosing an OK button applies any changes made to a dialog box then closes it.

As a shortcut, many dialog boxes automatically give focus to the OK button so that you can quickly specify settings and then press Return to choose OK.



OK, Cancel, and Help are examples of push buttons

▼ To Choose a Push Button (Mouse)

- Click the button.

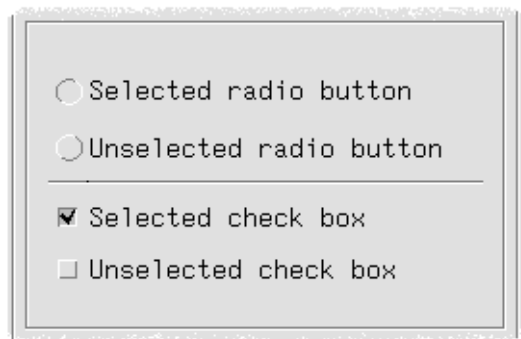
▼ To Choose a Push Button (Keyboard)

1. Press **Tab** and the arrow keys until the button has the keyboard focus, as shown by the highlight.
2. Press **Return**.

Check Boxes and Radio Buttons

You select a check box to specify an option or setting. You can select more than one check box in a group.

You also use a radio button (sometimes referred to as a choice button) to specify an option or setting, but only one radio button in a group can be selected at a time.



▼ To Select a Check Box or Radio Button (Mouse)

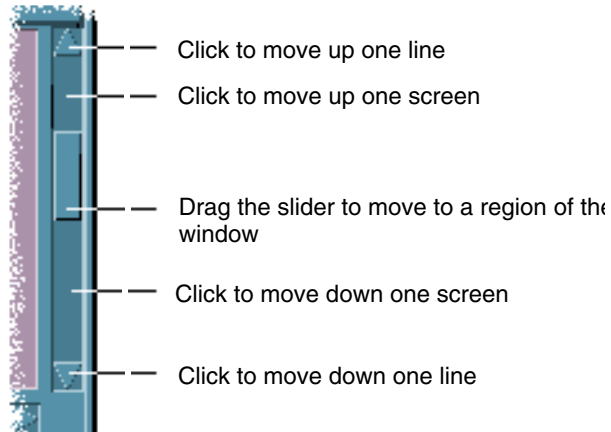
- Click the check box or radio button you want to select.

▼ To Select a Check Box or Radio Button (Keyboard)

1. Press **Tab** and the arrow keys until the check box or radio button has the keyboard focus, as shown by the highlight.
2. Press the **Spacebar**.

To Scroll the Contents of a Window

Windows often contain more information than you can see at one time. Use a window's scroll bar to bring the window's contents into view.



▼ To Scroll (Keyboard)

1. Press **Tab** to move to the window area you want to scroll.
2. Press the arrow keys, or **Prev** and **Next**, or **Page Up** and **Page Down**.
Hold down **Control** while you press an arrow key to scroll faster.

▼ To Use a Slider (Keyboard)

1. Press **Tab** or an arrow key to move the highlight to the slider.
2. Press **Up Arrow** or **Down Arrow** to move the slider.
Hold down **Control** while you press an arrow key to move the slider faster.

Selecting List Items

A selected list item becomes highlighted. The highlighted item is acted upon when you click a button, such as **OK**.

▼ To Select a List Item (Mouse)

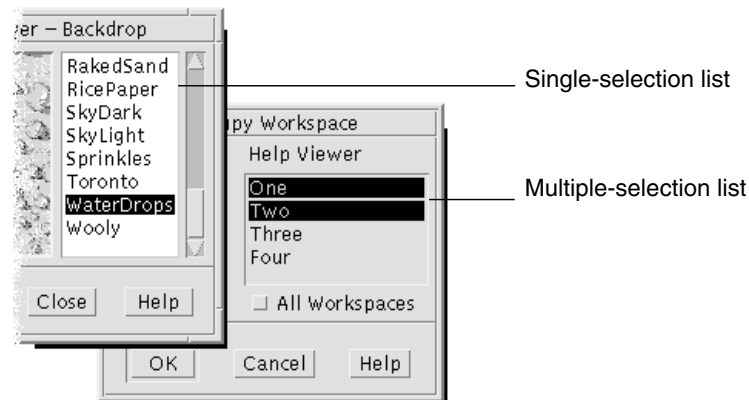
1. Click the list item.

In a multiple-selection list, hold down Shift while you click the items.

To deselect an item, click it again.

2. Click a button, such as OK.

In some lists, double-clicking an item selects the item and chooses the default command.



▼ To Select a List Item (Keyboard)

1. Press Tab to move to the list.

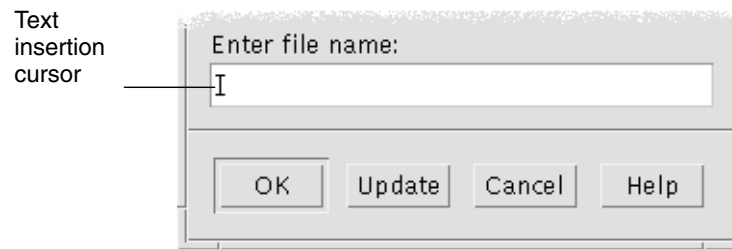
2. Select the list item:

- In a single-selection list, use the arrow keys to reach your choice.
- In a multiple-selection list, use the arrow keys to reach your first selection, then press Shift+Up Arrow or Shift+Down Arrow.

To deselect an item, press the Spacebar.

3. Press Tab to move to a button, such as OK or Apply, then press Return.

Text Fields



A text field accepts information you type.

▼ To Enter Text in a Field (Mouse)

1. **Click the field to display the text insertion cursor.**
2. **Type the text.**

In many dialog boxes, pressing Return completes the text entry and activates the default button, such as OK or Apply.

▼ To Enter Text in a Field (Keyboard)

1. **Press Tab, Shift+Tab, or the arrow keys until you reach the text field.**

A blinking cursor indicates that the text field has the keyboard focus.

2. **Type the text, then press Control+Tab to move keyboard focus out of the text field.**

▼ To Edit Text in a Field (Mouse)

1. **Select the text in the field to edit:**

Characters - Drag from the first character to the last character

Word - Double-click the word

Line - Triple-click the line

Multiline - Quadruple-click the field

To deselect text, click an empty area in the window.

2. **Type the replacement text.**

To Edit Text in a Field (Keyboard)

1. **Press Tab, Shift+Tab, or the arrow keys until you reach the field.**
2. **Use the editing keys to edit the field's contents, then type the replacement text.**
 - Arrow key - Move the text insertion cursor
 - Backspace - Delete the character to the left of the cursor
 - Delete or Delete char - Delete the character to the right of the cursor
 - Control+Delete *or* Control+Delete char - Delete from the cursor to the end of the line
3. **Press Control+Tab to move keyboard focus out of the text field.**

Using Menus

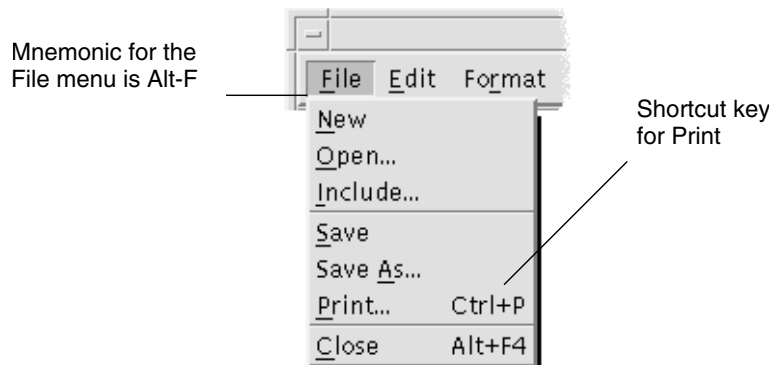
Menus provide access to commands you use to manage windows and operate software applications.

Choosing a menu item performs an associated action on the currently selected object. For example, when you select a window and choose Minimize from its Window menu, the window becomes an icon.

Menu items that appear dimmed are available only under certain conditions. For example, the Window menu's Restore item is available only when the window is an icon.

Menus you'll use on the desktop include:

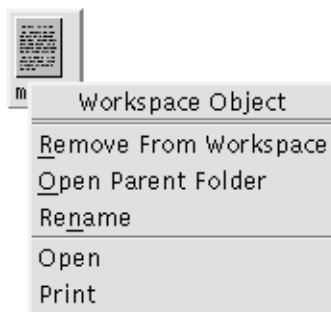
- Menus that you "pull down" from an application's menu bar by clicking the menu's name or typing Alt and its *mnemonic*. A mnemonic is an underlined character in a menu or item name.



An application's File menu is shown here.

The sequence of keys listed to the right of some items is called a *shortcut key*. Typing mnemonics and shortcut keys gives you quick keyboard access to menu items.

- Menus that “pop up” when you click mouse button 3 (or press Shift+F10) in an application window or on a workspace object.



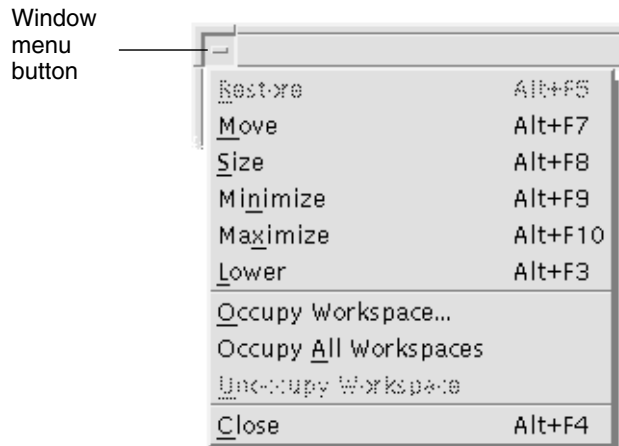
Window Menu

Use Window menu items to control windows and window icons.

This menu is displayed when you:

- Click the Window menu button in the upper left corner of a window
- Click a window icon

- Press Alt+Spacebar with the keyboard focus on a window or window icon



Restore - Turns an icon back into a window

Move - Changes the window's location

Size - Changes the size of the window (inactive for icons)

Minimize - Turns the window into an icon

Maximize - Enlarges the window to its greatest allowable size

Lower - Moves the window to the background

Occupy Workspace - Use to select the workspaces in which you want the window to appear

Occupy All Workspaces - Displays the window in all workspaces

Close - Closes the window, removing it from the workspace

Workspace Menu

The Workspace menu is a pop-up menu that contains items for managing the workspace.

To display the Workspace menu, click mouse button 3 on the workspace backdrop. You cannot access this menu through your keyboard.

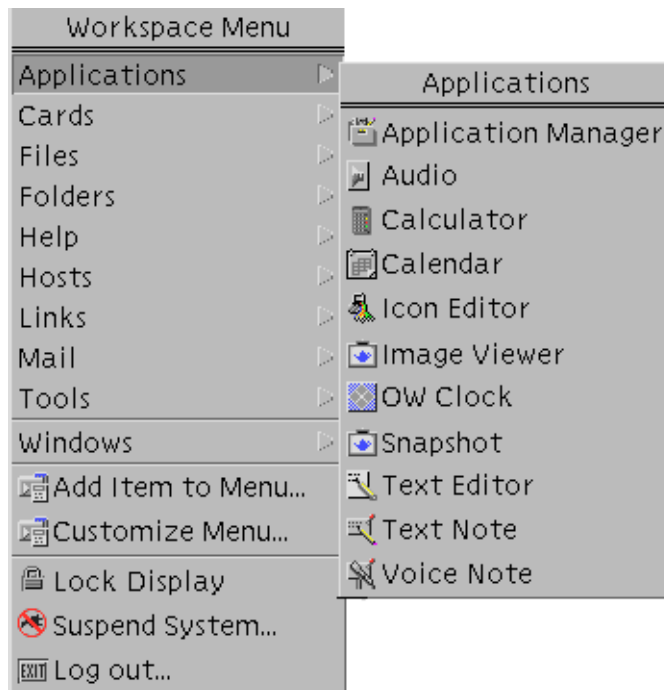


FIGURE 1-5 Workspace Menu with Applications Submenu Displayed

Note – You can start many of the applications listed in the Applications submenu by clicking their Front Panel controls or Application Manager icons. Selected OpenWindows desktop applications are available on this menu; others are available from within the OpenWindows application group in Application Manager.

▼ To Choose a Workspace Menu Item

1. **Move the pointer over the workspace backdrop.**
2. **Press mouse button 3, drag to the item, then release the mouse button.**
To close the menu without choosing an item, move the pointer away from the menu and click.

Note – You cannot choose a Workspace menu item using your keyboard.

▼ To Choose a Window Menu Item (Mouse)

1. **Click the Window menu button to display the menu.**

If the window is an icon, click the icon.

2. **Click a menu item.**

To close the menu without choosing an item, click anywhere other than the menu.

Tip – For faster access, you can press mouse button 1 over the Window menu button or icon, drag to the item, then release the mouse button.

▼ To Choose a Window Menu Item (Keyboard)

1. **Press Alt+Tab until you've placed the keyboard focus, as shown by the highlight, on the window or window icon.**
2. **Press Alt+Spacebar to display the Window menu.**
3. **Press the key for the item's mnemonic, the underlined character in the item name.**

To close the menu without choosing an item, press Esc.

▼ To Choose a Menu Item with the Mouse

1. **Display the menu:**

- Pull-down (menu bar) menu: Using mouse button 1, click the menu name.
- Pop-up menu: Click mouse button 3 inside the application.
- Object's pop-up menu: Click the object with mouse button 3.

2. **Click the item.**

You can also choose a menu item by pressing the mouse button, dragging to the item, then releasing the mouse button.

To close a menu without choosing an item, move the pointer away from the menu and click.

▼ To Choose a Pull-Down Menu Item With the Keyboard

1. Press **Alt+Tab** until you've placed the keyboard focus, as shown by the highlight, on the application window.
2. Display the menu by holding down **Alt** and then pressing the key for the menu's mnemonic (the underlined character in the menu's name as shown in the menu bar).
3. Press the key for the item's mnemonic.
Or, press an arrow key to move to the item, then press Return.

▼ To Choose a Pop-up Menu Item With the Keyboard

1. Press **Alt+Tab** until the keyboard focus is on the application window or workspace object.
2. Press **Shift+F10** to display the pop-up menu.
3. Press the key for the item's mnemonic.
Or, press Down Arrow to move to the item, then press Return.
To close a menu without choosing an item, press **Esc**.
For more information about using your keyboard for desktop navigation, refer to Appendix A.

Using Tear-Off Menus

In some applications such as Mailer and Calendar, you can "tear off" a menu, which keeps it open on your desktop for repeated use. You can recognize the availability of a tear-off menu by the appearance of a dotted line at the top of the menu.

▼ To Keep a Tear-Off Menu on the Desktop

1. Display the menu by clicking its name in the menu bar.
2. Click the dotted line above the first menu item.
The tear-off menu stays on your desktop until you dismiss it by either pressing **Alt+F4** or double-clicking the Window menu button (in the upper left corner of the application's window).

Basic Keyboard Skills

You can perform desktop tasks using your keyboard instead of your mouse. When you use your keyboard for desktop navigation, note the following:

- The Alt key is the same as the Extend char key on some keyboards
- Return is the same as Enter on some keyboards
- Pressing Esc halts most interactive operations
- In Style Manager, the Window Behavior setting must be Click In Window To Make Active (this is the default value)

For more information on the Window Behavior setting, refer to Chapter 9.

Keyboard focus uses the highlight to show you which element of a window, menu, or control will respond to your input. To activate a selected menu item or control (such as a button), press the Spacebar.

Here's a summary of several common keyboard operations:

- To move the highlight to the next window: Press Alt+Tab.
- To move the keyboard highlight within a window: Press Tab and the arrow keys (up, down, left, and right).
- To close a window and remove it from the workspace: Press Alt+F4.
- To minimize a window (turn it into an icon): Press Alt+Spacebar, then N to choose Minimize from the Window menu.
- To move a window: Press Alt+Spacebar, then M to choose Move from the Window menu. Press the arrow keys to move the window up, down, left, or right, then press Return.

Hold down Control while you press an arrow key to move the window faster.

For more information about using your keyboard for desktop navigation, refer to Appendix A. For information on currency symbols and characters from other languages, see "Composing Special Characters" on page 70. For information on displaying, manipulating and printing characters from the Thai and Hebrew Locales, see Appendix D.

Leaving the Desktop

This section describes how to log out of and exit the desktop, and how to lock your display to prevent unauthorized use of your system when you are away from it and have not logged out.

▼ To Log Out



Caution – Before logging out of the desktop, save your work in all open application windows. Remember to check each workspace.

- Click the Exit control in the Front Panel.



- Or, choose Log out from the Workspace menu.

Note – You cannot display the Workspace menu using your keyboard.

As you log out of the desktop, your current session is saved. When you log back in, the desktop will appear as it did before you logged out.

Applications that do not get saved as part of the current session include:

- Applications that you run in terminal emulator windows
 - Non-desktop applications that do not preserve their state during logout
- You'll need to restart these applications when you log in. For more information, see Chapter 2.

▼ To Lock Your Display

To prevent unauthorized use of your system when you are away from it and have not logged out:

- Click the Lock control in the Front Panel.



To unlock your display, type your password.

For information about screen lock options, refer to Chapter 9.

Composing Special Characters

Note – This section applies to users of English language locales only.

Characters such as £ and ¢ are not displayed on all types of keyboard. However, if you are using a code set that supports the character you require, you can use special key compose sequences to insert the required character in a document. For example, to compose the e acute symbol (é), you press the Compose key, followed by the e key, followed by the ' (apostrophe) key.

The commonly used ISO 8859-1, or “ISO Latin-1” code set provides most of the commonly used characters for Western European languages. For a table containing the Compose Key Sequences for ISO 8859-1 see Appendix C.

Note – For information on displaying, manipulating and printing text from CTL (Complex Text Layout) locales such as Thai and Hebrew, see Appendix D.

Euro Currency Symbol

Established code sets such as ISO Latin-1 do not support the Euro symbol: They will not enable you to create the symbol in a document; they will not display the symbol.

To create or display the Euro symbol, you need to be running one of the following:

- an ISO 8859–15 based code set such as en_US.8859–15 or en_UK.8859–15 (shipped with Solaris 7 Operating Environment and compatible versions)
- A UTF-8 code set (commonly used by multilingual users) such as en_US.UTF-8 or en_GB.UTF-8.



FIGURE 1-6 Euro Currency Symbol

Keyboard Placement

Table 1–1 shows the placement of the Euro on Sun Type 6 keyboards:

TABLE 1-1 Placement of Euro on Sun Type 6 Keyboards

Type 6 Keyboards	Euro Placement
US	AltGraph+4
UNIX	AltGraph-E
UNIX/Logoless	AltGraph-E
French	AltGraph-E
Danish	AltGraph-E
Italian	AltGraph-E
Netherlands/Dutch	AltGraph-E
Norwegian	AltGraph-E
Portuguese	AltGraph+E

TABLE 1-1 Placement of Euro on Sun Type 6 Keyboards (Continued)

Type 6 Keyboards	Euro Placement
Spanish	AltGraph-E
Swedish	AltGraph-E
Finnish	AltGraph-E
Swiss/French	AltGraph-E
Swiss/German	AltGraph-E
UK (Ireland)	AltGraph-E

Keyboard Input in UTF-8 Locales

Two additional methods exist for typing the Euro in UTF-8 locales.

- Unicode Hexadecimal code input method
To generate the Euro, type the Unicode value for this symbol: U+20AC
- Table Lookup Method
Activate this method by pressing Compose, followed by Ctrl+I. Select Latin from the list of possible scripts, and choose the Euro from the table of characters.

Getting Help

You can request help by:

- Pressing F1 or the Help key
- Choosing an item from an application's Help menu
- Clicking the Help button in a dialog box
- Opening the Help Manager to browse all the available help

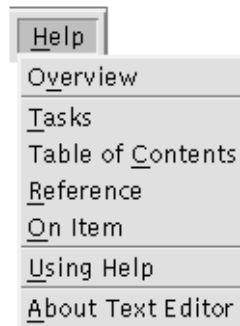
For more information on using help, refer to Chapter 3.

The quickest and easiest way to get help is to press the F1 key. When you press F1, the application you are using displays the help topic most closely related to your current activity.

Some keyboards have a dedicated Help key that may take the place of the F1 key.

Help Menu

Most applications have a Help menu for requesting specific kinds of help.



Overview - Displays introductory information about the application

Tasks - Displays instructions for using the application

Table of Contents - Displays a standard Table of Contents for the help volume

Reference - Displays summary information about application components

On Item - Changes the pointer to a question mark—click the question mark pointer on an item to display its description

Using Help - Displays information about using Help

About - Displays version and copyright information about the application (in this case, Text Editor)

To learn more about using help windows, choose Using Help from an application's Help menu. Or, you can press F1 while using a Help window.

▼ To Display the Help Manager

The Help Manager lists all the online help volumes installed on your system.

- 1. Click the Help Manager control in the Front Panel.**
The Help Viewer opens, displaying the Help Manager.
- 2. Choose the Common Desktop Environment topic to display the list of help volumes for the desktop.**

3. Browse the list of titles. To open a volume, click its title.

Starting a Desktop Session

A desktop session occurs between the time you log in and the time you log out.

The login screen, displayed by the Login Manager, is your gateway to the desktop. It provides a place for you to type your login name and password. The Options menu on the login screen lists your login options. In addition to running a desktop session, you can run a failsafe session. You can also select the language for your session.

- “Starting and Ending a Desktop Session” on page 75
- “To Use a Session in a Different Language” on page 76
- “Starting a Failsafe Session” on page 77
- “Starting a Command-Line Session” on page 77
- “Using a Home Session” on page 78

Starting and Ending a Desktop Session

A desktop session starts when you log in. Session Manager is started after Login Manager authenticates your login and password.

Session Manager provides the ability to *manage* sessions—to remember the state of your most recent session and return you there the next time you log in.

Session Manager saves and restores:

- The appearance and behavior settings – for example, fonts, colors, and mouse settings.
- The window applications that were running – for example, your File Manager and Text Editor windows. Certain types of applications can’t be saved and restored by Session Manager. For example, if you start the `vi` editor from a command line in a Terminal window, Session Manager cannot restore your editing session.

▼ To Log In to a Desktop Session

1. **Type your login name and press Return or click OK.**
2. **Type your password and press Return or click OK.**

If Login Manager does not recognize your name or password, click Start Over and start the log in process over again.

Once you've logged in, Session Manager starts a session:

- If this is the first time you've logged in, you'll get a new session.
- If you've logged in before, your previous session will be restored.

▼ To Log Out

- Click the Exit control in the Front Panel.
- *Or*, choose Log out from the Workspace menu.

When you log out of a regular desktop session, Session Manager saves information about your current session so that it can be restored the next time you log in. Information about non-desktop applications may not be saved.

▼ To Use a Session in a Different Language

1. **Choose Language from the Options menu on the login screen.**
2. **Choose the language group that includes the language you need.**
3. **Select a language.**
4. **Log in.**

The default language for your system is set by your system administrator. The Options menu enables you to access other languages. Choosing a language in the Options menu sets the LANG environment variable for your session. The default language is restored at the end of the session.

Starting a Failsafe Session

A failsafe session is a session that starts a single Terminal window (and optionally Workspace Manager). It is useful when you need access to a single Terminal window to execute several commands before logging in to a desktop session.

▼ To Log In to a Failsafe Session

1. Choose **Session** from the **Options** menu.
2. Choose **Failsafe Session** from the **Session** submenu.
3. **Log in**.

▼ To Log Out of a Failsafe Session

- Type the `exit` command in a Terminal window.

Starting a Command-Line Session

Command Line Login mode enables you to temporarily leave the desktop to work in your operating system environment. Command Line Login mode is not a desktop session. When your system is in Command Line Login mode, the desktop is suspended. You log in using your operating system mechanism rather than Login Manager. There are no windows because the X server is not running.

▼ To Log In to and Out of a Command-Line Session

Note – Certain types of configurations (for example, X terminals) do not provide a Command Line Login mode option.

To enter Command Line Login mode:

1. **Choose Command Line Login from the Options menu.**
The login screen disappears and is replaced by a console prompt.
 2. **Supply your login and password as prompted.**
To leave Command Line Login mode:
 - **Type `exit` at a command-line prompt.**
-

Using a Home Session

Ordinarily, the desktop saves session information when you log out and uses that information to start your next session. If you start or stop applications during your session, or use Style Manager to change the appearance and behavior of your system, changes you make are reflected in your next session. This type of session is called a *current session*.

The desktop also provides a *home session*. A home session is a session that you explicitly save. It's like taking a snapshot of your current session at some point in time. Once you've saved a home session, you can specify that logging in always restores that session instead of the current session.

▼ To Save a Home Session

1. **Click the Style Manager control in the Front Panel.**
2. **Click the Startup control in Style Manager.**
The Startup dialog box is displayed.
3. **Click Set Home Session in the Startup dialog box.**
4. **Click OK in the confirmation dialog box that appears.**
This saves the current state of your session.

▼ To Automatically Start the Home Session at Login

1. **Click the Style Manager control in the Front Panel.**

2. **Click the Startup control in Style Manager.**

The Startup dialog box is displayed.

3. **Select Return to Home session.**

4. **Click OK.**

When you choose Return to Home session, Session Manager will not save your session at logout.

▼ To Choose between the Current and Home Session for Each Session

1. **Click the Style Manager control in the Front Panel.**

2. **Click the Startup control in Style Manager.**

The Startup dialog box is displayed.

3. **Select Ask Me at Logout.**

4. **Click OK.**

You decide what will be your next session—current or home—at logout time. If you choose to return to the home session, the current session information is not saved. (You cannot change your mind the next time you log in.)

Getting Help

Online help is available for each of the standard applications in the Common Desktop Environment (CDE). Whether you are using File Manager, Calendar, or Mailer for example, you request and display help topics in the same way. You can also browse help information on your system using the desktop Help Manager.

Other applications installed on your desktop may take advantage of using the desktop's Help System or provide help in other ways.

- "Requesting Help" on page 81
- "Using Help Windows" on page 85
- "Selecting Help Topics" on page 87
- "Moving between Help Topics" on page 89
- "Searching for Specific Information" on page 92
- "Browsing Help on Your System" on page 95
- "Printing Help Topics" on page 101

Requesting Help

Here are the ways you can request Help:

- Press F1—also known as the "help key"—to get *context-sensitive* help
- Choose a command from an application's Help menu
- Open Help Manager from the Front Panel to browse help on your system
- Open the Help subpanel to choose help about the desktop or to choose On Item Help

Press F1 — The Help Key

When you have a question, the quickest and easiest way to get help is to press F1. When you press F1, the application you are using displays a help topic most closely related to the component—a window or button for example—that is highlighted. Because the application determines which help topic is most appropriate, this type of help is called context-sensitive.

The F1 key is a quick way to get help on an application menu or dialog box. For example, to request help about the File Manager File menu, display the File menu and press F1. File Manager displays a description of each item in the menu. Or, if a dialog box is open, pressing F1 will display an explanation of the dialog box. The F1 key is a shortcut for clicking the dialog box's Help button.

Note – Some computers have a dedicated “Help” key on the keyboard. If yours does, it may take the place of the F1 key.

Using an Application's Help Menu

Most applications have a Help menu that contains commands for requesting different types of help such as an introduction, application tasks, or reference information.

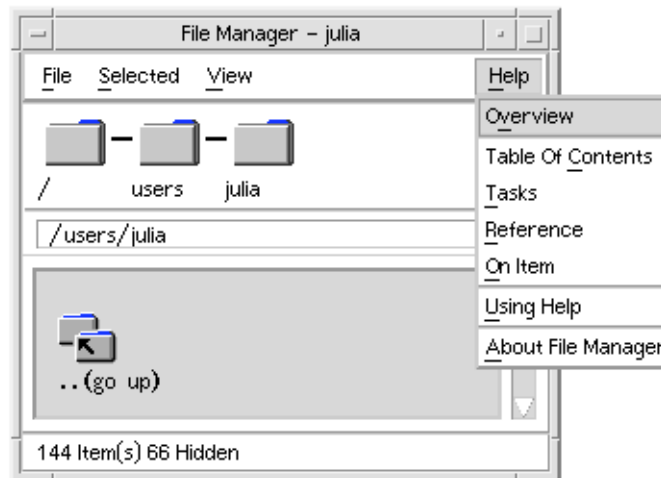


FIGURE 3-1 CDE application Help menu

A typical CDE Help menu includes these commands:

Overview—displays the *home topic* for the application. The home topic is the first topic of the application's help topic hierarchy.

Tasks—displays task instructions for most operations performed with the application.

Reference—displays reference summaries for various components, such as windows and dialog boxes, menus, and application resources.

On Item—enables you to click an item in any window of an application and view a description of the item.

Using Help—provides help on using the help windows.

About Application—displays the version and copyright information for the application.

Applications can include additional choices. Also, non-CDE applications may have different commands in their Help menus.

On Item Application Help

On Item help is interactive. It enables you to move the pointer to a specific item (such as a menu, button or dialog box) and click the item to display its corresponding help.

▼ To Select On Item Help

1. Choose On Item from the Help menu.

The pointer changes to a ? (question mark).

2. Move the pointer to an item in the application and click mouse button 1.

A description of the item is displayed.

Using Help Manager

Help Manager is a special help volume that lists all the online help registered on your system. Clicking the Help Manager control in the Front Panel opens the Help Manager help volume.



FIGURE 3-2 Help Manager control

Click any of the underlined titles to view the corresponding help information. For additional instructions about using Help Manager see “Browsing Help on Your System” on page 95.

For convenience, the Help subpanel on the Front Panel provides help on CDE and the Front Panel (see “Help Subpanel” on page 128).

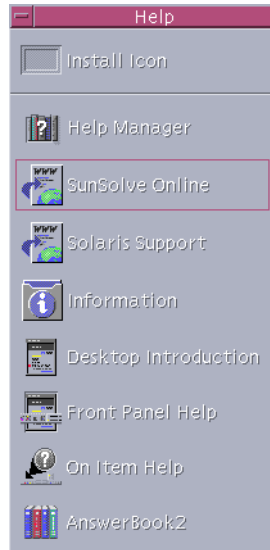


FIGURE 3-3 Help Subpanel

Using Help Windows

The Help System is built into each of the CDE applications (and possibly other applications installed on your system). When you ask for help while using an application, the application displays a help window.

Applications can use two types of help windows to display help topics: a general *help window* and a quick *help window*, shown in Figure 3-4.

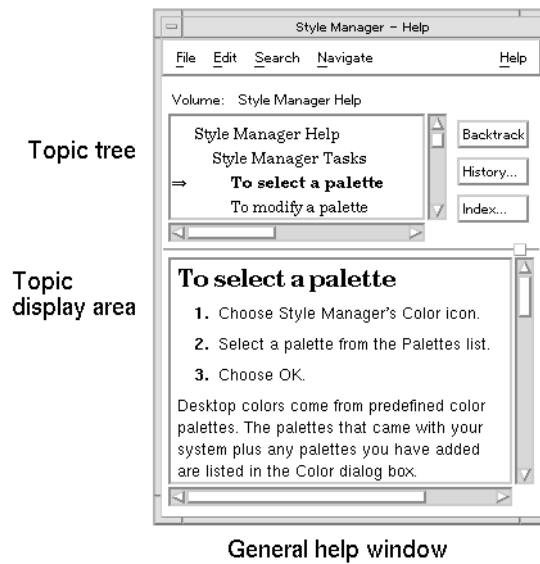


FIGURE 3-4 Types of help windows

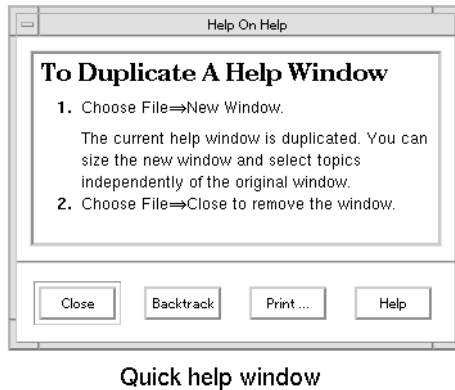


FIGURE 3-4 Types of help windows

General help windows have a topic tree and a topic display area. The topic tree is a list of help topics that you can browse to find help on a subject. When you choose a topic, it is displayed in the lower portion of the help window called the topic display area.

Quick help windows are streamlined help windows. A quick help window has just a topic display area and one or more buttons.

Selecting Help Topics

There are two ways to select a help topic. You can choose a topic from the topic tree. Or, within a help topic, you can select a hyperlink. A hyperlink is an active word or phrase that “jumps” to another related help topic. Any underlined text in a help window is a hyperlink.

Graphic images can also be used as hyperlinks. For more information about hyperlinks, see “Using Hyperlinks” on page 88.

Using the Topic Tree

The topic tree is an outline of a help volume’s major topics. Subtopics are indented under main topics. The current topic, whose contents are displayed in the topic display area, is marked with an (arrow). You can scroll the topic display area to see all your choices or resize the entire help window.

You can also change the size of the topic pane. To do so, drag the sash control shown in Figure 3–5. Then release the mouse button to set the new size.

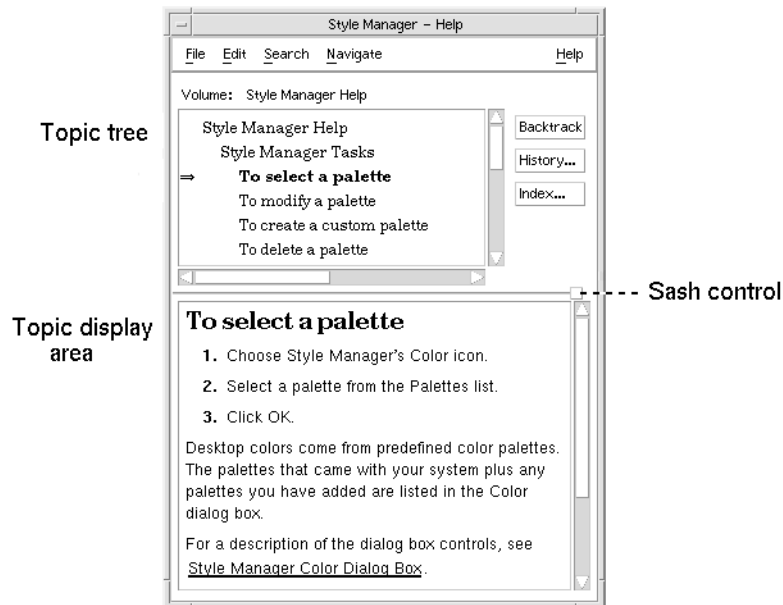


FIGURE 3–5 Resizing the topic tree

▼ To Select a Topic

1. Move the pointer into the topic tree.
2. Click mouse button 1 on the topic you want to display.

Using Hyperlinks

Any underlined text in a help window is a hyperlink. It is easy to “jump” to related help topics using hyperlinks—just click the underlined text.

What Hyperlinks Look Like

A solid underline identifies a standard hyperlink that displays the new topic in the current help window. For example, the last paragraph in Figure 3–5 shows a hyperlink of this type.

A dashed underline indicates a *definition link*, which displays a quick help window.

A graphic—an icon, for example—can also be a hyperlink. A grey open-cornered border identifies a graphic hyperlink. Figure 3–6 shows the different hyperlink formats that can be used in help topics.



FIGURE 3–6 Hyperlink formats

Links That Display a New Window

Most hyperlinks display the related topic in the same window. However, if you choose a hyperlink that jumps to a help topic for another application, a new window is displayed. Links that jump from one application's online help into another's are called *cross-volume* or *cross-application* hyperlinks.

▼ To Select a Hyperlink

1. Move the pointer to the underlined text or graphic image.
2. Click mouse button 1.

Moving between Help Topics

To move between help topics, use these commands on the Navigate menu:

Backtrack—returns to the previous topic. Backtrack enables you to return to each topic you have visited.

History—displays a History dialog box that lists help volumes and topics you have visited. Select a help topic to re-display it.

Home Topic—returns to the home topic, or beginning of the help volume.

For convenience, Backtrack and History are also provided as push buttons.

Help Pop-up Menu

In a general help window, you can also use the Help pop-up menu as a shortcut. The pop-up menu includes both Backtrack and Home Topic, which are frequently used commands.

Quick help windows do not have a pop-up menu.

▼ To Display the Help Pop-up Menu

1. Point to the topic display area and press mouse button 3.
2. Choose Backtrack or Home Topic.

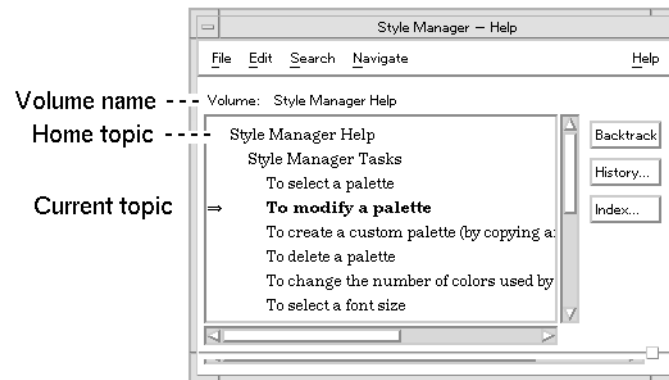


FIGURE 3-7 Help pop-up menu

Location Indicators

Because hyperlinks can quickly take you from one piece of information to another, you may need to know where you are. A quick look at your help window can give you the information you need.

- The line located below the menu bar reports the name of the volume you are viewing. This is helpful when you have explored several help volumes using Help Manager, the help index, or cross-volume links.



- Within the topic tree, the first item is the home topic, or the beginning of the help volume. After exploring topics, you can easily return to the home topic by scrolling to the top of the topic tree. Or, you can choose Home Topic from the Navigate menu or pop-up menu.
- An (arrow) points to the title of the current topic. As you choose topics, the arrow moves to identify your selection. Scrolling the topic tree shows you where you are located relative to other topics.

Knowing Where You've Been

A general help window keeps track of the topics that you have visited. The History command opens a dialog box that lists the help volumes and help topics you have visited.

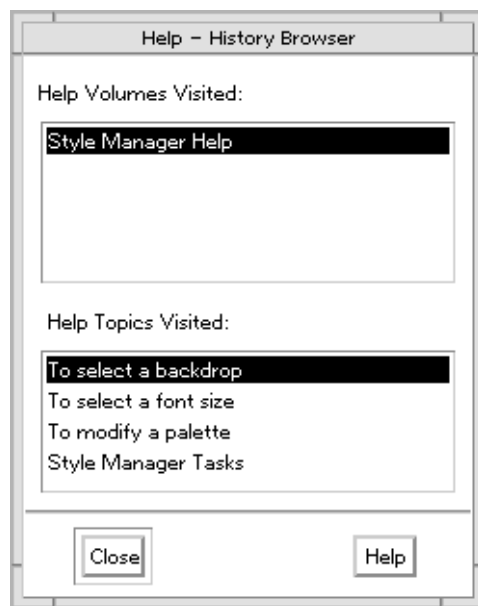


FIGURE 3-8 History dialog box

▼ To Use History to Return to a Topic

1. Click the History button.
2. Choose the title of the help volume or topic that you want to display.
3. When you're done, click Close.

Searching for Specific Information

Like a book, a help volume has an index of important words and phrases that you can use to find help topics on a subject. You can browse or search the index of the current volume, selected volumes, or all help volumes available on your system.

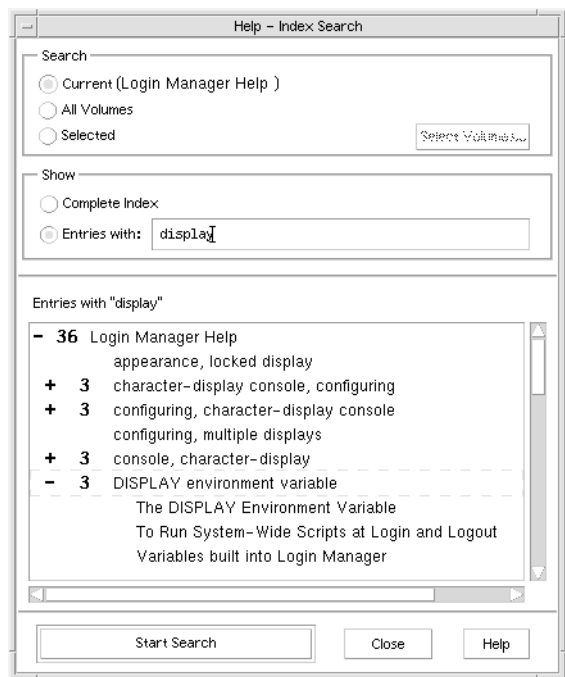


FIGURE 3-9 Index Search dialog box

Because the help index can be quite large even for a single volume, index entries can be expanded or contracted. A + (plus) sign indicates that the index entry relates to more than one help topic. The number shows the count of help topics. You can click the index item to list the topics.

For instance, the result of an index search for the word “display” is shown in Figure 3-9. The -36 prefix tells you that there are 36 index entries that contain the keyword “display.” Clicking any title marked by a + (plus) expands the list and the + (plus) changes to a - (minus) sign. The last index entry shown in the figure has been expanded in this way.

▼ To Search for Topics Using the Help Index

Note – The help index is available only in a general help window.

1. To open the index, click the Index button.

The index lists all of the entries for the current help volume. You can choose All Volumes to view an index for all available help volumes or choose Selected if you want to select only certain volumes.

2. Select the Entries with field, type the word or phrase you are looking for, and press Return.

Index searches are not case sensitive. Wildcards such as * (asterisk) and ? (question mark) can be used (see “Pattern Searches” on page 94 below).

3. Select the index entry you want to view.

If the entry has a + (plus sign) prefix, the list will expand to show additional choices. Then select a help topic to view.

You may view as many topics as you want.

4. Click Close when you are done.

Pattern Searches

In a pattern search certain characters (known as “wildcards”) have special meaning. You can combine these characters in a variety of ways.

Two frequently used wildcards are asterisk (*) and question mark (?). The * matches any string of characters (including no characters), and ? matches any single character. Other wildcards include:

. (period)—matches any character

| (vertical bar)—specifies two search patterns and matches either pattern (logical OR)

() (parentheses)—encloses a pattern expression

To search for a character that has special meaning in a regular expression, precede the character with a \ (backslash).

Examples

mouse.*clicking—matches entries that contain the word “mouse” followed by any number of characters followed by “clicking”

mouse | click—matches entries that contain the word “mouse” or “click”

(session | style)*manager—matches entries that contain “Session Manager” or “Style Manager”

Browsing Help on Your System

You can browse all application help volumes registered on your system without having to start each individual application—just start Help Manager from the Front Panel.

At the top level, Help Manager groups help volumes into help families. For example, the help family Common Desktop Environment lists help volumes for the standard desktop applications. You can browse and display any of the volumes listed.

▼ To Open Help Manager

1. **Click the Help Manager control in the Front Panel (see Figure 3-2).**

A help window displays a list of help families with online help. This is the top level of Help Manager.

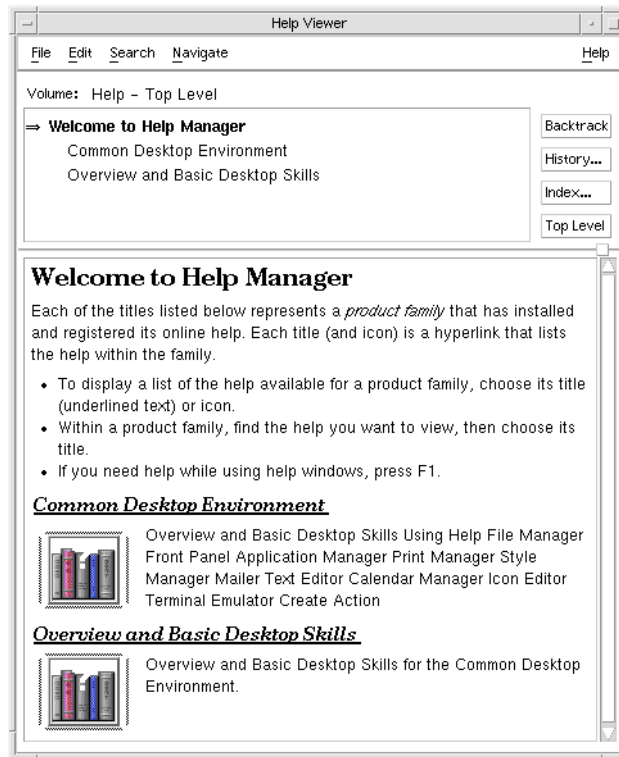


FIGURE 3-10 Top-level view in Help Manager

2. Scroll the window to find the product group you are interested in and click its title (underlined).

This lists the help volumes available for that product.

3. To open a particular help volume, click its title (underlined text).
4. To return to the top level of Help Manager, click the Top Level button.

For example, to browse File Manager's online help:

1. Click the Help Manager control.
2. Choose Common Desktop Environment.
3. Scroll the list of help volumes until you see File Manager Help.

4. Click File Manager Help.

File Manager's help is displayed. This is the same help information you would see if you opened File Manager and chose Overview from the Help menu.

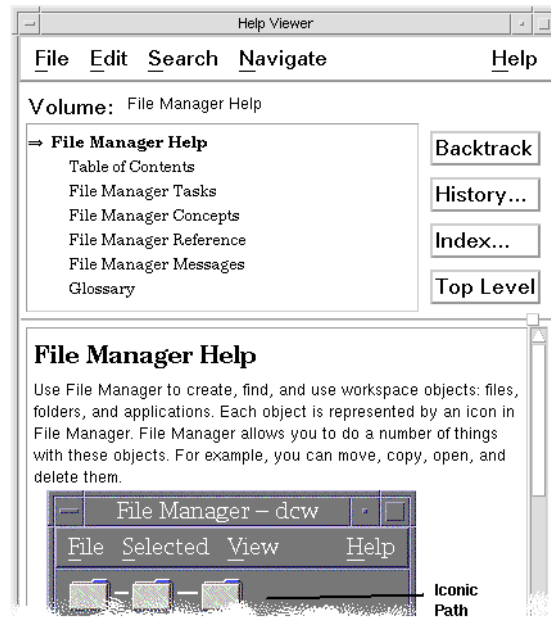


FIGURE 3-11 File Manager help viewed in Help Manager

▼ To Duplicate a Help Window

1. Choose New Window from the Help Manager File menu.

The current help window is duplicated. You can size the new window and select topics independently of the original window.

2. To remove the window, choose **Close** from the **File** menu.

Note – The New Window command is only available in the Help Manager help window (see “Browsing Help on Your System” on page 95).

Displaying Documentation Online

Online manuals can be displayed by choosing AnswerBook2 from the Help subpanel. The current versions of CDE manuals are normally available on the Internet at the URL <http://docs.sun.com>.

Displaying a Man Page

Manual reference pages, traditionally known as “man pages,” can be displayed using the Man Page Viewer action. The action icon is located in the Desktop_Apps folder in Application Manager.

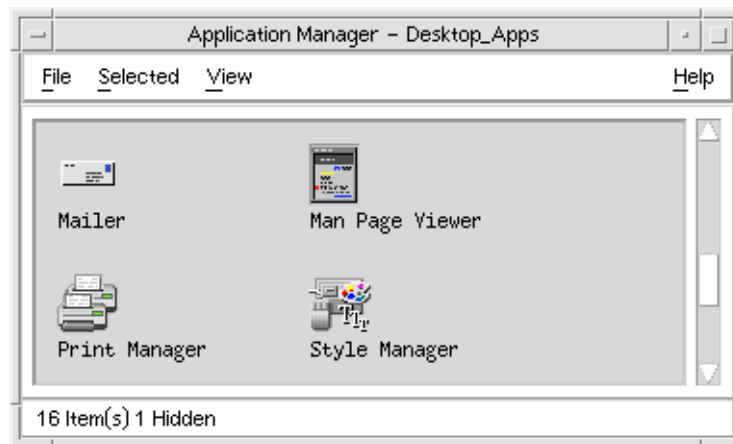
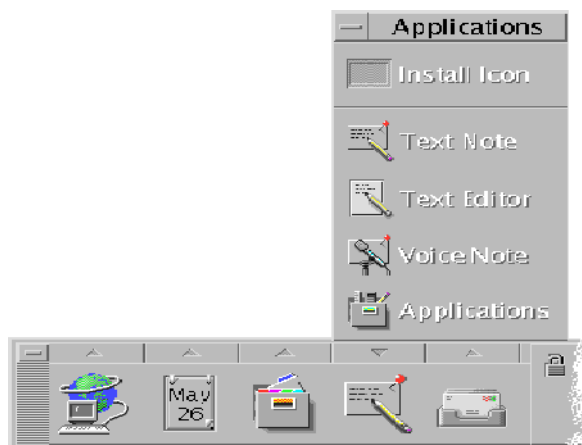


FIGURE 3-12 Man Page action icon

▼ To Display a Man Page

1. Click the Application Manager control in the Applications subpanel of the Front Panel.



Application Manager opens.

2. Double-click the Desktop_Apps icon.

3. Double-click the Man Page Viewer icon.

A dialog box is displayed, prompting you to enter a man page name.



4. Type the name of the man page you want to see and optional command line options, and press Return.

The man page is displayed in a quick help window.

5. Click Close to dismiss the man page.

Note – For a list of command line options available with the man command, display the man(1) man page.

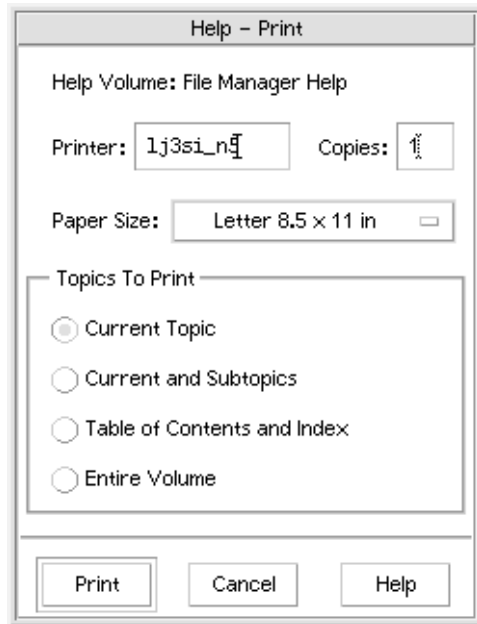
Printing Help Topics

Sometimes you may want to have a printed version of a help topic for a particular application. You can print an individual help topic, a table of contents and index, or the entire help volume. Printing options, such as paper size, number of copies, and destination printer, can also be set in the Print dialog box.

Printed help topics are directed to your default printer unless you provide a different printer name in the dialog box. Printed output is text only.

▼ To Print a Help Topic

1. **Choose Print from the File menu. (In a quick help window, click the Print button.)**
You can use the default values in the Print dialog box and skip to step 5 or enter new values for your print job.



2. **Optional.** Type the name of the printer that you want to use.
3. **Optional.** Type the number of copies to print.
4. **Optional.** Click the paper size button to choose a paper size.
5. **Select the topic or topics you want to print.**
 - Current Topic (the default)—prints only the current topic
 - Current and Subtopics—prints the current topic and its subtopics
 - Table of Contents and Index—prints the help volume table of contents and index
 - Entire Volume—prints the contents of the help volume including the table of contents and index
6. **Click Print.**

Printing Configuration

The Print dialog box displays the name of your default printer. You can change the default printer name by modifying the LPDEST environment variable. You can also change the printer for a specific application by modifying the application's application defaults file.

▼ To Set the Printer Resource for an Application

- Edit your `HomeDirectory/.Xdefaults` file by adding this resource:

```
application_name*printer           printer.name
```

If you do not have an `.Xdefaults` file, create the file in your home directory.

Example

You want to direct all printed help topics of an application named `ImageScan` to a printer named `laser2` rather than to your default printer.

Add this resource to your `.Xdefaults` file:

```
ImageScan*printer:                 laser2
```

Modifying Help Window Colors

You can change the colors of the topic tree or topic display area of a help window by setting application resources. Choosing contrasting colors is important. This ensures that text (foreground color) will be visible against the background color.

▼ To Change Help Window Colors for an Application

1. Edit your `HomeDirectory/.Xdefaults` file by adding these resources:

```
application_name*DtHelpDialog*DisplayArea.foreground:  color  
application_name*DtHelpDialog*DisplayArea.background:  color  
application_name*DtHelpDialog*TocArea.foreground:      color  
application_name*DtHelpDialog*TocArea.background:      color  
application_name*DtHelpQuickDialog*DisplayArea.foreground:  color  
application_name*DtHelpQuickDialog*DisplayArea.background:  color
```

Substitute the name of the application whose help windows you want to change for `application_name`.

You can ask your system administrator for a list of colors that you can use or refer to your system documentation.

2. Save and close the file.

When you restart your application, it will use the new color values for the topic tree and topic display area in its help windows.

For example, these resource entries change the foreground and background colors of the topic tree (TocArea) and topic display area (DisplayArea) for an application named DtCardCatalog.

```
DtCardCatalog*DtHelpDialog*TocArea.foreground: yellow
DtCardCatalog*DtHelpDialog*TocArea.background: blue
DtCardCatalog*DtHelpDialog*DisplayArea.foreground: yellow
DtCardCatalog*DtHelpDialog*DisplayArea.background: blue
DtCardCatalog*DtHelpQuickDialog*DisplayArea.foreground: yellow
DtCardCatalog*DtHelpQuickDialog*DisplayArea.background: blue
```

Quick help windows do not have a topic tree, so the TocArea resource is omitted.

Using the Front Panel

The Front Panel is your “dashboard” or control area for the CDE desktop. It gives you point-and-click and drag-and-drop access to the majority of applications on your system; it allows you to switch workspaces; and it displays information such as time and date, printer status, and so on. You can customize your Front Panel to include your favorite applications, and you can move or minimize the Front Panel.

Before using the Front Panel, you should be aware of the following features:

- Using the Front Panel is faster than using Application Manager: it enables you to run the common actions on the Main Panel with one click of the mouse, and you can activate the thirty or so other controls on the subpanels with two clicks of the mouse.
- Controls are grouped logically into subpanels, making them easier to find.
- Many controls on the Front Panel act as drop zones that carry out actions on files and text dropped on them, often interpreting the required action by looking at the file contents. For example, if you drop a mail message on the activity drop zone (spinning globe) it opens the message in Mailer, but if you drop text file on the same drop zone, it opens the file in Text Editor. Front Panel is also fully web-aware, running the web browser when you drop bookmark files, URL text, or HTML files on appropriate drop zones.
- Many controls on the Main Panel also act as indicators, displaying time and date, print and mail status, workstation performance, and so on.
- “Front Panel Elements” on page 106
- “Basic Front Panel Skills” on page 107
- “Tour of the Front Panel” on page 114
- “Front Panel Applications” on page 132
- “Customizing the Front Panel” on page 138
- “Customizing Workspaces” on page 141

Front Panel Elements

The Front Panel comprises the Main Panel (displayed by default) and several subpanels that roll-up when you click their tab on the main panel.

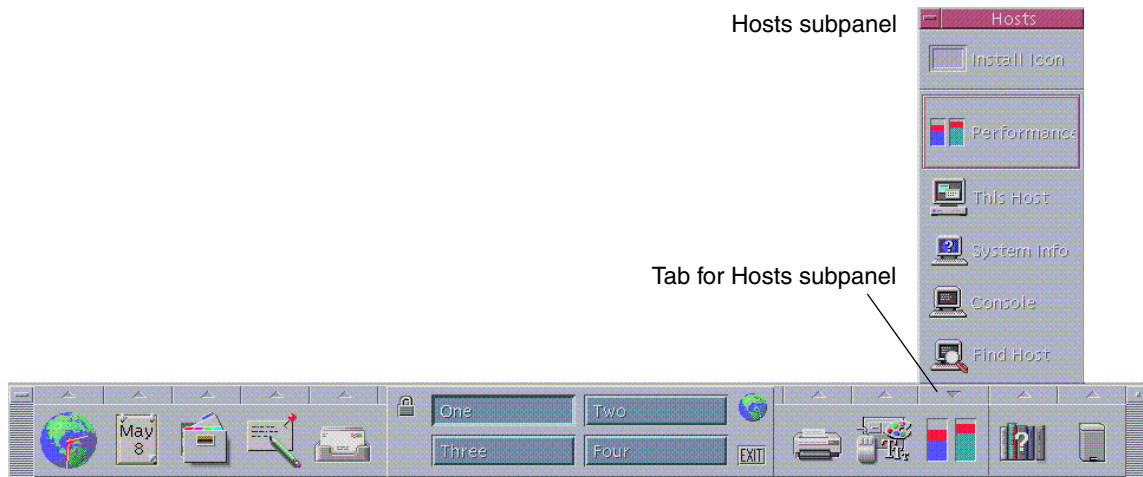


FIGURE 4-1 Main Panel and an Open Subpanel

Main Panel

The central area of the Main Panel, called the *workspace switch*, enables you to display other workspaces, run actions, lock the display and log out.

Subpanels

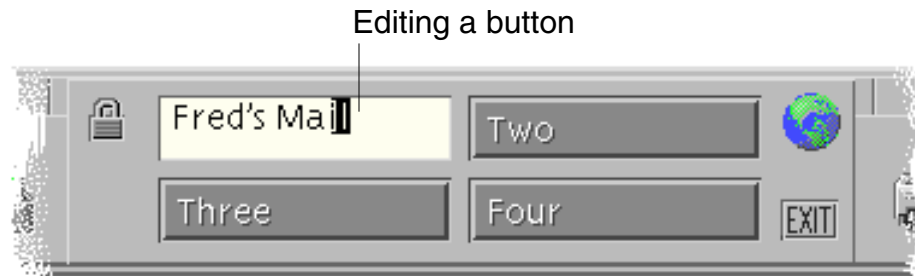
Above each control on the main panel is a tab marked with a triangle. Clicking this tab displays the subpanel, whose name is indicated on its title bar.

Subpanels contain:

- A labelled copy of the control in the Main Panel.
- Other controls for running applications. (You can promote these to the Main Panel.)
- An Install Icon control, which acts as a drop zone for adding a control to the subpanel.

The Workspace Switch

The workspace switch contains the buttons you use to change from one workspace to another, and other controls. You can rename a workspace by clicking its button and editing the name text.



Workspace Switch

Each workspace occupies the entire display, as though your display has several layers. Workspaces effectively expand the amount of display area available on your desktop.

Basic Front Panel Skills

This section covers basic skills for using Front Panel controls and subpanels.

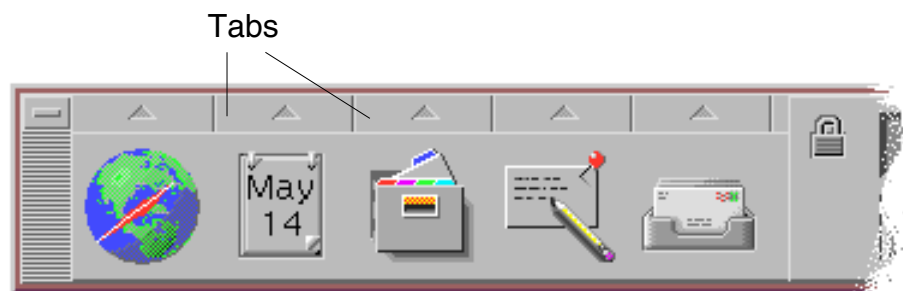
▼ To Activate a Front Panel Control

- Click or double-click the control.

▼ To Open a Subpanel

Controls that have subpanels have an arrow button on top of the control.

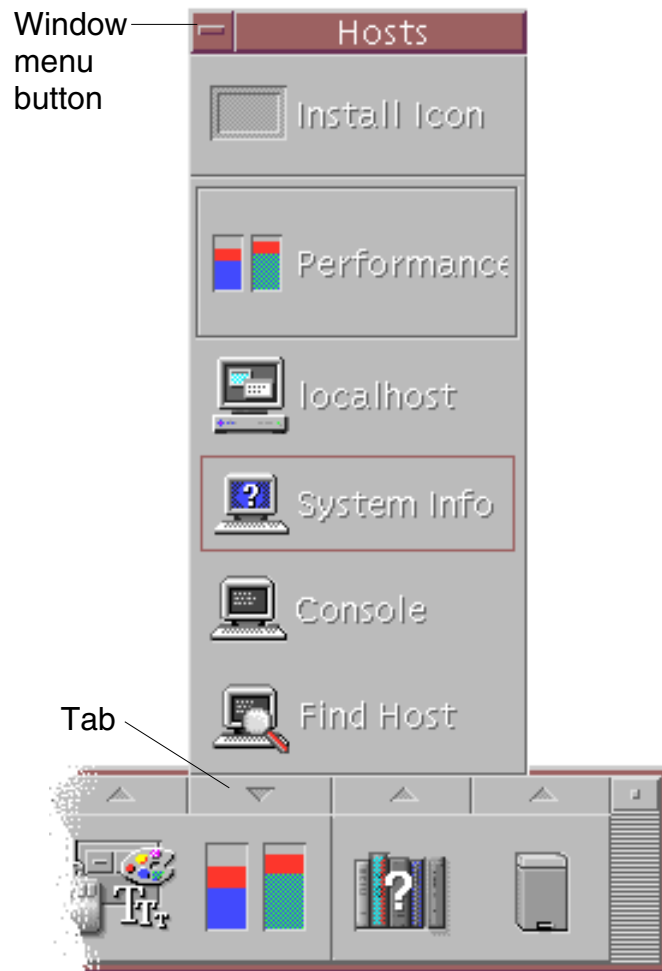
- Click the tab above the control.



▼ To Close a Subpanel

The subpanel closes automatically when you choose a control unless you have moved the subpanel from its original location.

- Click the tab for the open subpanel.
- *Or*, choose Close from the subpanel's window menu (upper left corner)



Front Panel Pop-Up Menus

Each control in the Front Panel has a pop-up menu. The menu is different for each control.

▼ To Display a Front Panel Pop-Up Menu

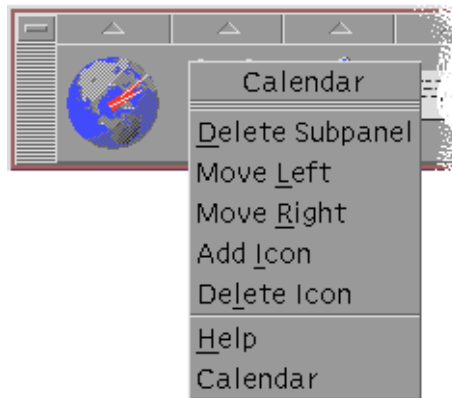
- **Press mouse button 3 over the control.**
The control's pop-up menu is displayed.

Contents of the Pop-Up Menu

The contents of the pop-up menu depend on the behavior of the control and its location.

Main Panel Controls

If the control starts an application, the first entry in the menu is a command that starts the application. Choosing the menu item has the same effect as clicking the control.

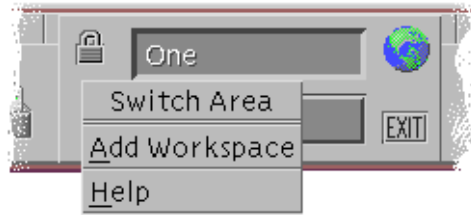


In addition, the pop-up menu may contain the following items:

- Delete Subpanel - Removes the subpanel and its contents
- Move Left - Interchanges the selected icon (and its subpanel) with the icon and subpanel immediately to its left
- Move Right - Interchanges the selected icon (and its subpanel) with the icon and subpanel immediately to its right
- Add Icon - Adds a blank icon immediately to the right of the selected control
- Delete Icon - Removes the selected icon and its subpanel
- Help - Displays On Item help for the control

Switch Area

The switch area is the portion of the workspace switch not occupied by other controls or workspace buttons.

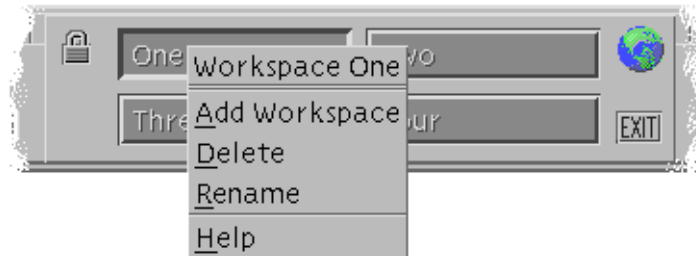


The switch area pop-up menu contains the following items:

- Add Workspace - Adds a workspace and creates a workspace button in the workspace switch
- Help - Displays help for the workspace switch

Workspace Buttons

Use the workspace buttons to change workspaces. Each button has its own menu.

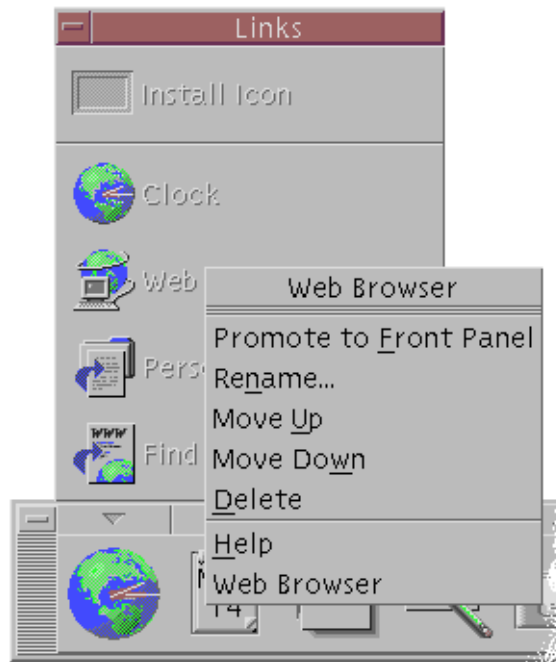


The workspace button pop-up menu includes the following items:

- Add Workspace - Adds a workspace to your list of workspaces
- Delete - Deletes the workspace
- Rename - Changes the button into a text field for editing the name
- Help - Displays help for the workspace switch

Subpanel Controls

The pop-up menus for subpanels include a command for making the control the current Main Panel control.



The pop-up menu for subpanel controls includes the following items:

- Promote to Front Panel - Duplicates the control in the Main Panel, replacing the current Main Panel control
- Rename - Renames the control on the subpanel
- Move Up - Interchanges the selected icon with the icon immediately above it
- Move Down - Interchanges the selected icon with the icon immediately below it
- Delete - Deletes the control from the subpanel
- Help - Displays On Item help for the control

Front Panel Drop Zones

The Front Panel contains the following controls that act as drop zones:

- Some controls act as drop zones as specified for the applications that they run. For example, the File Manager control will display folder paths dropped on it, the Text Editor control will open files dropped on it, and the Web Browser control will open URLs dropped on it.

- The Add Icon control on each subpanel acts as a drop zone (as explained in “To Add an Application or Other Icon to a Subpanel” on page 139).
- The Activity indicator (globe) control on the main panel is a drop zone for all registered data types, invoking the default actions for each object dropped on it. For example, dropping a URL displays the URL in a browser, and dropping a folder displays the folder contents in File Manager.

Front Panel Help

You can get help on:

- Individual controls
- Using and configuring the Front Panel

▼ To Get On Item Help on a Front Panel Control

- **Choose Help from the control’s pop-up menu.**

Or:

1. **Display the Help subpanel.**
2. **Click the On Item Help control.**
The pointer changes shape.
3. **Click the control on which you want help.**

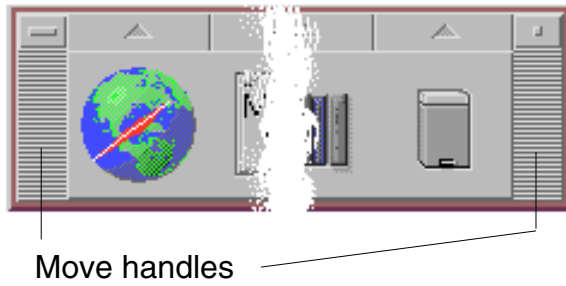
▼ To Get Help on Using and Configuring the Front Panel

1. **Display the Help subpanel.**
2. **Click the Front Panel Help control.**
This displays the Help Viewer and Front Panel help volume.

▼ To Move the Front Panel or a Subpanel

Subpanels are moved like other windows—by dragging the title bar.

The Main Panel is moved using its move handles.



▼ To Minimize the Front Panel

Minimizing the Front Panel turns it into an icon.

- Click the Front Panel's minimize button.



The Front Panel window icon is labeled with the workspace name.

Tour of the Front Panel

This section introduces the contents of the Main Panel and the subpanels. Your Front Panel may be customized with different or additional controls.

Main Panel

The following table describes the controls on the Main Panel.

TABLE 4-1 Main Panel Controls





Icon	Control (Subpanel)	Click Behavior	Drop Behavior	Indicator Behavior
	Clock (Links)	Opens the default browser	None	Current time
	Calendar (Cards)	Starts the Calendar application	Dropping an appointment file adds the appointment to the calendar	Current date
	File Manager (Files)	Opens a File Manager view of your home folder	Dropping a folder opens a File Manager view of that folder	None
	Text Note (Applications)	Starts the desktop Text Editor application	Puts the dropped file or text on the workspace	None

TABLE 4-1 Main Panel Controls (Continued)






Control				
Icon	(Subpanel)	Click Behavior	Drop Behavior	Indicator Behavior
	Mailer (Mail)	Starts the desktop Mailer application	Attaches dropped item to a New Message window	Changes appearance when you have new mail
				
	Lock	Locks the display and keyboard. You must type your password to unlock the system.	None	None
	Workspace switch	Changes workspaces	None	Indicates current workspace
	Activity Indicator	Displays a Go action dialog box	Runs action (for example, a browser) registered for data type dropped	Spins when the system is running an action

TABLE 4-1 Main Panel Controls (Continued)







Control				
Icon	(Subpanel)	Click Behavior	Drop Behavior	Indicator Behavior
	Exit	Begins logout from the current session	None	None
	Default (Personal Printers)	Displays the status of the default printer	Prints the file on the printer	None
	Style Manager (Tools)	Opens the desktop Style Manager application	None	None
	Performance Meter (Hosts)	Opens Performance Meter	Opens Performance Meter for the hostname dropped	Once activated, indicates CPU and disk activity for future sessions
	Help Manager (Help)	Opens a Help Viewer window displaying the top level of help information	Dropping a master volume file (*.sdl) opens a Help Viewer window with that help volume	None

TABLE 4-1 Main Panel Controls (Continued)

Control				
Icon	(Subpanel)	Click Behavior	Drop Behavior	Indicator Behavior
	Trash (Trash)	Opens the Trash Can window	None	Different appearance when not empty

Links Subpanel

Use the Links subpanel to open a web browser, display the Sun Microsystems web search site (<http://search.Sun.com>), and manage your personal bookmarks.

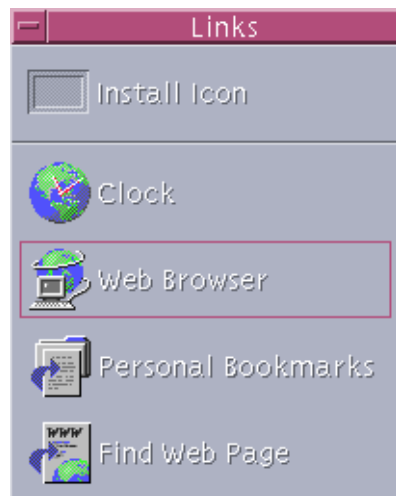


TABLE 4-2 Links Subpanel Controls





Icon	Name	Click Behavior	Drop Behavior
	Clock	Opens default browser	Opens default browser for URL

TABLE 4-2 Links Subpanel Controls *(Continued)*

Icon	Name	Click Behavior	Drop Behavior
	Web Browser	Opens default browser	Opens default browser for URL
	Personal Bookmarks	Opens File Manager view of personal bookmarks	Opens default browser for URL
	Find Web Page	Opens default browser for the Sun Microsystems search site	None

Cards Subpanel

Use the Cards subpanel to open Calendar and search for address cards, host cards, and mail alias cards.

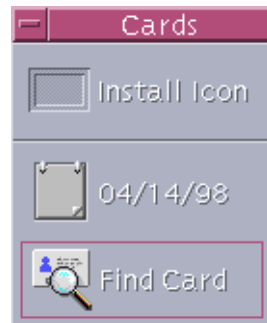


TABLE 4-3 Controls on the Cards Subpanel



Icon	Name	Click Behavior	Drop Behavior
	Calendar	Opens Calendar for the current date and user	Sets up the dropped appointment

TABLE 4-3 Controls on the Cards Subpanel (Continued)

Icon	Name	Click Behavior	Drop Behavior
	Find Card	Opens Address Manager with default search options	Opens a dropped card, or opens Address Manager with default options and searches for dropped text

Files Subpanel

Use the Files subpanel to:

- Open File Manager
- Access removable media such as CD-ROMs and diskettes
- Examine file properties
- Run encryption, compression, and archiving commands
- Find files and folders

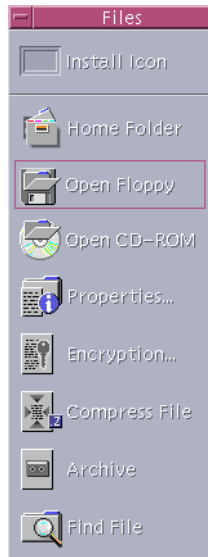


TABLE 4-4 Controls on the Files Subpanel









Icon	Name	Click Behavior	Drop Behavior
	Home Folder	Opens File Manager view of \$HOME	Opens File Manager view of dropped folder
	Open Floppy	Loads a diskette in drive and displays File Manager view of it.	None
	Open CD-ROM	Loads a CD-ROM volume in drive and displays a File Manager view of it	None

TABLE 4-4 Controls on the Files Subpanel *(Continued)*

Icon	Name	Click Behavior	Drop Behavior
	Properties	Opens Properties dialog box with no file selected	Opens Properties dialog box for file or folder dropped
	Encryption	Prompts for the file to be encrypted and the encryption key	Encrypts and replaces an unencrypted file; decrypts and replaces an encrypted file
	Compress File	Prompts for file to be compressed	Compresses and replaces an uncompressed file; decompresses and replaces a compressed file
	Archive	Prompts for file or folder to be archived	Archives and replaces dropped file or folder
	Find File	Opens File Finder in default mode	Searches for dropped text as file or folder name

Applications Subpanel

Use the Applications subpanel to post text and voice notes on the workspace, to run Text Editor, and to open Application Manager.

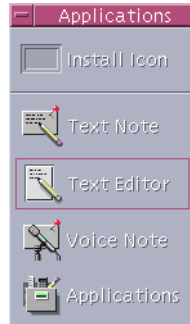






TABLE 4-5 Controls on the Applications Subpanel

Icon	Name	Click Behavior	Drop Behavior
	Text Note	Opens Text Editor in note mode	Puts the dropped file on the workspace
	Text Editor	Opens Text Editor	Opens the dropped file in Text Editor
	Voice Note	Opens Audio in note mode	None
	Applications	Opens Application Manager	None

Mail Subpanel

Use the Mail subpanel for to access Mailer or to connect to the Solaris suggestion box mail alias.

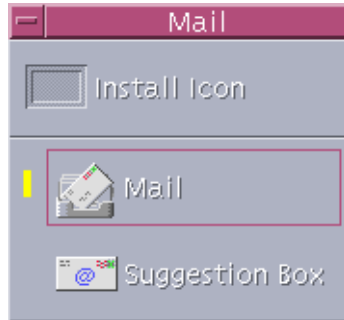




TABLE 4-6 Controls on the Mail Subpanel

Icon	Name	Click Behavior	Drop Behavior
	Mail	Opens Mailer	Displays New Message dialog box and attaches dropped file
	Suggestion Box	Opens New Message dialog box to sent to the default suggestion box mail alias for Solaris at Sun Microsystems	Displays New Message dialog box for suggestion box mail alias and appends dropped file

Personal Printers Subpanel

Use the Personal Printers subpanel to view print jobs on your printer or to work with all the printers on your system.

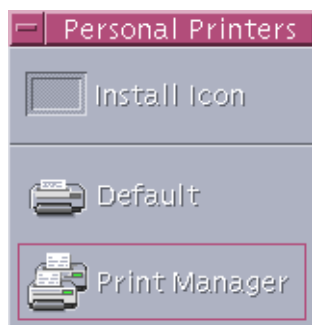




TABLE 4-7 Controls on the Personal Printers Subpanel

Icon	Name	Click Behavior	Drop Behavior
	Printer Jobs	Opens Printer Jobs for your default printer	Prints the dropped file on the default printer
	Print Manager	Opens Print Manager for all printers available on your network	Prints the dropped file on the selected printer. This is a useful method of printing to a printer other than your default printer.

Tools Subpanel

Use the Tools subpanel to setup your preferences for the desktop and workspace, to run Process Manager, and to view errors in CDE.

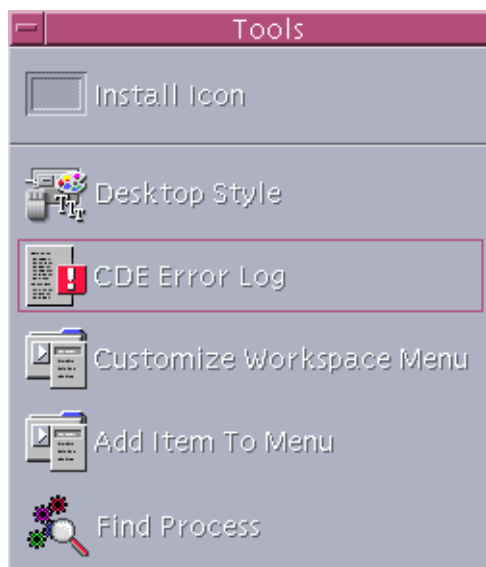


TABLE 4-8 Controls on the Tools Subpanel






Icon	Name	Click Behavior	Drop Behavior
	Desktop Style	Opens Style Manager	None
	CDE Error Log	Displays the file <code>\$HOME/.dt/errolog</code> which contains CDE errors after <code>xsession</code> startup	None
	Customize Workspace Menu	Warns you to update the workspace and opens a File Manager view of the Workspace menu	None

TABLE 4-8 Controls on the Tools Subpanel (Continued)

Icon	Name	Click Behavior	Drop Behavior
	Add Item To Menu	Opens the Add Item to Workspace Menu dialog box	None
	Find Process	Opens Process Manager for your workstation	Opens Process Manager in default mode

Hosts Subpanel

Use the Hosts subpanel to view system information, to monitor host performance, to open terminal and console sessions on hosts, and to find hosts.

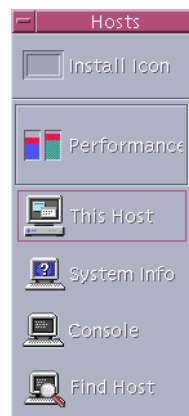


TABLE 4-9 Controls on the Hosts Subpanel






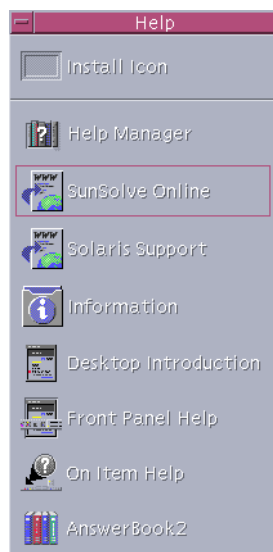
Icon	Name	Click Behavior	Drop Behavior
	Performance	Opens Performance Meter for your workstation	Opens Performance Meter in default mode

TABLE 4-9 Controls on the Hosts Subpanel *(Continued)*

Icon	Name	Click Behavior	Drop Behavior
	This Host	Opens Terminal window for your workstation	None
	System Info	Opens Workstation Information for your workstation	Displays Workstation Information for dropped host name
	Console	Opens Console for your workstation	None
	Find Host	Opens Address Manager to search for host cards	Searches for dropped host name

Help Subpanel

The Help subpanel enables you to access AnswerBook2™ documentation, the master help volume (Help Manager), and other online help volumes such as Front Panel Help.



First-time CDE Users

If you are upgrading from a previous version of CDE and want to read about the current features of the CDE desktop, see:

- Desktop Introduction
- Front Panel Help

If you are transitioning from OpenWindows, see:

- Desktop Introduction
- Front Panel Help
- *Solaris Common Desktop Environment: User's Transition Guide* which can be accessed via the AnswerBook2 viewer.

If you are transitioning from another windowing system such as Microsoft Windows, see:

- Desktop Introduction
- Front Panel Help
- *Solaris Common Desktop Environment: User's Guide* which can be accessed via the AnswerBook2 viewer

Help with Procedures

If you need to know *how to* carry out a procedure or task in CDE, see:

- Help Manager and search the help volumes for the required procedure or keyword
- The procedures in *Solaris Common Desktop Environment: User's Guide* which can be accessed via the AnswerBook2 viewer

Technical Issues and Support

System administrators will find *Solaris Common Desktop Environment: Advanced User's and System Administrator's Guide* (available via the AnswerBook2 viewer) useful for resolving configuration and administration issues.

System administrators investigating possible bugs should register with SunSolve™, the Sun Microsystems online information, FAQ, and patch service; click SunSolve Online for more details. For help with specific problems that may require interaction with technical support, click on Solaris Support.

The following table describes the Help subpanel controls.

TABLE 4-10 Help Subpanel Controls









Icon	Name	Click Behavior	Drop Behavior
	Help Manager (duplicate of Main Panel control)	Opens a Help Viewer window displaying the top level of help information	Dropping a master volume file (*.sd1) opens that help volume
	SunSolve Online	Opens a browser for the Sun Microsystems documentation and FAQ web site	None
	Solaris Support	Opens a browser for the Sun Microsystems download site for patches, and technical support	None

TABLE 4-10 Help Subpanel Controls *(Continued)*



Icon	Name	Click Behavior	Drop Behavior
	Information	Opens the Information folder in Application Manager	None
	Desktop Introduction	Displays the Introducing the Desktop help volume	None
	Front Panel Help	Displays the Front Panel help volume	None
	On Item Help	Provides on-item help for the Front Panel. Click this control, then click the control on which you want help.	None
	AnswerBook2	Displays the AnswerBook2 viewer if you have AnswerBook2 installed.	None

Trash Subpanel

Use the Trash subpanel to trash and recover files, and to remove (shred) files from the system.



TABLE 4-11 Controls on the Trash Subpanel

Icon	Name	Click Behavior	Drop Behavior
	Trash	Opens Trash Can window	Moves dropped files to the Trash Can window
	Empty Trash Can	Shreds (removes) contents of Trash Can window	Moves dropped files to Trash Can window

Front Panel Applications

This section describes selected applications available on the default Front Panel. Other applications are described in their respective chapters, or in their online help or man pages.

Changing the Default Web Browser

The Links subpanel of the Front Panel contains a Web Browser control. When you click the control, the default browser is launched.

Your `PATH` environment is searched for the `netscape` command (for the Netscape browser) or `hotjava` command (for the HotJava™ browser).

If the `netscape` command is found first, the Netscape browser is launched. If the `hotjava` command is found first, the HotJava browser is launched. If neither is found, an error dialog box appears reporting the failure to find a browser.

The `SdtWebClient` action is used to launch your system's default web browser. If you want to ensure that the default is always Netscape, change the `MAP_ACTION` setting in your `user-prefs.dt` file to

```
MAP_ACTION SdtNetscape
```

If you want to ensure that the default is always the HotJava browser, change the `MAP_ACTION` setting in your `user-prefs.dt` file to

```
MAP_ACTION SdtHotJava
```

The `user-prefs.dt` file belongs in your `$HOME/.dt/types` directory. To create a `user-prefs.dt` file, copy the `/usr/dt/appconfig/types/C/user-prefs.dt` file and save it in your `$HOME/.dt/types` directory as `user-prefs.dt`.

▼ To Display a Different Clock

The Links subpanel of the Front Panel contains a Clock control. When you click the control, the default browser is launched. You can remove this control and display a digital clock on the desktop as follows:

- 1. Open the Links Subpanel.**
- 2. Click mouse button 3 on the Web Browser control.**
A pop-up menu is displayed.
- 3. Choose Promote to Front Panel.**
The Web Browser control is displayed on the Main Panel and the Clock control is displayed on the subpanel.
- 4. Click mouse button 3 on the Clock control.**
A pop-up menu is displayed.
- 5. Choose Delete.**
The Clock control is removed from the subpanel.
- 6. Open the Desktop Tools folder in Application Manager.**
- 7. Double-click Digital Clock.**
The Digital Clock application displays the time and date. This application can be left on your Workspace permanently. Ensure that it is saved with your session defaults using Style Manager.

Working With Bookmarks

A bookmark is a file containing a web URL, or a folder or attachment containing bookmarks. Clicking on a bookmark's icon displays the web page in your default browser.

CDE uses a file extension of `.url` to identify bookmarks. Double click the `index.html` icon in the Sample Bookmarks folder to read more about bookmarks in CDE.

Personal Bookmarks

The Folders subpanel of the Front Panel contains a Personal Bookmarks control. When you click the control, a File Manager view appears on the desktop. It is initially empty. You can create bookmarks to put in this folder. These URLs are then easily accessible through the Front Panel.

Creating Bookmarks

You can create bookmarks in any of the following ways:

- Drag URL text onto the Personal Bookmarks window. This creates a new file. The new file name is `Untitled.url` unless there is another file in your Personal Bookmarks folder with that name. In that case, a dialog box appears telling you to rename the new file.
- Drag URL text onto the Personal Bookmarks control on the Front Panel. This creates a new file with a `.url` extension.
- Copy an existing bookmark: Use the File Manager Selected menu to copy an existing bookmark into your Personal Bookmarks folder, or hold down the Control key and drag the icon onto the opened Personal Bookmarks File Manager window or the Personal Bookmarks control on the Front Panel.

You can create a bookmark using any URL that is normally available, such as URLs with `http` addresses.

Sharing Bookmarks

If you drop URL text or a bookmark file or folder onto the Front Panel mail icon, a Mailer Compose window appears with the corresponding bookmark as an attachment.

Using Find Web Page

The Find Web Page control on the Links subpanel enables you to display a Sun Microsystems search site, <http://search.sun.com/>. This site enables you to search selected sites at Sun Microsystems or to search the Internet.

You may find this search site more useful than standard commercial sites when you are searching for information relating to Sun Microsystems and its products.

Using Encryption

The Encryption control on the Files subpanel enables you to encrypt and decrypt files using the default encryption application. The encryption application shipped with Solaris is `crypt`, as described in the `crypt` man page.

▼ To Encrypt a File

You can encrypt a file by doing one of the following:

1. **Click `Encrypt` in the `Desktop_Tools` folder of `Application Manager`, and specify the file and encryption key in the dialog box displayed.**
2. *Or*, **click the `Encryption` icon on the `Files` subpanel, and specify the file and encryption key in the dialog box displayed.**
3. *Or*, **drop the file on the `Encryption` icon on the `Files` subpanel and specify the encryption key in the dialog box displayed.**

The file is encrypted, encoded, and replaced in its original location.

▼ To Decrypt a File

You can decrypt a file by doing one of the following:

1. **Click `Decrypt` in the `Desktop_Tools` folder of `Application Manager`, and specify the file and encryption key in the dialog box displayed.**
2. *Or*, **drop the file on the `Encryption` icon on the `Files` subpanel and specify the encryption key in the dialog box displayed.**

The file is decoded, decrypted, and replaced in its original location.

Tip – You can decrypt a file by double-clicking on it in a File Manager window.

Using Compression

The Compression control on the Files subpanel enables you to compress (or zip) and decompress (or unzip) files using the default compression application. Compression and Decompression is also available via the Compress File and Uncompress File icons in Application Manager.

The encryption application shipped with the Solaris software is `compress` which, as described in the `crypt` man page, uses adaptive Lempel-Ziv coding. Compressed files are given the extension `.z`.

▼ To Compress a File

1. **Click Compress File in the Desktop_Tools folder of Application Manager and specify the file in the dialog box displayed.**
2. *Or*, **click the Compression icon on the Files subpanel and specify the file in the dialog box displayed.**
3. *Or*, **drop the file on the Compression icon on the Files subpanel.**

The file is compressed, given a `.z` extension, and replaced in its original location.

▼ To Decompress or Restore a File

1. **Click Uncompress File in the Desktop_Tools folder of Application Manager, and specify the file in the dialog box displayed.**
2. *Or*, **drop the file on the Compression icon on the Files subpanel.**

The file is decompressed, has its `.z` extension removed, and is replaced in its original location.

Tip – You can decompress a file by double-clicking on it in a File Manager window.

Using Archiving

The Archive control on the Files subpanel enables you to archive (`tar`) and unpack files. `tar` commands are also available via the Archive, Archive Unpack, and Archive List Contents icons in Application Manager.

The archiving application shipped with Solaris is `tar` which is described in the `tar` man page. By default, archived files are given the extension `.tar`.

▼ To Archive a File

1. Click **Archive** in the **Desktop_Tools** folder of **Application Manager** and specify the relevant file and folder names in the dialog box displayed.
2. *Or*, click the **Archive** icon on the **Files** subpanel and specify the relevant file and folder names in the dialog box displayed.
3. *Or*, drop the file on the **Archive** icon on the **Files** subpanel.

The file is compressed, given a `.tar` extension, and replaced in its original location.

▼ To Unpack an Archived File

1. Click **Archive Unpack** in the **Desktop_Tools** folder of **Application Manager**, and specify the file in the dialog box displayed.
2. Drop the file on the **Archive** icon on the **Files** subpanel.

The file is decompressed, has its `.tar` extension removed, and is replaced in its original location.

Tip – You can unpack a file by double-clicking on it in a File Manager window.

Using Suggestion Box

The Suggestion Box control on the Mail subpanel enables you to send an email to a product improvement proposals mailbox at Sun Microsystems.

Your suggestions should do one of the following:

- Propose the addition of applications, utilities and services to Solaris
- Propose enhancements to existing services and applications
- Report functionality and nomenclature you find difficult to understand, learn, or use



Caution – The suggestion box facility does not provide any guaranteed level of service to you. For issues or bugs that you need to be resolved, use the normal bug reporting process, which is conducted through the distributor network.

Using Workstation Information

When you click System Info on the Hosts subpanel, the Workstation Information dialog box is displayed. The information in this dialog box is typically of interest to system administrators and technical support agents. It includes:

- User identification
- System identification
- Memory usage and allocation
- Version identification for operating environment and CDE
- Current session information

Tip – You cannot change the amount of physical memory allocated using Workstation Information. For information on setting the swap space, see the `swap (1M)` man page.

Customizing the Front Panel

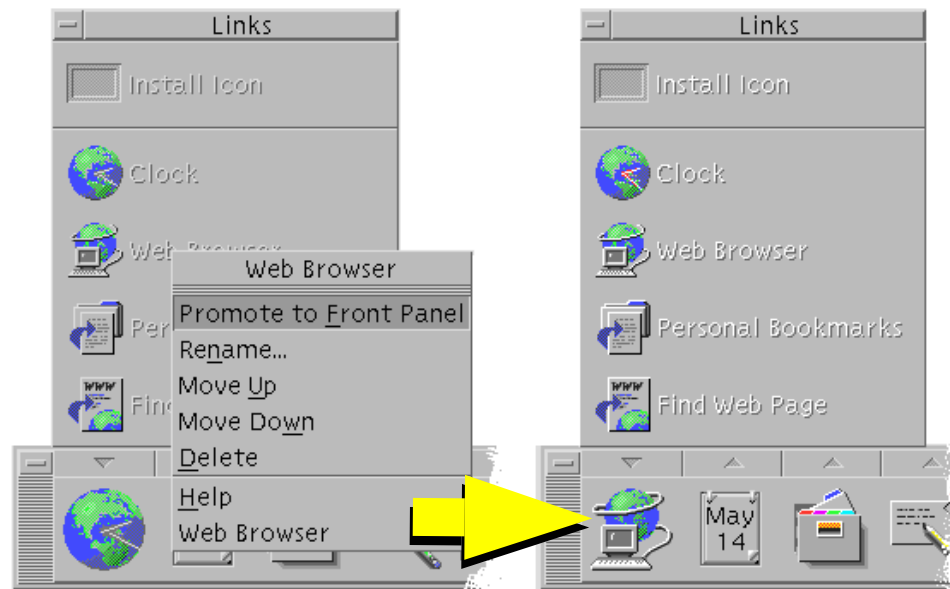
You can change the layout and contents of the subpanels and change the contents of the main panel by:

- Adding controls to subpanels
- Interchanging Main Panel and subpanel controls
- Adding subpanels
- Adding and deleting workspaces
- Renaming workspaces

Other customization options require that you create or edit a Front Panel configuration file. These are explained in *Solaris Common Desktop Environment: Advanced User's and System Administrator's Guide*.

▼ To Put a Subpanel Control in the Main Panel

1. Click mouse button 3 on the subpanel control you want to put in the Main Panel.
2. Choose Promote to Main Panel from the control's pop-up menu.



▼ To Add an Application or Other Icon to a Subpanel

You can add any type of File Manager or Application Manager icon to the Front Panel. However, the most convenient use for this feature is adding application icons.

1. Display the object's icon in File Manager or Application Manager.
2. Display the subpanel to which the object is to be added.
3. Drag the object to the Install Icon control and drop it on the control.

How Installed Icons Work

The behavior of controls added to the Front Panel using the Install Icon control depend on the type of icon that was dropped.

- File - The same behavior as the file's icon in File Manager

- Folder - Opens a File Manager view of the folder
- Application group - Opens an Application Manager view of the application group
- Application icon - The same behavior as the application's icon in File Manager or Application Manager

Adding and Removing Subpanels

Any control in the Main Panel can have a subpanel.

▼ To Add a Subpanel

1. Click mouse button 3 on a control in the Main Panel that does not have a subpanel.
2. Choose Add Subpanel from the control's pop-up menu.

▼ To Remove a Subpanel

1. Click mouse button 3 on the control whose subpanel you want to remove.
2. Choose Delete Subpanel from the control's pop-up menu.

▼ To Replace a Control in the Main Panel

The easiest way to replace a control in the Main Panel is to exchange it with a subpanel control. If the control does not have a subpanel, you can create one temporarily or permanently.

1. If the control you want to replace does not have a subpanel, create one by choosing Add Subpanel from the control's pop-up menu.
2. Display the new subpanel.
3. If the control you want to put in the Main Panel is not already in the subpanel, add it to the subpanel.
See "To Add an Application or Other Icon to a Subpanel" on page 139.
4. Choose Copy to Main Panel from the subpanel control's pop-up menu.

▼ To Remove All User Customizations

Note – This procedure does not affect advanced customizations made by manually editing Front Panel configuration files.

1. **Open Application Manager and double-click the Desktop_Controls application group icon.**

2. **Double-click Restore Front Panel.**

The screen will go blank for several seconds while the Workspace Manager is restarted.

The Restore Front Panel action removes all customization made using:

- The Install Icon control
- The Front Panel's pop-up menus

Customizing Workspaces

You can use the Front Panel workspace switch to rename workspaces and change the number of workspaces.

▼ To Rename a Workspace

1. **Point to the workspace button of the workspace you want to rename.**
2. **Choose Rename from the button's pop-up menu (displayed by pressing Shift+F10 or mouse button 3).**

The workspace button turns into a text field.

3. **Edit the text field.**
4. **Press Return.**

▼ To Add Workspaces

1. **Point to any area in the workspace switch and press mouse button 3 to display the pop-up menu.**

2. **Choose Add Workspace from the pop-up menu.**

The new workspace, named New, is placed at the end of the set of workspaces.

3. **Rename the workspace (see “To Rename a Workspace” on page 141).**

▼ To Remove Workspaces

If you remove a workspace that contains windows, those windows are moved to the next workspace.

1. **Point to the workspace button of the workspace you want to remove.**
2. **Choose Delete from the button’s pop-up menu (displayed by pressing Shift+F10 or mouse button 3).**

▼ To Customize the Controls in the Workspace Switch

This is an advanced task that requires you to create a Front Panel configuration file. Advanced customization is covered in *Solaris Common Desktop Environment: Advanced User’s and System Administrator’s Guide*.

Initially, the workspace switch has the four positions shown below.



Use this procedure to replace one of these controls. (Blank is also a control.)

1. **Install the application you want placed in the switch into the Applications subpanel.**

For example, if you want to add a Display System Load control to the switch, drag it from the Desktop_Tools application group to the Applications subpanel.

2. **Locate the Front Panel configuration file created automatically when you installed the control in the Applications subpanel. The definition is located in the directory `$HOME/.dt/types/fp_dynamic`.**

For example, when Display System Load is added to the Applications subpanel, it creates the file `Xload1.fp`.

3. **Move the file from the `$HOME/.dt/types/fp_dynamic` directory to the `$HOME/.dt/types` directory.**

4. **Open the file in the `$HOME/.dt/types` directory for editing.**

Edit the lines that define the `CONTAINER_TYPE` and `CONTAINER_NAME` to the following:

```
CONTAINER_TYPE SWITCH
CONTAINER_NAME Switch
```

5. **Edit the line that defines the position (`POSITION_HINTS`). For example, to put the control in the Blank location, set:**

```
POSITION_HINTS 3
```

6. **Save the configuration file.**

7. **Create another file in the `$HOME/.dt/types` directory.**

The file name must end with `.fp`. For example, you might create a new file `$HOME/.dt/types/DeleteBlank.fp`.

8. **Open the file for editing.**

9. **Open the file `/usr/dt/appconfig/types/language/dtwm.fp` in another editor window.**

This file is read-only. You will not have to write to it.

10. **In `/usr/dt/appconfig/types/language/dtwm.fp`, find the definition for the switch control you are replacing.**

For example, this is the definition for the Blank control:

```
CONTROL Blank
{
    TYPE blank
    CONTAINER_NAME Switch
    CONTAINER_TYPE SWITCH
    POSITION_HINTS 3
    ICON FpblnkS
    HELP_TOPIC FPOnItemSwitch
```

```
        HELP_VOLUME                FPanel
    }
```

11. **Copy the definition for the control you are replacing from `/usr/dt/appconfig/types/language/dtwm.fp` to the new configuration file.**

For example, you would copy the definition for the Blank control to the new file `$HOME/.dt/types/DeleteBlank.fp`.

12. **Add the line `DELETE True` to the end of the definition, within the curly braces:**

```
CONTROL Blank
{
    ...      HELP_VOLUME                FPanel
    DELETE                True
}
```

13. **Save the file.**
14. **Choose Restart Workspace Manager from the Workspace menu.**

Front Panels and Multiple Screens

CDE for Solaris supports *multi-headed* systems, or multiple screens on the same workstation. This effectively adds space to your CDE desktop. By default, each screen on your system has its own Front Panel.

Each Front Panel is handled separately by CDE, so changes made to one Front Panel will not affect others. See "Miscellaneous Configurations" and "Advanced Front Panel Configuration" in *Solaris Common Desktop Environment: Advanced User's and System Administrator's Guide*.

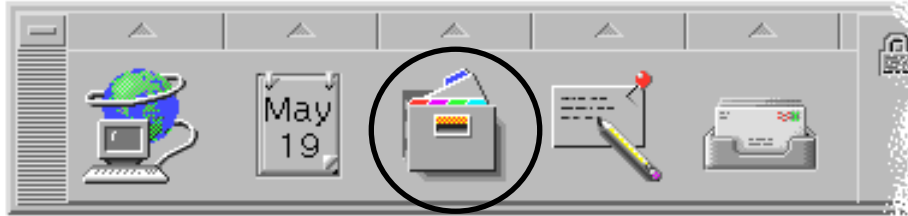
Managing Files with File Manager

Use File Manager to create, find, and use desktop objects: files, folders, and applications. Each object is represented by an icon in File Manager.

- “Introducing the File Manager Window and Desktop” on page 146
- “Manipulating Files and Folders” on page 156
- “Navigating to Folders and Subfolders” on page 159
- “File and Folder Ownership and Security” on page 163
- “Deleting Objects to the Trash Can” on page 162
- “Using File Manager Objects on the Desktop” on page 176
- “Using File Finder” on page 178
- “Customizing File Manager Views” on page 184
- “Using Removable Media with File Manager” on page 192

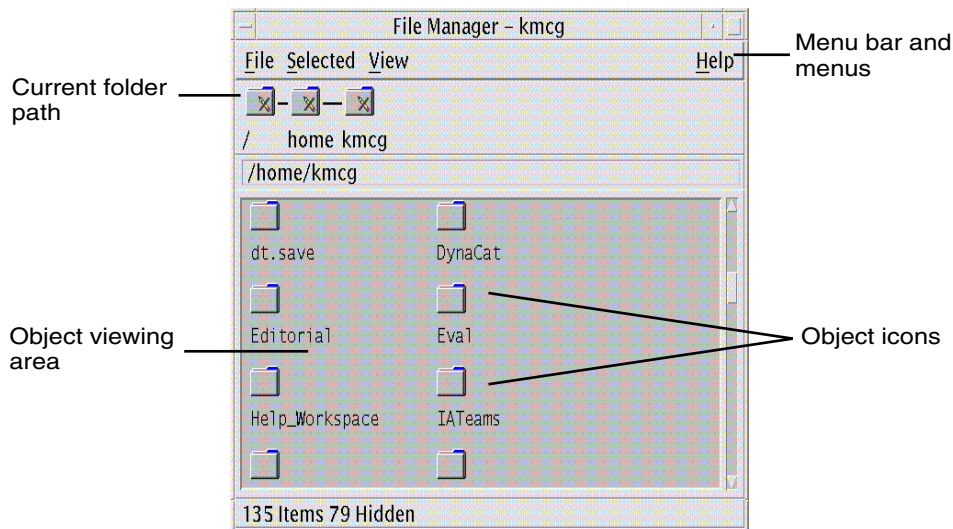
To open File Manager:

- Click the File Manager control in the Front Panel.



Introducing the File Manager Window and Desktop

The File Manager main window is a view of a folder on your system. The folder you are currently viewing is called the *current folder*.



- Current folder path - Displays iconic view of the current folder's path (double-click to change path)
- Menu bar and menus - Contains the commands available in File Manager

- Object viewing area - Shows the objects (files and folders) in the current working folder
- Object icons - Uses icons to represent the files and folders in the current folder

Basic File System Concepts

This section describes basic file system concepts.

Files

A *file* is a container that holds information. Most of the files you use contain information (data) in some particular format—a document, a spreadsheet, a chart. The format is the particular way the data is arranged inside the file. The format of a file is known as its *data type*.

When File Manager is in one of its icon-view modes, you can identify the data type of a file by the icon used to represent the file. Each data type has a different icon.

Most application programs understand a limited number of data types. For example, a document editor probably cannot read a spreadsheet file. The desktop helps you recognize different types of files using a data-type database. In most cases, when you double-click a file, the desktop will automatically launch the application that understands that file's data type.

The maximum allowable length of a file name varies from system to system. Some operating systems do not allow file names longer than 14 characters. If necessary, consult with your system administrator.

Folders

A *folder* is a container for files, similar to a folder in a file cabinet. In fact, File Manager uses a folder icon to represent a folder. A folder can contain other folders—sometimes called subfolders. With folders and subfolders, you can create multiple layers of organization that form a hierarchy. In other contexts, folders are often referred to as *directories*.

Within any single folder, each file name must be unique. However, files in different folders may have the same name.

As you navigate from folder to folder, your current location is referred to as the *current folder*.

Objects

Since files and folders are both represented in File Manager as icons, the term *object* is used to describe them both. Objects are discrete things on the desktop that you can create and manipulate.

On the desktop, applications can also be represented as objects. For example, Application Manager contains objects representing the applications available on your system.

Paths

The location of a file is often specified by listing the folders and subfolders that lead to the file—this list is called a *path*. A file's path is visible in two places in File Manager. First it is shown in the iconic path as a string of folders. Second, it is shown in a text form in the text path line above the view area. These two areas can be turned off. (See "To Configure the Headers" on page 184 for more information.)

Paths and Path Names

The path to an object is a way to specify where the object is located in the file system. There are two ways to specify the path: absolute path and relative path.

Absolute Paths

A path is an *absolute path* if it begins at the root folder. The *root folder* is the single common folder on your system where the hierarchy begins. If a path begins with a slash (/), it is an absolute path specified from the root folder. For example, the following is an absolute path to the file letter:

```
/usr/dt/config/letter
```

Relative Paths

A path is *relative* if it describes the location of a file or folder as it relates to the current folder. If you are in a folder and you want to move down the folder tree, you don't need to type the absolute path name. You can just type the path starting with the name

of the next folder in the path. If a path does not begin with a slash, it is a relative path. For example, if the current folder is `/usr/dt` and you want to move to the folder `/usr/dt/config/letters`, you would use the following relative path:

```
config/letters
```

Two special folder names are useful when specifying relative paths. The `."` folder (sometimes called "dot") represents the current folder. The `.."` folder (sometimes called "dot-dot") represents the *parent* folder—the folder one level up in the folder hierarchy. For example, if your current folder is `/usr/dt/config`, then the relative path to the `Dtwm` file becomes:

```
../app-defaults/language/Dtwm
```

because the file is in the `/usr/dt/app-defaults/language` folder, one level above the current folder and in the `app-defaults/language` subfolder.

See Also

- "To Change to Another Folder" on page 159
- "To Find a File or Folder by Name" on page 179
- "To Find a File by Contents" on page 182

If you still want to learn more about your computer's file system, refer to the online help or documentation for your operating system. There are also many commercial books available that cover the basics of file systems and file management.

Basic File Management Skills

To get started using File Manager, you need to learn a few basic skills. Each icon in File Manager represents an object that you can manipulate in a variety of ways, including:

- Object selection
- Dragging and dropping
- Using pop-up menus
- Renaming objects
- Getting online help on objects
- Opening objects
- Viewing information about an object

Object Selection

When you select the icon of a file or folder, its name is highlighted. Many choices in File Manager's menus apply to the currently *selected* file or folder. The Selected menu contains choices that affect only the currently selected objects. The contents of this menu will change as you select different kinds of objects in the view area.

Selecting multiple files is useful if you want to delete several files at once, or move a group of files to a new folder. Note that when you select more than one object, the Actions portion of the Selected menu will be empty.

When multiple icons are selected, dragging any one of the selected icons drags the whole group. The Selected menu and various menu commands that apply only to a single object are inactive.

Tip – To deselect icons, hold the Control key down and highlight those icons again; this causes them to become unselected from the group.

▼ To Select a Single File or Folder (Mouse)

- **Click once on the icon.**

▼ To Select a Single File or Folder (Keyboard)

1. **Use the Tab and arrow keys to move the highlight to the icon you want to select.**
2. **Press the Spacebar.**

To deselect a file or folder, select another icon or click an empty area within the File Manager window.

▼ To Select Multiple Files and Folders (Mouse)

- **Drag the mouse from a blank area to draw a box around the icons you want to select, and then release the mouse button.**

You can then hold down the Control key and drag around additional icons.

If you have selected icons in File Manager, clicking or dragging anywhere in the File Manager scrolling pane will deselect those icons. However, if you hold down the Control button before clicking or dragging in the scrolling pane, your existing selections are retained. This method is useful for making multiple selections.

Tip – When the icons you want to select are not located next to each other, click mouse button 1 to select the first icon, then hold down the Control key and click mouse button 1 to select each additional icon.

▼ To Select Multiple Files and Folders (Keyboard)

1. Select the first file or folder icon by pressing the Spacebar.
2. For each additional icon you want to select, move the highlight to it, then press Control+Spacebar.

▼ To Drag and Drop a File or Folder

1. Put the mouse pointer over the file or folder.
2. Press and hold mouse button 1.
3. Drag the icon to where you want to drop it.
4. Release the mouse button.

So, the motion for dropping an object is *press...drag...release*.

To cancel a drag in progress, press Esc before releasing the mouse button.



FIGURE 5-1 Drag icon showing the object being dragged

If more than one icon is selected, you drag the entire group by dragging any of the selected icons.

Note – You cannot drag and drop an object without a mouse or other pointing device.

Basic Drag-and-Drop Tasks

- To move a file to another folder, drop the icon on the destination folder's icon. Or, if both the source and destination folders are open, drag the icon from the source folder's view window and drop it onto the background of the folder's view window.
- To place an icon for a file or folder on the backdrop of your current workspace, drop the file or folder icon outside of any window. A desktop object is really just a *reference* to the real object, which remains in the File Manager view, unchanged.
- To print a file, drop the file icon onto the Printer control in the Front Panel (or one of the printers in the Personal Printers subpanel).
- To delete a file or folder, drop the file or folder icon onto the Trash Can control in the Front Panel.

If you try to drop an icon in a location that does not support dropped objects, the icon snaps back to its original location in File Manager or on the desktop.

▼ To Display a Pop-up Menu (Mouse)

Each object in File Manager has a pop-up menu. The File Manager window itself has a pop-up menu viewable when the pointer is placed in a location in the view window outside the boundaries of the individual file or folder objects.

1. Point to the icon whose pop-up menu you want to display and press mouse button 3.

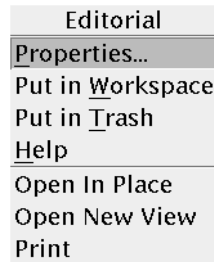


FIGURE 5-2 Sample Pop-up Menu

2. To choose a command from the menu, drag to the command, then release. Or, click the command.

▼ To Display a Pop-up Menu (Keyboard)

1. Using the Tab and direction keys, move the highlight to the icon whose menu you want to display.
2. Press Shift+F10.
3. To choose a command from the menu, use the direction keys to highlight the command, then press Return.
4. To cancel the menu without choosing a command, press Esc.

▼ To Rename a File or Folder (Mouse)

1. Select the file or folder name by clicking the name beneath its icon.
2. Type the new name.
3. Press Return. If you click outside the name without first pressing Return, your changes will be lost.
To cancel a rename operation, press Esc.

Note – You can't rename actions.

▼ To Rename a File or Folder (Keyboard)

1. Use the Tab and arrow keys to move to the icon for the file or folder you want to rename.
2. Press the Spacebar to highlight (select) the icon name.
3. Choose Rename from the Selected menu.
4. Type the new name.
5. Press Return.

To cancel a rename operation, press Esc.

▼ Getting Help on a File or Folder

The description displayed when you ask for help on an icon describes the data type associated with the file or folder. The description is specified in the data-type definition.

To get help using the mouse:

- Select the file or folder, then press F1.
- *Or*, put the mouse pointer on the object and select help from the object's pop-up menu (displayed by pressing mouse button 3).
- *Or*, choose On Item from the Help menu, then click the file or folder's icon.

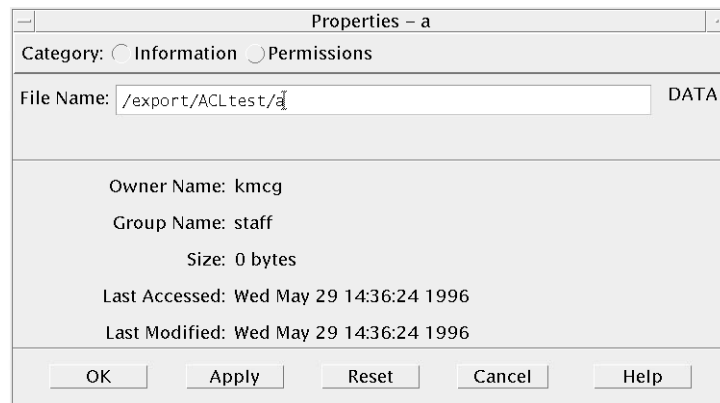
To get help using the keyboard:

- Use the Tab and arrow keys to move to the icon, then press F1.

To find out more about how to use Help, see Chapter 3.

▼ To View a File or Folder's Information

Use the Information dialog box to view information about a file or folder.



1. In File Manager, select the icon of the file or folder whose information you want to view.
2. Choose Properties from the File Manager Selected menu, or from the icon's pop-up menu (displayed by pressing Shift+F10 or mouse button 3).
The Properties dialog box appears.
3. Click the Information radio button.
4. Examine the information about the file or folder:
 - Owner Name – The name of the file or folder's owner
 - Group Name – The name of the group to which the file or folder belongs
 - Size – The size of the file or folder
 - Last Accessed – The date on which the file or folder was last accessed
 - Last Modified – The date on which the file or folder was last modified

Note – If you want to view the information for another file or folder, select the object, choose Properties from the Selected menu, and click the Information radio button. If you bring up the Properties dialog box by typing `sdfprop&` on the command line, you can click Browse in the dialog box and select the file or folder name to view properties.

Opening a File or Folder

The most basic action you can perform on an object is to open it. "Open" is a very general term, and the action taken depends on the type of object you are opening. For

example, opening a folder changes the File Manager view to show the contents of that folder. Opening a data file usually starts the application that created the file and loads the data file.

▼ To Open a File or Folder

- Double-click the icon.
Double-clicking an icon executes the object's *default action*, which is always the first action in the Actions portion of the Selected menu. For most data files, the default action opens the file by starting the appropriate application and loading the file.
- Or, select the icon, then go to the menu bar and choose Open (or Open In Place or Open New View) from the Selected menu.
- Or, choose an Open item from the icon's pop-up menu (displayed by pressing Shift+F10 or mouse button 3).

Manipulating Files and Folders

The major identifying features of a file or folder are:

- Its name and location in the folder hierarchy.
- Its owner permissions (properties).
For more information on permissions and how to set them, see "File and Folder Ownership and Security" on page 163.
- Whether it is linked to another file. A linked file is a representation of another file. Linked files provide a way for you to have one file that appears to exist in two or more folders.

Note – The following procedures assume that you have permission to write to the files or directories. See "Basic Permissions" on page 163.

▼ To Create a New File or Folder

1. **Choose New File or New Folder from the File menu.**
2. **Type the name into the New File or New Folder field.**

3. Click OK or press Return.

To close the New File or New Folder dialog box without creating a new file or folder, click Cancel or press Esc.

There are two other ways to create objects:

- Copy an existing object, then rename the copy (see “To Copy a File or Folder (Mouse)” on page 157).
- Create a new file within an application. For example, Text Editor creates a new file when you save a new document.

▼ To Move a File or Folder (Mouse)

1. **Make the source and destination folders visible:** by opening a File Manager view of the contents of the destination folder or the icon of the closed destination folder.
2. **Select the file or folder to be moved and drag it to the destination folder.**
If you move a folder, the entire folder and its contents are moved.

▼ To Move a File or Folder (Keyboard)

1. **Use the Tab and direction keys to move the highlight to the file or folder to be moved.**
2. **Press the Spacebar to select the object.**
3. **Choose Move to from the Selected menu.**
4. **Type a name into the Destination Folder text field.**
For example, if you want to move the file report into the folder /u/john, you would type /u/john.
5. **Click OK or press Return.**
If you move a folder, the entire folder and its contents are moved.

▼ To Copy a File or Folder (Mouse)

1. **Make the source and destination folders visible:**
Open a File Manager view of the contents of the destination folder or the icon of the closed destination folder.
2. **Select the file or folder to be copied.**

3. **Press and hold the Control key.**
4. **Drag the file or folder and drop it onto the destination folder.**
Make sure that you release the mouse button before you release the Control key. Otherwise, you will move instead of copy the file or folder.

▼ To Copy a File or Folder (Keyboard)

1. **Select the icon.**
2. **Choose Copy to from the Selected menu.**
3. **Type a name into the Destination Folder text field.**
Note that this must be the new full path name for the file. For example, if you want to copy the file report into the folder /u/john, you would type /u/john.
4. **Click OK or press Return.**
To close the Copy File dialog box without copying a file, click Cancel or press Esc.

Symbolic Links

A link icon is a copy of an icon that points to the same file or folder as the original icon. Any changes you make after opening the link icon will also appear when you access the file or folder using the original icon.

▼ To Create a Symbolic Link (Mouse)

1. **Make the source and destination folders visible:**
 - Open a File Manager view of the contents of the destination folder.
 - *Or*, open a File Manager view that shows the icon of the closed destination folder.
2. **Select the file or folder to be copied.**
3. **Press *and hold* the Shift key and the Control key while dragging and dropping the icon of a file or folder onto the icon of a new folder.**
When you drop the icon, File Manager creates symbolic link in the new folder that points to the original file or folder. Make sure that you release the mouse button before you release the Shift key and the Control key. Otherwise, you will move instead of link the file or folder.

▼ To Create a Symbolic Link (Keyboard)

1. Use the **Tab** and **arrow** keys to move the highlight to the icon of the file or folder to which you want to link.
2. Press the **Spacebar** to select the icon.
3. Choose **Copy as Link** from the **Selected** menu.
4. Type a name into the **Destination Folder** text field including the path for the name of the folder where you want this link icon to appear.
5. (Optional) If you want this link icon to have a different name than the original icon, type a new name in the **Name for copy** text field.
6. Click **OK** or press **Return**.

Navigating to Folders and Subfolders

Each File Manager window (also called a *view*) shows the contents of a single folder.

If you are not familiar with hierarchical file systems, see “Basic File System Concepts” on page 147.

▼ To Change to Another Folder

You can change to another folder in any of the following ways:

- Double-click a folder icon.
- Select a folder icon and choose **Open In Place** from the **Selected** menu to open the folder in the current window, or **Open New View** from the **Selected** menu to open it in a new window.
- Choose the **Open In Place** or **Open New View** command from the folder’s pop-up menu (displayed by pressing **Shift+F10** or mouse button 3).
- Double-click a folder in the iconic path to change the view to that folder.
- Select (click) the current folder line to change it into a text field. Type the name of the path you want and then press **Return**.
- In the current folder line, double-click a segment of the current path. For example, if the current folder is `/users/fredj/.dt/types`, you can change to the `/users/fredj` folder by double-clicking the word `fredj`.

- Choose Go To from the File menu. Enter the folder's full path name in the Destination Folder text field of the Go To window.

▼ To Go to Your Home Folder

- Choose Go Home from the File menu.

▼ To Change to the Parent Folder

- Choose Go Up from the File menu
- *Or*, double-click the .. (go up) icon.

▼ To Open a Terminal Window in the Current Folder

This procedure opens a terminal emulator window with the same current folder as the File Manager window. This is a quick way to type a command to affect the contents of the folder you are currently viewing.

- Choose Open Terminal from the File menu.

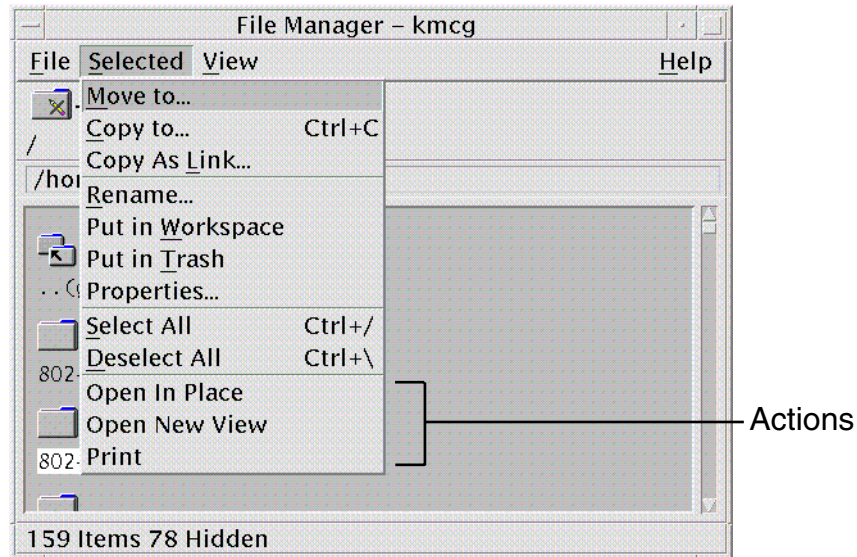
Note – You must have execute permission for a folder before you can open a Terminal window from it.

To find out how to use terminal emulators, see Chapter 14.

Executing an Action for a File or Folder

Actions act on objects, and are a basic part of working with them. For example, printing the contents of an object uses the Print action. Starting an application for a data file object uses an Open action, or some other application action.

The Selected menu contains a list of commands followed by a list of actions you can use with the selected icon. The contents of the actions portion of the Selected menu change depending on the type of icon that is currently selected.



The action listed at the top of the action portion of the menu (the default action) is the action that will be taken when you double-click a file or folder. In the menu shown in the figure, the default action is Open In Place.

▼ To Execute the Default Action

The default action is the first action listed in the actions portion of the Selected menu.

- Double-click the object's icon.

▼ To Execute Other Actions

1. Select the object's icon.
2. Choose the action you want to execute from the Selected menu or from the object's pop-up menu.

Deleting Objects to the Trash Can

The Trash Can collects the files and folders that you delete. They are not actually removed from the file system until the trash is “emptied.” You can only change your mind and *restore* a file you’ve put in the Trash Can if the Trash Can hasn’t been emptied.

▼ To Open the Trash Can Window

- Click the Trash Can control in the Front Panel.



▼ To Put an Object in the Trash Can

- Choose Put in Trash from the object’s pop-up menu (displayed by pressing Shift+F10 or mouse button 3).
- *Or*, select the object’s icon, then choose Put in Trash from the Selected menu.
- *Or*, drag the object’s icon and drop it onto the Trash Can control in the Front Panel.
- *Or*, drag an object’s icon to the open Trash Can window.

▼ To Put Back a File or Folder from the Trash Can

- Drag the object from the Trash Can window to File Manager.
- *Or*, in the Trash Can window, select the object you want to restore and choose Put back from the File menu.
- *Or*, choose Put back from the object’s pop-up menu (displayed by pressing Shift+F10 or mouse button 3).

▼ To Delete a File or Folder Permanently

When you delete a file permanently, it cannot be recovered (unless you have a backup mechanism.)

1. **Open the Trash Can.**
2. **Select the objects you want to empty from the Trash Can.**
Select individual objects, or choose Select All from the File menu.
3. **Choose Shred from the File menu or from the object's pop-up menu (displayed by pressing Shift+F10 or mouse button 3).**
4. **Click OK in the confirmation dialog box.**

File and Folder Ownership and Security

The traditional UNIX file and folder protection scheme provides *read*, *write*, and *execute* permissions for three user types: *owner*, *group*, and *other*. These are called *basic permissions*.

Access Control Lists (ACLs) provide greater control over file and folder permissions than do basic permissions. ACLs enable you to define file or folder permissions for the owner, owner's group, others, and specific users and groups, and default permissions for each of these categories.

Basic Permissions

The permissions on a file or folder specify how it can be accessed. These permissions apply to the basic user types as well as to the ACL default types described in "Setting Default Permissions Through an Access Control List" on page 172.

- *Read Permission* – Allows access to retrieve, copy, or view the contents of the object.
- *Write Permission* – For a file, allows access to change the contents of the file. For a folder, allows access to create or delete objects from the folder.
- *Execute Permission* – For a file, allows access to run the file (for executable files, scripts, and actions). For a folder, allows access to search and list the folder's contents.

If you do not have permission to write inside a folder, the folder will look like this:



If you do not have read or execute permission for a folder, the folder will look like this:



Basic User Types

For a file or folder, the three basic types of users are:

- *Owner* – The user who owns the file or folder. Only a system administrator (root user) can change the owner of a file or folder.
- *Group* – Users who have been grouped together by the system administrator. For example, the members of a department might belong to the same group. This group is the owning group and usually includes the file or folder's owner.
- *Other* – All other users on the system besides the owner and owning group.

Examples

To make a folder private:

- Change the folder's properties, giving yourself (the owner) read, write, and execute permission, but giving no permissions for group and other. This means that only you and the root user can view the contents of the folder.

To make an object that you've created available for everyone to use but protect it so it isn't inadvertently overwritten:

- Change the file's properties, giving read and execute permission to owner, group, and other. Don't give anyone write permission.

▼ To View a File or Folder's Permissions

1. In File Manager, select the icon of the file or folder whose permissions you want to view.
2. Choose Properties from the File Manager Selected menu, or from the icon's pop-up menu (displayed by pressing Shift+F10 or mouse button 3).
The Permissions dialog box is the default view.
3. Examine the file or folder's Basic Permissions in the Effective column ("r" stands for Read permission, "w" stands for Write permission, and "x" stands for Execute permission).
 - Owner – The permissions granted to the file or folder's owner
 - Group – The permissions granted to the file or folder's group
 - Other – The permissions granted to everyone besides the owner and group

Note – The Read, Write, and Execute columns in the dialog box represent requested permissions, and may be different than the permissions that are actually in effect (which are shown in the Effective column). The requested permissions may not be in effect because of the mask (see "Permissions Mask" on page 175).

If you want to look at the permissions for another file or folder, select the object and choose Properties from the Selected menu. If you display the Properties dialog box by typing `sdt fprop&` on the command line, you can click Browse in the dialog box and select the file or folder name to view properties.

▼ To Modify Basic Permissions

1. In File Manager, select the icon of the file or folder whose permissions you want to modify.
2. Choose Properties from the File Manager Selected menu or from the icon's pop-up menu (displayed by pressing Shift+F10 or mouse button 3).
The Permissions dialog box appears.
3. Click the check boxes to set the Owner, Group, and Other permissions.
The mask restricts the Group permissions, but does not affect Owner or Other permissions. The actual read, write, and execute permissions that Owner, Group, and Other receive appear in the Effective column.

4. Use the Apply Changes To option button to choose the scope of the changes.

For files, the options are This File Only (default), All Files in Parent Folder, and All Files in Parent Folder and its Subfolders. For folders, the options are This folder only (default) and This folder and its Subfolders.

5. Click OK on the Permissions dialog box to apply the current settings and dismiss the dialog box. Click Apply to apply the settings without dismissing the Permissions dialog box.

If you want to modify the permissions for another file or folder, select the object and choose Properties from the Selected menu. If you display the Properties dialog box by typing `sdt fprop&` on the command line, you can click Browse in the dialog box and select the file or folder name to modify properties.

See “Permissions Mask” on page 175 for a discussion of the mask.

▼ To Change File or Folder Ownership

Note – If you do not have permission to change the properties, some of the controls in the Permissions dialog box are unavailable.

1. In File Manager, select the icon of the file or folder whose ownership you want to modify.

2. Choose Properties from the File Manager Selected menu or from the icon’s pop-up menu (displayed by pressing Shift+F10 or mouse button 3).

The Permissions dialog box appears.

3. To change the owner, type the new owner name into the Owner text field. To change the owning group, type the new group name into the Group text field.

You can specify a different owning group only if you are also a member of another group, even if you are not the file or folder owner.

4. Click OK to apply the current settings and dismiss the dialog box. Click Apply to apply the settings without dismissing the Permissions dialog box.

▼ To Browse and Edit Properties of Multiple Files and Folders

1. Open the Properties dialog box by typing `sdt fprop&` at the command line.

You can edit the File Name text field and click Browse to open the File Selection dialog box only if you open the Properties dialog box from the command line.

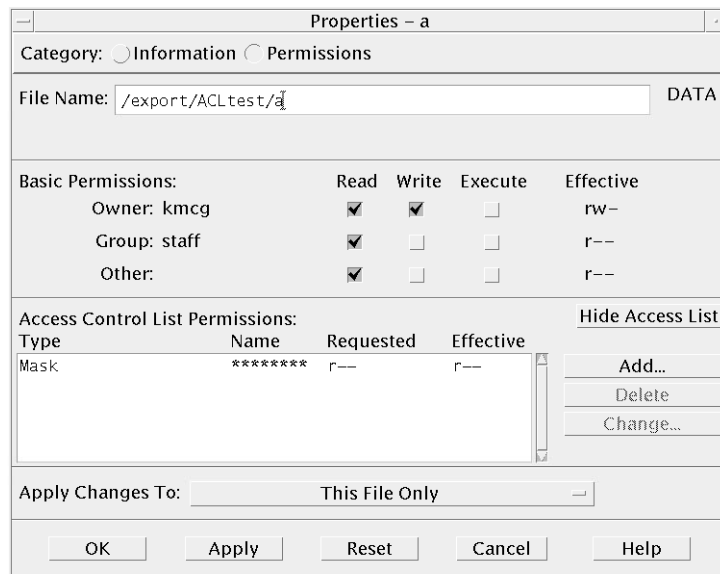
2. Click **Browse** or type the name of a file or folder in the **File Name** field.
3. **Browse** or edit the file or folder properties.
4. Click **OK** to apply the current settings and dismiss the dialog box. Click **Apply** to apply the settings and continue the browsing and editing process.

Access Control Lists

ACLs enable you to define file or folder permissions for the owner, owner's group, others, and specific users and groups, and default permissions for each of these categories. You can set up only one ACL per file or folder. An ACL consists of *ACL entries*. Each entry has a user type associated with it, much as basic permissions have Owner, Group, or Other associated with them.

If you want to grant file or folder access to a particular user or group, use the User or Group type ACL entry, respectively. You must specify the name of the user or group when you create the ACL entry. For example, you can use an ACL to grant a friend read permission on your resume, while protecting it from being read by the rest of the world (besides yourself).

To create, modify, or view ACLs on a file or folder, it must reside on a server or system running Solaris 2.5 Operating Environment or compatible versions, and you must be running Solaris 2.5 Operating Environment or compatible versions. Such files and folders are called *ACL-enabled*. To set, modify, and view basic permissions and ACLs using the Properties Graphical User Interface (GUI), you must be running CDE 1.1 or later.



You must be the owner of the file or folder to create or modify basic permissions or ACLs for that file or folder. If you are not the owner, all fields in the Properties dialog box are displayed as read-only.

Note – ACL terminology in this section refers to terminology used in the Properties GUI. Command-line terminology may be slightly different.

▼ To View an Access Control List

1. In File Manager, select the icon of the file or folder whose Access Control List (ACL) you want to view.
2. Choose Properties from the File Manager Selected menu or from the icon's pop-up menu (displayed by pressing Shift+F10 or mouse button 3).

The Properties dialog box appears.

If the file or folder has an ACL, it appears in the scrolling list labeled Access Control List Permissions. If the file or folder has no ACL, the scrolling list is hidden.

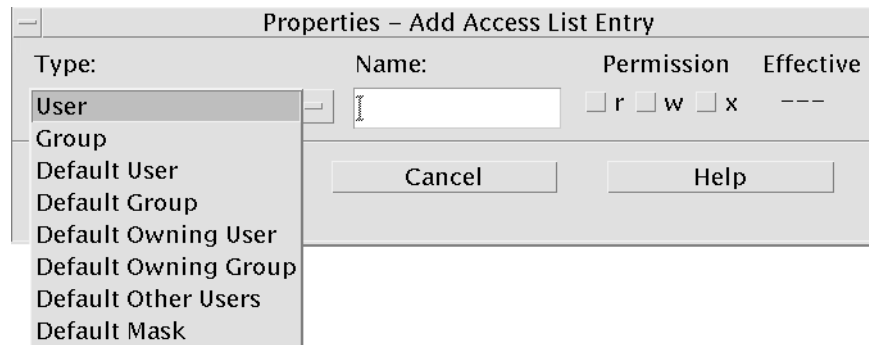
The Requested column shows the permissions that the owner requests for each ACL entry. These permissions are restricted by the mask, and the actual ACL entry permissions appear in the Effective column. See "Permissions Mask" on page 175 for a discussion of the mask.

Note – To create, modify, or view ACLs on a file or folder, it must reside on a server or system running Solaris 2.5 Operating Environment or compatible systems, and you must be running Solaris 2.5 Operating Environment or compatible systems.

▼ To Add an Access Control List Entry

Note – Adding the first Access Control List entry creates the Access Control List.

1. In File Manager, select the icon of the file or folder whose ACL you want to modify.
2. Choose Properties from the File Manager Selected menu or from the icon's pop-up menu (displayed by pressing Shift+F10 or mouse button 3).
The Permissions dialog box appears.
3. Click Show Access Control List if the ACL portion of the Permissions dialog box is not visible.
4. Click the Add button.
The Add Access List Entry dialog box appears.



5. Select an option from the Type option button.
6. Enter the name associated with the chosen Type, if it has one in the Name field.

7. **Click the Permission check boxes to reflect the values you want for the new ACL entry.**

The status line at the bottom of the dialog box informs you if the permissions you request are restricted by the mask.

8. **Click Add in the Add Access List Entry dialog box.**
9. **Use the Apply Changes To option button to choose the scope of the change.**
For files, the options are This File Only (default), All Files in Parent Folder, and All Files in Parent Folder and its Subfolders. For folders, the options are This folder only (default) and This folder and its Subfolders.
10. **Click OK to apply the current settings and dismiss the dialog box. Click Apply to apply the settings without dismissing the dialog box.**

▼ To Change an Access Control List Entry

1. **In File Manager, select the icon of the file or folder for which you want to change an ACL entry.**
2. **Choose Properties from the File Manager Selected menu or from the icon's pop-up menu (displayed by pressing Shift+F10 or mouse button 3).**
The Permissions dialog box appears.
3. **Select the entry in the Access Control List Permissions scrolling list that you want to change.**
4. **Click Change.**
The Change Access List Entry dialog box appears.



5. **Click the Permission check boxes to reflect the values you want for the ACL entry.**
The status line at the bottom of the dialog box informs you if the permissions you request are restricted by the mask.

6. **Click the Change button in the Change Access List Entry dialog box.**
7. **Use the Apply Changes To option button to choose the scope of the change.**
For files, the options are This File Only (default), All Files in Parent Folder, and All Files in Parent Folder and its Subfolders. For folders, the options are This folder only (default) and This folder and its Subfolders.
8. **Click OK to apply the current settings and dismiss the dialog box. Click Apply to apply the settings without dismissing the dialog box.**

▼ To Delete an Access Control List Entry

1. **In File Manager, select the icon of the file or folder for which you want to delete an ACL entry.**
2. **Choose Properties from the File Manager Selected menu or from the icon's pop-up menu (displayed by pressing Shift+F10 or mouse button 3).**
The Permissions dialog box appears.
3. **Select the entry in the Access Control List Permissions scrolling list that you want to delete.**
4. **Click the Delete button.**
A dialog box appears asking you to confirm this deletion. If you delete any of the four required ACL default entries, all ACL default entries will be deleted. See "Setting Default Permissions Through an Access Control List" on page 172 for a description of required and optional default ACL entries.

Note – Removing all entries (except Mask) removes the entire Access Control List.

5. **Use the Apply Changes To option button to choose the scope of the change.**
For files, the options are This File Only (default), All Files in Parent Folder, and All Files in Parent Folder and its Subfolders. For folders, the options are This folder only (default) and This folder and its Subfolders.
6. **Click OK to apply the current settings and dismiss the dialog box. Click Apply to apply the settings without dismissing the dialog box.**

Setting Default Permissions Through an Access Control List

When you create a file or folder within a folder, it inherits the basic permissions set by the system administrator. (To determine the current defaults, create a new file or folder and then choose Properties from the Selected menu to view the permissions.)

You can use an Access Control List to set default basic permissions yourself for any file or folder that is created within a folder. The ACL for that folder must contain entries for all four of the following *required* Default entry types: Default Owning User, Default Owning Group, Default Other, and Default Mask. An ACL can contain only one entry of each required type.

The file or folder inherits the values for Owner, Group, and Other from the person who creates it and inherits the basic permissions from the required ACL Default entry types on the containing folder. ACL entries of these types do not have names associated with them.

You can also set *optional* Default entry types—Default User and Default Group—for any file or folder that is created within a folder. You can create as many Default User or Default Group ACL entries as you want. You must specify the name of the user or group when you create the ACL entry.

Any ACL in which you want to put a Default User or Default Group entry must also contain one of each required entry type.

Example

Suppose that the values for Owner and Group for a user named Carla are `otto` and `otto_staff`, respectively. The value for Other (call it `otto_other`) is everyone at Carla's company except for Carla and the members of `otto_staff`. Carla creates these required Default ACLs on her folder named `Project1`:

- Default Owning User with permissions `rx` (read, execute)
- Default Owning Group with permissions `rx` (read, execute)
- Default Other with permissions `no-read, no-write, no-execute`
- Default Mask with permissions `rw` (read, write)

Any file or folder subsequently placed in the `Project1` folder inherits these basic permissions from `Project1`:

- The file or folder Owner value is `otto` and `otto` has read, write, and execute permission on that file or folder
- The file or folder Group value is `otto_staff` and `otto_staff` has read and execute permission on that file or folder
- The file or folder Other value is `otto_other` and `otto_other` has no-read, no-write, and no-execute permission on that file or folder

Also, the file or folder has a Mask entry in the Access Control List Permissions scrolling list with the value rw (read, write).

If Carla also adds an optional ACL of type Default User (Default Group) for the Project1 folder, then any file or folder subsequently placed in Project1 will inherit an ACL of type User (Group).

▼ To Set Required Default Entry Types

1. In File Manager, select the icon of the folder for which you want to set the required ACL Default entry types.

2. Choose Properties from the File Manager Selected menu or from the icon's pop-up menu (displayed by pressing Shift+F10 or mouse button 3).

The Permissions dialog box appears.

3. Click the Show Access Control List button if the folder has no ACL defined.

If the folder has an ACL defined, it will be visible when you open the Permissions dialog box.

4. Click Add and select an ACL entry of type Default Owing User, Default Owing Group, Default Other, or Default Mask.

A message appears reminding you that the other required ACL Default entries will also be added.

5. Click the Permission check boxes to set the permissions for the Default entry.

6. Click Add in the Add Access List Entry dialog box.

The other three required ACL Default entries are automatically created for you, with permissions set to no-read, no-write, no-execute.

7. (Optional) Change the permissions for the required ACL Default entries that were automatically created in step 6 above.

8. Use the Apply Changes To option button to choose the scope of the changes.

The options are This folder only (default) and This folder and its Subfolders.

9. Click OK to apply the current settings and dismiss the dialog box. Click Apply to apply the settings without dismissing the dialog box.

▼ To Delete Required ACL Default Entry Types

1. In File Manager, select the icon of the folder for which you want to delete an ACL Default entry.

2. **Choose Properties from the File Manager Selected menu or from the icon's pop-up menu (displayed by pressing Shift+F10 or mouse button 3).**

The Permissions dialog box appears.

3. **Select required ACL Default entry and click Delete.**

A message appears to remind you that once you delete one of the required default ACL entries, the other three are automatically deleted for you.

4. **Click Delete in the confirmation dialog box.**

5. **Use the Apply Changes To option button to choose the scope of the change.**

The options are This folder only (default) and This folder and its Subfolders.

6. **Click OK to apply the current settings and dismiss the dialog box. Click Apply to apply the settings without dismissing the dialog box.**

▼ To Set Optional ACL Default Entry Types

1. **In File Manager, select the icon of the folder for which you want to set an optional ACL Default entry type.**

2. **Choose Properties from the File Manager Selected menu or from the icon's pop-up menu (displayed by pressing Shift+F10 or mouse button 3).**

The Permissions dialog box appears.

3. **Click the Show Access Control List button if the folder has no ACL defined.**

If the folder has an ACL defined, it will be visible when you open the Permissions dialog box.

4. **Click Add and select an ACL entry of type Default User or Default Owning Group.**

If the ACL does not contain the required default entries, they will also be created, with permissions set to no-read, no-write, no-execute.

5. **Click the Permission check boxes to set the permissions for the Default entry.**

6. **Click Add in the Add Access List Entry dialog box.**

7. **Continue to add as many ACL entries of type Default User or Default Owning Group as you want.**

8. **Use the Apply Changes To option button to choose the scope of the changes.**

The options are This folder only (default) and This folder and its Subfolders.

9. **Click OK to apply the current settings and dismiss the dialog box. Click Apply to apply the settings without dismissing the dialog box.**

Permissions Mask

ACL-enabled files and folders have a *mask* defined whose default permissions are the group permissions for the file or folder. The mask is the maximum allowable permissions granted to any user on all ACL entries and for Group basic permissions. It does not restrict Owner or Other basic permissions. For example, if a file's mask is read-only, then you cannot create an ACL with write or execute permission for a user without changing the mask value.

Use the mask as a quick way to limit permissions for users and groups.

▼ To Modify the Mask

- 1. In File Manager, select the icon of the file or folder whose mask you want to modify.**
- 2. Choose Properties from the File Manager Selected menu or from the icon's pop-up menu (displayed by pressing Shift+F10 or mouse button 3).**
The Permissions dialog box appears.
- 3. Click the Show Access Control List button if the folder has no ACL defined.**
If the folder has an ACL defined, it will be visible when you open the Permissions dialog box.
- 4. Select the Mask entry in the Access Control List Permissions scrolling list.**
The current mask permissions appear in the Effective column.
- 5. Click the Change button.**
- 6. Click the Permission check boxes to reflect the values you want for the mask.**
- 7. Click the Change button in the Change Access List Entry dialog box.**
- 8. Use the Apply Changes To option button to choose the scope of the permissions changes.**
For files, the options are This File Only (default), All Files in Parent Folder, and All Files in Parent Folder and its Subfolders. For folders, the options are This folder only (default) and This folder and its Subfolders.
- 9. Click OK to apply the current settings and dismiss the dialog box. Click Apply to apply the settings without dismissing the dialog box.**

Using File Manager Objects on the Desktop

The desktop lets you put any file or folder icon directly on the backdrop of the current workspace for quick access. Any icon you drop on the desktop stays where you put it.

File Manager provides a way to view all the objects in your file system. However, the object is only visible when you are viewing the folder it is in.

To make an object more accessible, you can put it directly on the workspace backdrop. The desktop is that area or surface on which windows appear to lie. When an object is placed there, it is called a *workspace object*. There is a separate desktop for each workspace.

Placing an object on the workspace does not alter the original file or folder. In fact, the icon that appears on the workspace is really just a shortcut for accessing the real file or folder. Any operation you perform on the workspace object is actually performed on the file or folder it represents.

Workspaces in the Desktop

You can have several workspaces on your desktop, so you can set up your working environment by putting the files and folders in the workspaces where you use them most, or in more than one workspace if needed.

Pop-up Menus

Each workspace object has its own pop-up menu, displayed with mouse button 3 or by pressing Shift+F10 when the icon is selected. This menu contains commands for manipulating the object, including all the actions that appear in the File Manager's Selected menu when the object is selected. The Workspace pop-up menu is similar to the pop-up menu available within File Manager windows, but contains a few different commands.

▼ To Put a File or Folder on the Workspace Backdrop

This procedure creates a copy of the icon on the workspace backdrop. Any changes you make to the copy on your workspace backdrop will also be made to the original that is still in File Manager.

1. **Switch to the workspace where you want to display the object.**
2. **Then:**
 - Drag and drop the object's icon onto the workspace.
 - *Or*, select the icon, then choose the Put in Workspace command from the Selected menu or from the icon's pop-up menu (displayed by pressing Shift+F10 or mouse button 3).

You can repeat these steps to put an icon on the desktop in as many workspaces as you want.

▼ To Display the Pop-up Menu for a Workspace Object (Mouse)

1. **Point to the object's icon.**
2. **Press mouse button 3.**
3. **Choose a command from the menu by dragging to the command then releasing the mouse button.**

▼ To Display the Pop-up Menu for a Workspace Object (Keyboard)

1. **Move the highlight to the object's icon using Alt+Tab.**
2. **Press Shift+F10.**
3. **Choose a command from the menu by using the direction keys to highlight the command, then press Return.**

To cancel the menu without choosing a command, press Esc.

▼ To Remove an Object from the Workspace

1. **Switch to the workspace where the object resides.**
2. **Locate the object's icon on the desktop.**
3. **Choose Remove From Workspace from the object's pop-up menu.**

Removing an object from the workspace does not alter the original object; that is, the object still exists in File Manager.

Using File Finder

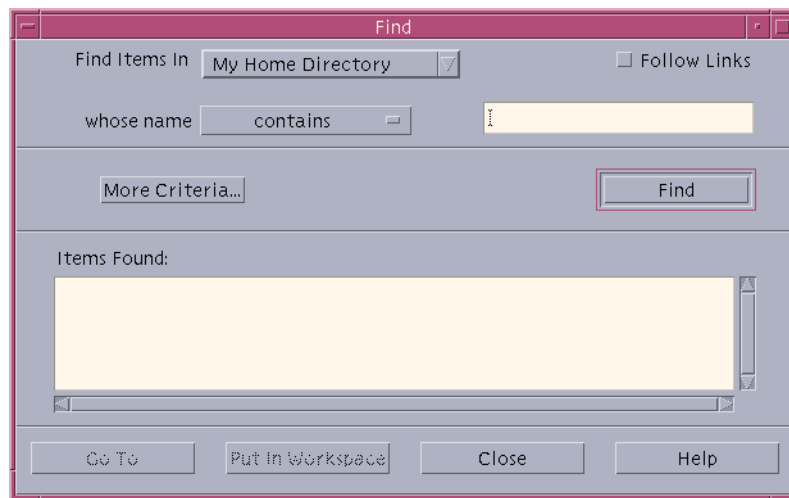
File Finder is an application that searches a folder and its subfolders and returns a list of files or folders that match your search criteria. Files and folders are sometimes generally called *objects*.

When specifying search criteria, you typically supply a file or folder name, or some text that you expect to find in the required file. You can also specify the size, owner, date modified, type, and permissions.

▼ To Open File Finder

You can open File Finder from the Front Panel or from inside File Manager.

- **Click the Find File control on the Files subpanel of the Front Panel.**
The Find File application opens with the default search path set to your home folder.
- **Or, choose Find on the File menu of the File Manager application.**
The Find File application opens with the default search path set to the folder that was displayed in File Manager.

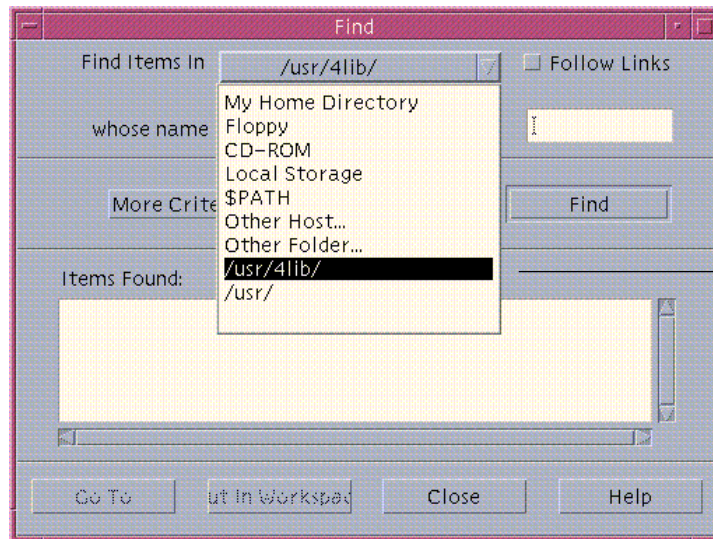


▼ To Find a File or Folder by Name

1. Open File Finder.

File Finder displays the Find dialog box.

2. Select the folder under which you expect to find the required files or folders using the following table as a guide to the menu items in the Find dialog.



Paths you used previously and were automatically saved

Menu Item	Where File Finder Searches
My Home Directory	Your home directory (referred to as \$HOME in this chapter), for example, /home/fredj
Floppy	Contents of the diskette drive
CD-ROM	Contents of the CD-ROM drive
Local Storage	All folders on this workstation
\$PATH	All folders on the workstation's default path
Other Host	Specify the hostname of a different workstation
Other Folder	Specify another folder on this workstation

Folders are arranged in a hierarchical structure ("Basic File System Concepts" on page 147) By default, the Find operation will search the folder you specify and all its subfolders.

3. If you want to search across symbolic links that originate on your search path, select the Follow Links check box.

Tip – If the actual location of a linked folder is at the top level of a large number of folders, the search might take a long time. Be aware of the locations to which folders are linked before starting search operations.

4. Select whether you will be searching for a file name containing, equalling, or not containing your search text by selecting the appropriate option in the Whose Name selector.
5. Type a full or partial name of the file or folder you want to find into text box on the same line as the Whose Name selector.

Note – The following applies when you select “is equal to” from the and Name selector:

When you specify a file or folder name, you can include wildcard characters such as asterisk (*) and question mark (?). The * matches any string of characters (including no characters), and ? matches any single character. For example:

ba*-matches all names that begin with the string ba

ba?-matches all three-character names that begin with the string ba

*.dt-matches all names that end with the .dt suffix

*.???-matches all names that have a three-character suffix

The file name and contents can be specified using the same *regular expression* syntax allowed by the `find` command. (Refer to the `find` man page and `grep` man page for more information.)

6. Click Find.

File Manager begins searching the specified folder and its subfolders for files that match the specified search criteria. Matches that are found are listed in the Items Found list. You can stop the search at any time by clicking the Stop button.

Tip – If too many objects are returned, you can specify more restrictive criteria and try again.

7. (Optional) If you want to go to an object in the list, select it and click Go To open File Manager displaying its folder, or click Put on Workspace to display an icon for it on the workspace.

▼ To Find a File by Contents

1. **Open File Finder.**
2. **Click More Criteria to display the More Criteria dialog box.**
3. **Select the Content checkbox and click OK.**

The And Content line is added to the Find dialog.
4. **Specify the search folder and any name constraints for the search on the Find Items In line and on the Whose Name line.**
5. **If you leave the File or Folder Name field empty, File Manager searches every file within the search folder.**

Names can be specified using the same *regular expression* syntax allowed by the `grep` command. (Refer to the `grep` man page for more information.)
6. **In the File Contents field, type the text string you want to find.**

If you select “and content contains (any case), then case is ignored for this string (upper- and lowercase letters are equivalent). You do not have to use complete words. For example, if you type `fi` it will find both `fish` and `File`.
7. **Click Find to commence the search.**

File Manager begins searching the search folder and its subfolders for any file containing the search string. Matches that are found are listed in the Files Found list. Once you have found a file, you can select it in the list and then click Go To to open File Manager for its folder. You can stop the search at any time by clicking Stop.

Tip – If too many files are returned, specify more restrictive criteria.

Finding a File by File Properties

The previous procedures explained how to search for a file or folder by specifying a name, and how to search for a file by specifying some of its contents. You can also specify the following object properties as search criteria:

- **Size** - Specify a file size in characters. Append the character “c” to the size you specify to return a file size in characters (as displayed in File Manager). If this line is displayed and left blank, qualifying objects of all sizes will be returned.
- **Owner** - Specify an exact UNIX user name for the object’s owner. If this line is displayed and left blank, qualifying objects belonging to all users will be returned.
- **Date modified** - Specify a date using the date specification format `[[CC]YY]MMDD[hhmm][.SS]`. Entries enclosed by square brackets are optional. If this line is displayed and left blank or left with the above prompt string, qualifying

objects of all modification dates will be returned.

- **Type** - Choose whether to return files or folders. If this line is displayed, qualifying objects of only the type selected will be returned. Otherwise, qualifying objects of both types will be returned.
- **Permissions** - Select one of the options which relate to the ACL (Access Control List) If this line is displayed, qualifying objects of only the type selected will be returned. Otherwise, qualifying objects of all types will be returned (subject to other constraints).

By default, File Finder displays only the line for specifying name criteria. By clicking More Criteria, you can display lines for other criteria.

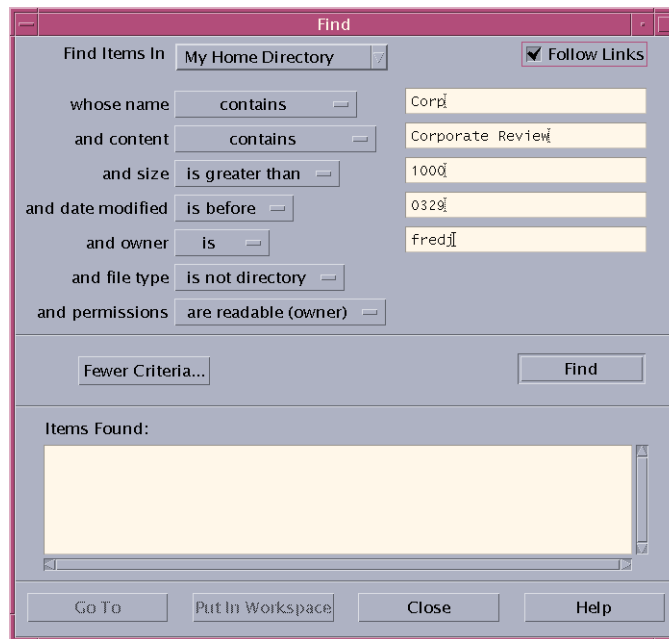


FIGURE 5-3 File Finder With All Search Criteria Displayed

▼ To Find a File by File Properties

1. **Open File Finder.**
File Finder opens with the default display and settings.
2. **Click More Criteria to display the More Criteria dialog box.**

3. **Select the check boxes for the criteria that you intend specifying in your search.**
File Finder updates the Find dialog box to contain a line for specifying each of the selected criteria.
4. **(Optional) Specify the folder to be searched, the name of the file or folder, and the contents of the required file using the instructions in “To Find a File or Folder by Name” on page 179 and “To Find a File by Contents” on page 182.**
5. **Specify criteria relating to the properties of the file or folder on the lines provided.**
Each line of constraints will be evaluated as described above. If you use more than one set of criteria, File Finder will return only objects that satisfy *all* of the search criteria.
6. **When you are satisfied with the criteria you have entered, click Find.**
File Finder searches the specified folders and subfolders, and returns a list of the files and folders that match *all* of the specified search criteria. You can stop the search at any time by clicking Stop.

Tip – If too many files are returned, you can specify more restrictive criteria and try again.

Customizing File Manager Views

File Manager provides several ways to see the contents of folders. You can:

- Change the basic viewing structure from one folder at a time to seeing a tree view see “To Display the Tree View” on page 187).
- Determine the sort order of objects (see “To Change the Order in Which Icons Are Sorted” on page 188).
- Hide (filter) certain objects (see “To Show or Hide Files and Folders” on page 189).
- Change the style used for objects – names and small or large icons, names alone, or a long list of names plus properties.

▼ To Configure the Headers

1. **Choose Set View Options from the View menu.**

2. Determine which headers to display:

- Select Iconic Path to show current folder path as a string of folder icons at the top of the window.
- Select Text Path to show the current folder's full path name in a text field above the view pane.
- Select Message Line to show a count of the number of files in the folder. The line will appear at the bottom of the window.

3. To implement the chosen option and close the Set View Options dialog box, click OK.

To implement the chosen option and leave the Set View Options dialog box open, click Apply.

▼ To Configure How Icons are Placed

1. Choose Set View Options from the View menu.

2. Determine how you want to have the icons placed:

- Select As Placed to leave icons where they are dropped.
- Select Rows and Columns to automatically align the icons you drop into a grid.

3. To implement the chosen option and close the Set View Options dialog box, click OK. To implement the chosen option and leave the Set View Options dialog box open, click Apply.

Using the Tree View

The tree view resembles an outline. Files and folders contained in a folder are listed beneath that folder in an indented list

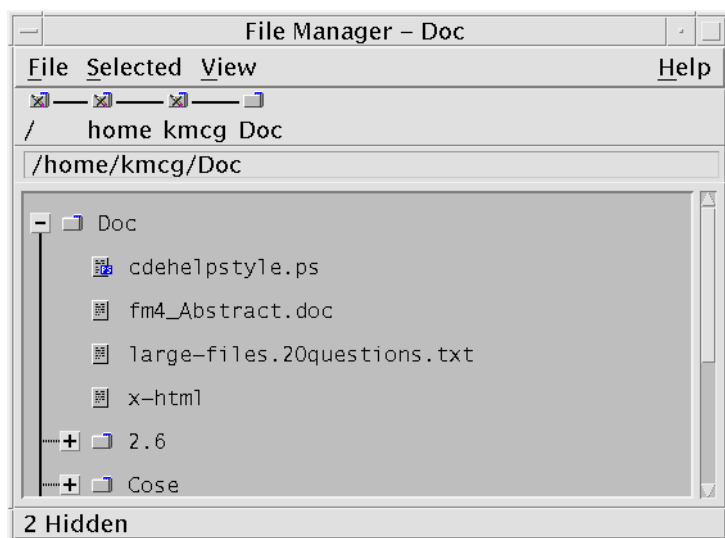


FIGURE 5-4 File Manager Tree View

In the tree view, a folder can have three states. The states are shown and changed using the buttons to the left of the folder. You can also open and close the tree branches by selecting a folder and then pressing the + and - keys on your keyboard (these are the keys in the center, not the numeric keypad):

+ () - The folder is in its closed state. None of the folder's contents are shown. Clicking the button expands the folder partially or fully, depending on the tree view option currently in effect.

- () - The folder is in its fully expanded state. All objects in the folder are shown. Clicking the button fully closes the folder.

+/- () - The folder is in its partially expanded state. The only contents shown are the folders it contains. (This view is possible only when viewing "Folders, then Files".) Clicking the button expands the folder to show the file names.

You can alter the appearance of files and folders in the tree view by changing the settings in the Show box in the Set View Options dialog box. Changes to the preferences are only for the current session. To make them permanent, see "To Save the Current Preferences as Your Default" on page 189.

If you double-click a folder in tree view, a new view of that folder opens that is not in tree view mode.

▼ To Display the Tree View

The tree view shows a folder and the files and folders beneath it.

1. **Change to the folder where you want the tree view to start.**
2. **Choose Set View Options from the View menu.**
3. **Select By Tree in the Show box.**
4. **Select one of the tree view options:**
 - Folders only - The tree shows folders only. To view files, double-click a folder name. This is the default view.
 - Folders, then Files - Folders only appear at first. Click the [+] button next to each folder to view its contents. The first click shows subfolders. A second click shows files that are inside. When you click the button a third time, the folder contracts again.
 - Folders and Files - The tree shows both folders and files automatically.
5. **To implement the chosen options and close the Set View Options dialog box, click OK. To implement the chosen options and leave the Set View Options dialog box open, click Apply.**

▼ To Display the Folder View

The folder view will show a folder and all the files and folders in that folder.

1. **Change to the folder that you want to view.**
2. **Choose Set View Options from the View menu.**
3. **Select By Single Folder in the Show box.**
4. **To implement the chosen options and close the Set View Options dialog box, click OK. To implement the chosen options and leave the Set View Options dialog box open, click Apply.**

You can alter the appearance of files and folders in the folder view by changing the settings in the Show box in the Set View Options dialog box. Changes to the preferences are only for the current session. To make them permanent, see “To Save the Current Preferences as Your Default” on page 189.

▼ To Change How Objects Are Represented

1. **Choose Set View Options from the View menu.**

2. **Select the representation you prefer from the Representation box.**
 - By Name Only - Icons will not be displayed in File Manager. File Manager indicates objects that are folders by adding a slash (/) after their names. Executable programs have an asterisk (*) after their name.
 - By Large Icons - This is the default. The objects in File Manager will appear with their names and large icons.
 - By Small Icons - The objects in File Manager will appear with their names and small icons.
 - By Name, date, size, ... - The objects in File Manager will appear with date, size, and so on in addition to the file names and icons.
3. **Click OK or Apply.**

▼ To Change the Order in Which Icons Are Sorted

1. **Choose Set View Options from the View menu.**
2. **Select the sort order you prefer from the Order box, and the direction from the Direction box.**
 - Alphabetically - A to Z (Ascending) or Z to A (Descending). Icons with names that start with capital letters appear first. Icons with names that start with lowercase letters are at the bottom.
 - By File Type - By object type. For example, files, folders and actions are different types of objects. Within each group of the same type, the icons are sorted alphabetically (based on the order the data types are read into the database).
 - By Date - By date the files were last modified, oldest to newest (Ascending) or newest to oldest (Descending).
 - By Size - By file size, smallest to largest (Ascending) or largest to smallest (Descending).
3. **Click OK or Apply.**

If you have Placement set to As Placed, icons are sorted only when you choose Clean Up from the View menu or when you click Apply in the Set View Options dialog box. If Placement is set to Rows and Columns, the icons are sorted each time there's a change to the folder's contents, or when you choose Update from the View menu.

▼ To Re-Sort (Clean Up) Objects

The Clean Up command sorts the objects in the current view (according to the settings in the Set View Options dialog box) and lines them up in a grid pattern. The settings in other File Manager windows are not affected.

- **Choose Clean Up from the View menu.**

The Clean Up command is unavailable if you have the Placement preference set to Rows and Columns.

▼ To Save the Current Preferences as Your Default

When you apply changes using the Set View Options and Set Filter Options dialog boxes, the changes only apply to the current session. If you want to save the preferences so they will be used the next time you open File Manager:

1. **Set the preferences that you want and apply them (using Set View Options and Set Filter Options in the View menu).**
2. **Choose Save As Default Options from the View menu.**
3. **Click OK.**

These changes to the default view will not take effect until the next time you click the File Manager control in the Front Panel.

After saving the current preferences, all new File Manager views you open use the new preferences and filter list.

Hiding Files and Folders

Hidden files and folders are those whose file types are selected in the *filter list*.

The criterion for hiding or showing a file or folder is based on its data type. Use the Set Filter Options command to change which data types are shown and hidden. (See “To Specify Which Data Types Are Hidden” on page 190 below.) The default hidden data types are DOT_FILE, DOT_FOLDER, and CURRENT_FOLDER.

▼ To Show or Hide Files and Folders

- **Choose Show Hidden Objects from the View menu.**

Choosing the command a second time again reverses the toggle (from shown to hidden and back again).

The criterion for hiding or showing a file or folder is based on its data type. Use the Set Filter Options command to change which data types are shown and hidden. (See “To Specify Which Data Types Are Hidden” on page 190 below.) The default hidden data types are DOT_FILE, DOT_FOLDER, and CURRENT_FOLDER.

▼ To Specify Which Data Types Are Hidden

1. Choose Set Filter Options from the View menu.

Data types that have already been chosen to be hidden are highlighted.

2. In the Select File Types to be Hidden box, select the data types you want to be hidden. File types that are already being hidden are highlighted.

Or, to reset the default filter list (DOT_FILE, DOT_FOLDER, and CURRENT_FOLDER), click Defaults.

3. (Optional) Type a name pattern into the Also Hide (Optional) field specifying additional file and folder names to be hidden.

The filter list specifies which files are not to be displayed. If you select all object types or type * into the Filter String field, then no files are displayed. If you type *.txt, then any file whose name ends in .txt will be added to the filter list and not displayed.

Advanced users: The Filter String may be any regular expression. Refer to the `regex(5)` man page for more information.

4. Click OK, or, if you want to view the results before closing the dialog box, click Apply.

To reset to the default filter list, choose Defaults. This resets the default values but does not apply them until you click Apply or OK.

Icon Browsing

Files with names that end in .pm or .bm contain icons. These are the files that File Manager uses to build icons. By default, you must open these files to see the icons they contain. If you enable icon browsing, File Manager displays the contents of .pm or .bm files so you don't have to open them to see what they look like.



FIGURE 5-5 Icon with Icon Browsing Enabled (Left) and Disabled (Right)

▼ To Enable Icon Browsing

1. **Copy the file** `/usr/dt/examples/types/language/IconBrowse.dt` **into your** `/$HOME/.dt/types` **folder.**
2. **Open Application Manager and double-click Reload Actions in the Desktop_Controls application group.**
3. **Restart File Manager.**

Note – The maximum default display area for icons is 38x38 pixels. So, if a picture file is larger than 38x38, the picture will be clipped and only the top left 38x38 pixels will be shown. You can increase the size of the display area for icons if you want larger images to be fully visible (see “To Change the Icon Display Area Size” on page 191). However, a larger display size area will slow down the opening of folders, and icons will be spread further apart in folder views.

▼ To Disable Icon Browsing

1. **Remove your personal copy of the** `IconBrowse.dt` **file.**
2. **Open Application Manager and double-click Reload Actions in the Desktop_Controls application group.**

▼ To Change the Icon Display Area Size

1. **Open a Terminal window and type** `dtpad ~/.Xdefaults`.
2. **When the file is displayed, it may be empty or there may be text already in the file. In either case, add the following four lines of text to the file:**

```
Dtfile*smallIconWidth:24
Dtfile*smallIconHeight:24
Dtfile*largeIconWidth:38
Dtfile*largeIconHeight:38
```

When you type in these lines, replace the default numbers at the end of each line with the new display area size you want.

3. Choose **Save** from the **File** menu.

4. Choose **Close** from the **File** menu.

Note – The change will not take effect until you exit the desktop and log back in. If you should want to return to the default display area size, type the default sizes back in or just remove the four lines you added, and then exit and restart the desktop.

Using Removable Media with File Manager

File Manager enables you to use *removable media*, such as diskettes and CD-ROMs, on the workspace. You can view the contents of your diskettes or CD-ROMs if you have a system with at least one diskette drive or one CD-ROM drive and you are running Solaris CDE 1.1 or later.

Removable media are mounted on your file system in removable media folders. File Manager enables you to view the contents of the removable media without having to know the location of these folders.

File Manager restricts the view of a diskette or CD-ROM window to the removable media folder and its subfolders. You cannot navigate out of the folder `/floppy/diskette_name` when you view the diskette labeled `/diskette_name` or navigate out of the folder `/cdrom/cdrom_name` when you view the CD-ROM labeled `/cdrom_name`.

Note – The File Selection dialog box enables you to perform certain tasks, such as Open or Save As, on the files in file systems for all mounted CD-ROMs and diskettes, as well as for your home folder. You can choose your home folder or mounted CD-ROMs and diskettes through the menu button at the end of the Enter Path or Folder name text field.

Dragging and Dropping Files and Folders

When you drag a file or folder icon from a *regular folder window*, the default drag-and-drop behavior is:

- A copy operation when you drop the icon onto a diskette window.
- A move operation when you drop the icon onto a folder window.
- A move operation when you drop the icon onto the Trash Can or to the Trash window.

When you drag a file or folder icon from a *diskette window*, the default drag-and-drop behavior is:

- A copy operation when you drop the icon onto another diskette window.
- A copy operation when you drop the icon onto a folder window.
- A move operation when you drop the icon onto the Trash Can or to the Trash Can window.

When you drag a file or folder icon from a *CD-ROM window*, the default drag-and-drop behavior is:

- A copy operation when you drop the icon onto a diskette window.
- A copy operation when you drop the icon onto a folder window.

Note – You cannot drag and drop files or folders onto a CD-ROM.

Supported Formats

CDE reads and writes the following file-system formats:

- DOS High Density (commonly used by PCs running Windows or DOS)
- NEC-DOS Medium Density (sometimes used by older PCs)
- UNIX (Solaris version, as written by CDE running on a SPARC-based workstation)
- UNIX (IA version, as written by CDE running on an IA-based workstation)

CDE supports DOS High Density and NEC-DOS Medium Density formats whether running on SPARC or IA, but the following restrictions apply to the UNIX format:

- A SPARC-based workstation cannot read or write diskettes formatted as "UNIX" on an IA system
- An IA-based workstation cannot read or write diskettes formatted as "UNIX" on an SPARC system

Tip – If you need to use the same diskettes on SPARC-based and IA-based systems, use the DOS High Density format.

Removable Media Manipulation Skills

This section describes tasks that you can perform using diskettes and CD-ROMs with File Manager.

▼ To View Files and Folders on a Diskette

1. **Insert the diskette into a disk drive.**
2. **Select Open Floppy from the Files subpanel on the Front Panel, or from the File Manager File menu.**

If the diskette is formatted and readable by the system (see “Supported Formats” on page 193), File Manager displays a view of the diskette’s contents. If the diskette is unformatted or is unreadable by the system, File Manager displays the Format Floppy dialog box.

Note – If your system has more than one disk drive, File Manager opens one window for each readable diskette you insert when you choose Open Floppy from the File menu.

▼ To View Files and Folders on a CD-ROM

- **Insert the CD-ROM into a CD-ROM drive.**

File Manager displays a window containing a view of the CD-ROM contents.

If you close the CD-ROM’s File Manager window, you can reopen it by selecting Open CD-ROM from either the File Manager File menu or from the Folders Subpanel on the Front Panel.

▼ To Format a Diskette

1. **Choose Format Floppy from the diskette’s File Manager window File menu.**
The Format Floppy dialog box appears.
2. **Select one of the formatting options (see “Supported Formats” on page 193).**

3. Click **Format** or press **Return**.
4. (Optional) To rename the diskette, type the new name in the **Floppy Name** text field and press **Return**.

▼ To Rename a Diskette

1. Choose **Rename Floppy** from the diskette's **File Manager** window **File** menu.
The **Rename Floppy** dialog box appears.
2. Type the new name in the **Floppy Name** text field.
3. Click **Rename** or press **Return**.

▼ To Eject a Diskette or CD-ROM

1. Choose **Eject** from the **File Manager** window **File** menu.
2. Remove the diskette or CD-ROM from the disk drive.

▼ To Copy Files or Folders to a Diskette

1. Select the icon for the file or folder you want to copy.
2. Choose **Copy to** from the **Selected** menu.
The **Copy Object** dialog box appears.
3. Type a full path name in the **Destination Folder** text field.
Use `/floppy` as the directory name. For example, if you want to copy the file `report` onto a diskette named `john`, you would type `/floppy/john`.
4. Type the file or folder name in the **Name for copy** text field.
In the above example, you would type `report`.
5. Click **OK** or press **Return**.

Note – You cannot copy files or folders to a CD-ROM.

▼ To Move Files or Folders to a Diskette

1. Select the icon for the file or folder you want to move.

2. Choose Move to from the Selected menu.

The Move Object dialog box appears.

3. Type a full path name in the Destination Folder text field.

Use /floppy as the directory name. For example, if you want to move the file report onto a diskette named john, you would type /floppy/john.

4. Click OK or press Return.

Note – You cannot move files or folders to a CD-ROM.

▼ **To Delete Files or Folders From a Diskette**

- Choose the Put in Trash command from the file or folder icon's pop-up menu (displayed by pressing Shift+F10 or mouse button 3).
- *Or*, select the file or folder's icon, then choose Put in Trash from the Selected menu.
- *Or*, drag the file or folder's icon and drop it onto the Trash Can control in the Front Panel.
- *Or*, drag the file or folder's icon to an open Trash Can window.

▼ **To Create Files and Folders on a Diskette**

1. Choose New File or New Folder from the File menu.

2. Type a name in the New File Name field of the New File dialog box or New Folder Name field of the New Folder dialog box.

3. Click OK or press Return.

To close the New File or New Folder dialog box without creating a new file or folder, click Cancel or press Escape.

Note – You cannot create files or folders on a CD-ROM.

Using Removable Media Manager

Use Removable Media Manager to format, protect, and view data on removable media devices such as diskettes, CD-ROM, DVD-ROM, Iomega Zip drives, and Iomega Jaz drives.

- “Starting Removable Media Manager” on page 197
- “Supported Media Classes” on page 198
- “Viewing Additional Information About a Device” on page 198
- “Properties” on page 199
- “Formatting and Slicing Devices” on page 200
- “To Protect a Device” on page 202

Starting Removable Media Manager

To open the Removable Media Manager:

- In File Manager, choose Removable Media Manager from the File menu.
- From the Front Panel, click the Removable Media Manager icon in the Files subpanel.
- From the Workspace menu, choose Removable Media Manager in the Folders menu.

When Removable Media Manager starts, it displays all media currently loaded into the drives. The different forms of devices are represented by icons and are unlimited. For example, if a machine has three drives loaded with diskettes, three diskette icons are displayed. The icon view updates each time a device is inserted or ejected. Each class of media is represented by a different icon.

You can select one or more devices and perform operations on them. A device is displayed with a nickname (`cdrom0`), an optional volume name (`ssa_2_1_sparc`), and an optional partition or slice number (`s1`).

Note – In order to have the Removable Media Manager recognize a diskette, you must choose Open Floppy from one of the following:

- File subpanel of the Front Panel
 - File menu of the File Manager
 - Folders menu of the Workspace Menu
-

Supported Media Classes

Removable Media Manager supports the following devices:

- Diskette
- CD-ROM
- DVD-ROM
- Zip
- Jaz
- Rmdisk (generic call includes Sysquest devices)

Viewing Additional Information About a Device

To display additional information about a device, you must change the viewing option. To do this:

▼ To Change the Viewing Option

1. In the Removable Media Manager window, click on a device.
2. From the View menu, select Set View Options.
3. Under the Representation section, select the By Name, date, size... button.

4. Click OK.

Note – If the device has no name, it is shown as . . unnamed.

In verbose mode, Removable media manager shows the following for each media object:

- Volume name
- Media nickname or alias
- Media partition or slice number
- Total storage capacity
- Mount point UNIX permissions
- Mount point owner name
- Mount point group name
- Mount point path
- Mount point date

Properties

The Properties dialog box displays the properties and capacity capabilities of a device. Two property categories can be displayed using the properties dialog box:

- Information—shows the alias, product id, write protect and password protection status. Also displayed are the file system, mount point and total capacity.
- Floating Capacities—shows the used and available capacities for a device.

▼ To View the Properties of a Device

The properties of a device are available using two different methods. Properties can be accessed from the Removable Media Manager menu and from the Command Line.

1. Viewing properties from the Removable Media Window

- a. From the Removable Media Manager window, click on a device to select it.
- b. From the Selected menu, select Properties.

2. To view properties using the command line option, type:

```
sdtmedia_prop -u k /vol/dev/rdsk/...
```

where —u is b, k, m, or g.

This action shows capacities in units of bytes, kilobytes, megabytes, or gigabytes.

Formatting and Slicing Devices

You can format, name, and create file systems in a single operation on all types of removable devices by the format option in the Removable Media Manager window.

Two separate actions are launched. The first is a low level format of the device, which utilizes a status bar to update you on the percentage completed. When the format is complete, the second action is launched which applies the file system and optional name and slices to the device.

▼ To Format a Device

Formatting is done on all re-writable devices, including diskettes, Jaz, and Zip devices. Formatting can be initiated in one of two ways.

1. To format from the Removable Media Manager window:

a. Click on a device icon.

b. From the Removable Media Manager window, choose the Selected menu.

c. Choose Format.

The Media Format window will appear with further selections relative to the device you have selected.

d. Select either Quick Format or Long Format.

e. Select a type from the File System pull-down menu.

f. (Optional) Under Volume Name type a name for the formatted device.

If no name is specified, the device will not be named. If the device has already been formatted and has a volume name, the volume name will not be shown.

If UFS was selected as the file system the Solaris Slice Editor button will appear in the dialog box.

g. Click Format.

Note – ‘Long Format’ ignores password protection on the device. If the media is read-write protected you will be prompted for the password. ‘Long Format’ is the default value for previously sliced media, write protected media or write protected with password media.

2. To format using the command line option:

To format, name, and create file systems on all types of removable media devices from the command line type:

```
sdtmedia_format -d volume_device_name
```

▼ Creating Solaris Slices

The Media Slice Editor is used to create Solaris slices on a device. You can only create slices in an UFS file system. If you select a PCFS or UDFS file system, you will not have the option of creating Solaris slices.

Once slices are created, the Media Slice Editor can be used to write UFS or UDFS file systems onto the slices. Where possible the Media Slice Editor will check the slice values supplied by the user and the overall integrity of the slice information. For example, it will report errors for overlapping slices.

There are two methods of creating slices. The first is to use the AutoSlice option.

1. Using AutoSlice.

a. Select the AutoSlice button.

b. Type the number of slices to be created.

c. Click OK.

2. Or you may enter the number and size of the slices into the Slice Editor dialog box. The Slice Editor will create slices on cylinder boundaries.

To Protect a Device

Device protection enables you to view the software protection for a selected device and to either write protect, read-write protect or disable protection. The device protection options are:

- Disable Protection
- Write Protect Without Password
- Write Protect With Password
- Read-Write Protect with Password

▼ To View a Device's Protection

1. In the Removable Media Manager window, click on a device.
2. From the Selected menu, choose Properties.

▼ To Disable Protection

This option allows the user to disable software protections if the medium has been previously write or read-write protected.

1. If the media has been write protected without a password:
 - a. In the Removable Media Manager window, select the device.
 - b. From the Selected menu, select Disable Protection.
2. If the media has been write or read-write protected with a password:
 - a. In the Removable Media Manager window, select the device.
 - b. From the Selected Menu, choose Disable Protection.
 - c. Type the password into the Password dialog.

▼ To Enable Protection

This option allows the user to enable software protection.

1. To write protect without a password:
 - a. In the Removable Media Manager window, select the device.
 - b. From the Selected Menu, choose Write Protect.
 - c. In the Protect dialog, click Write Protect Without Password.
 - d. Click OK.
2. To write protect with a password:
 - a. In the Removable Media Manager window, select the device.
 - b. From the Selected menu, choose Write Protect.
 - c. In the Protect dialog, click Write Protect With Password.
 - d. In the Enter Password area, type the password.
 - e. Tab to the Verify Password area and type the password again.
 - f. Click Apply.
3. To read-write protect with a password:
 - a. In the Removable Media Manager window, select the device.
 - b. From the Selected Menu, choose Read-Write Protect.
 - c. In the Protect dialog, click Read-Write Protect With Password.
 - d. In the Enter Password area, type the password.
 - e. Tab to the Verify Password area and type the password again.
 - f. Click Apply.

4. Command Line Option

To start the Password dialog box from the command line, type:

```
sdtmedia_prot [-w|-d] /vol/dev/rdisk/...
```

Use the command line options in the following table to specify the degree of protection for the device.

TABLE 6-1 Command Line Option `sdtmedia_prot`

-w	If the device is not protected, write protects the device without a password and does not display any dialogs. If the device is already protected, displays an error dialog.
----	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

TABLE 6-1 Command Line Option `sdtmedia_prot` (Continued)

<code>-d</code>	Disable device protection. If the device is password protected, the user is prompted for the password.
-----------------	--------------------------------------------------------------------------------------------------------

Use the command line options in the following to specify the degree of protection for a device.

▼ To Change Your Password

To change your password, you must first disable the existing password protection and then apply the new password protection to the device. After entering your new password you will have to enable password protection.

1. **Disable your password protection.**
2. **Type a new password in the field.**
3. **Re-enter the same password.**
4. **Click Apply to enable password protection or Cancel to abort the operation.**

Using Window Manager Enhancements

Window Manager Enhancements consist of three separate applications. They are:

- “Graphical Workspace Manager” on page 205
- “Window List ” on page 212
- “Workspace Manager” on page 218

These three applications provide the ability to manipulate workspaces and windows from the different applications depending on the tasks you want to perform. Graphical Workspace Manager allows for changes in workspaces and windows. The Window List concentrates on the manipulation of windows. Finally, the Workspace Manager controls the number of workspaces, whether or not the Workspace Switch Area appears on the Front Panel, and the ability to restore the default values.

Graphical Workspace Manager

Graphical Workspace Manager enables you to operate a workspace "control panel". This panel displays a window containing a miniaturized picture of each workspace on the desktop. Workspaces may be created, deleted, renamed, tiled, or cascaded. Application windows may be moved (within or between workspaces), terminated, minimized, or maximized.

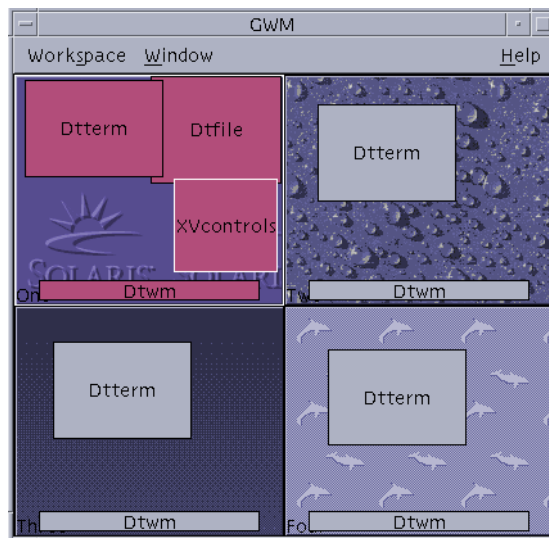


FIGURE 7-1 Graphical Workspace Manager Main Screen

Starting the Graphical Workspace Manager

The Graphical Workspace Manager can be started either from the Desktop or from the command line.

- ▼ To Start the Graphical Workspace Manager from the Desktop
 1. Right-click on the Desktop to open the Workspace menu.
 2. Choose Applications.
 3. Choose Application Manager.
 4. Double-click Desktop_Apps.
 5. Double-click GWM.

- ▼ To Start the Graphical Workspace Manager from the Command Line
 - Type `sdtgwm` at the command line.

Graphical Workspace Manager Tasks

There are a number of tasks that you can perform using Graphical Workspace Manager:



FIGURE 7-2 Graphical Workspace Manager – Workspace Menu

- “To Add a Workspace” on page 207
- “To Delete a Workspace” on page 208
- “To Rename a Workspace” on page 208
- “To Switch to a Different Workspace” on page 208
- “To Cascade All Windows in a Workspace” on page 208
- “To Tile All Windows in a Workspace” on page 208
- “To Minimize a Window” on page 209
- “To Close a Window” on page 209
- “To Terminate an Application” on page 210
- “To Move a Window to a Different Workspace” on page 210
- “To Occupy Workspace(s)” on page 210
- “To Unoccupy Workspace” on page 210

▼ To Add a Workspace

1. Choose Add Workspace from the Workspace menu.
2. Enter a name in the Add Workspace dialog box.

3. Click OK.

▼ To Delete a Workspace

1. Choose **Delete Workspace** from the **Workspace** menu.
2. Choose the workspace to be deleted from the submenu.

▼ To Rename a Workspace

1. Choose **Rename** from the **Workspace** menu.
2. From the submenu, select the workspace to be renamed.
3. Enter the new name in the **Rename Workspace** dialog box.
4. Click OK.

▼ To Switch to a Different Workspace

1. Choose **Switch to Workspace** from the **Workspace** menu.
2. From the submenu, select the workspace to which you want to switch.

▼ To Cascade All Windows in a Workspace

This task executes in the current workspace.

- Choose **Cascade All Windows** from the **Workspace** menu.

▼ To Tile All Windows in a Workspace

This task executes in the current workspace.

1. Choose **Tile All Windows** from the **Workspace** menu.
2. From the submenu, choose **Horizontal** or **Vertical**.

▼ To Open the Options Dialog

- Choose Options from the Workspace menu.

For further information on the Options Dialog, see “Graphical Workspace Manager Options Dialog” on page 210.



FIGURE 7-3 Graphical Workspace Manager — Window Menu

▼ To Minimize a Window

1. Select a window in Graphical Workspace Manager.
2. Choose Minimize from the Window menu.

▼ To Close a Window

1. Select a window in Graphical Workspace Manager.
2. Choose Close Window from the Window menu.
3. (Optional) If the window you are closing is the only window that contains the application, a confirmation dialog will appear. Click OK, if you want to continue with closing the window.

▼ To Terminate an Application

1. Select an application window in Graphical Workspace Manager.
2. Choose **Terminate Application** from the Window menu.
3. In the confirmation dialog box, click **OK**.

▼ To Move a Window to a Different Workspace

1. Select a window in the Graphical Workspace Manager.
2. Choose **Move to Workspace** from the Window menu.
3. From the submenu, choose the workspace to which you want the window to move. You may also choose **All Workspaces**.

▼ To Occupy Workspace(s)

1. Select a window in the Graphical Workspace Manager.
2. Choose **Occupy Workspace** from the Window menu.
3. Choose the workspace(s) from the submenu.
Multiple workspaces can be selected by pressing the Control key and selecting the additional workspaces.
4. Click **OK**.

▼ To Unoccupy Workspace

1. Select a window in the Graphical Workspace Manager.
2. Choose **Unoccupy Workspace** from the Window menu.

Graphical Workspace Manager Options Dialog

The Graphical Workspace Manager Options dialog box contains a number of options that can be set. They are:

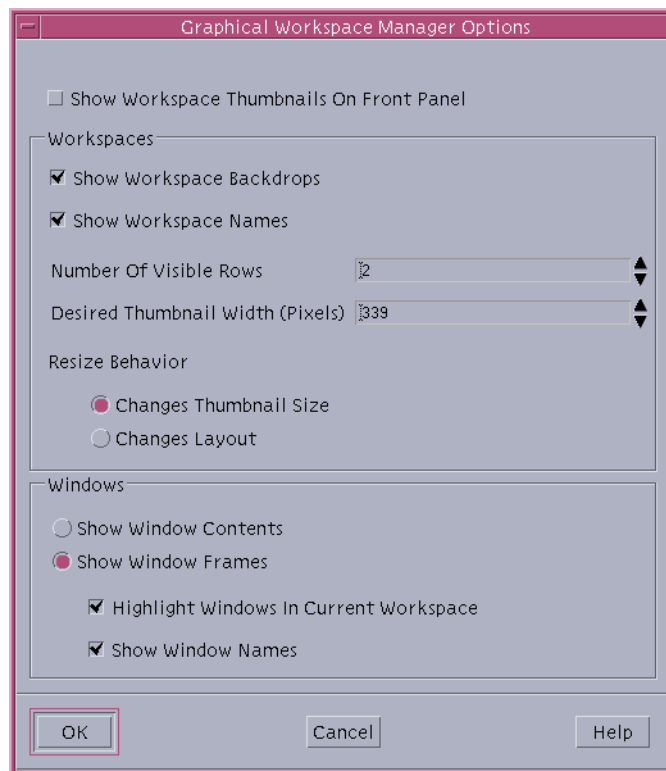


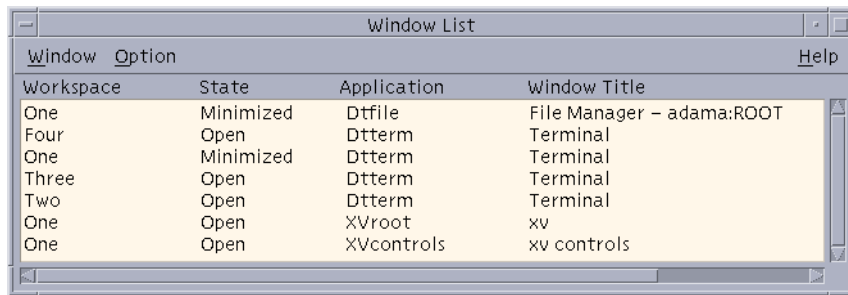
FIGURE 7-4 Graphical Workspace Manager Options Dialog Box

- **Show Workspace Thumbnails On Front Panel** – Determines if the Graphical Workspace Manager workspace images will appear on the Front Panel.
- **Show Workspace Backdrops** – Determines if the actual workspace backdrops will be shown in the Graphical Workspace Manager.
- **Show Workspace Names** – Displays the workspace names in the thumbnailed workspaces of the Graphical Workspace Manager.
- **Number of Visible Rows** – Enables the setting of the number of rows used to display the open workspaces of the Graphical Workspace Manager.
- **Desired Thumbnail Width (Pixels)** – Sets the width, in pixels, of the workspace display in the Graphical Workspace Manager.
- **Changes Thumbnail Size** – Specifies that a resize of the Graphical Workspace Manager will actually increase/decrease the size of the Graphical Workspace Manager main window, thus changing the size of the workspace thumbnails.
- **Changes Layout** – Specifies that a resize of the Graphical Workspace Manager will only change the layout of the workspace thumbnails within the Graphical Workspace Manager.
- **Show Window Contents** – Causes window images to be grabbed and displayed.

- **Show Window Frames** – Window images will not be grabbed. Blank boxes will be displayed.
- **Highlight Windows In Current Workspace** – The windows in the current workspace will be displayed in the desktop highlight color. This option is only available if Show Window Frames is selected.
- **Show Window Names** – The command name of the window will appear in the window. This option is only available if Show Window Frames is selected.

Window List

The Window List displays information about all windows across the CDE workspaces. Once launched, the window list will be updated in a dynamic fashion.



Window	Option	State	Application	Window Title
One		Minimized	Dtfile	File Manager – adama:ROOT
Four		Open	Dtterm	Terminal
One		Minimized	Dtterm	Terminal
Three		Open	Dtterm	Terminal
Two		Open	Dtterm	Terminal
One		Open	XVroot	xv
One		Open	XVcontrols	xv controls

FIGURE 7-5 Window List Main Screen

The windows can be sorted in one of the following orders:

- Workspace Name
- Window State
- Application Name
- Window Title

Starting the Window List

The Window List can be started either from the Desktop or from the command line.

▼ To Start the Window List from the Desktop

1. **Right-click on the Desktop to open the Workspace Menu.**
2. **Select Applications.**
3. **Select Application Manager from the Applications submenu.**
4. **Double-click Desktop_Apps.**
5. **Double-click Window List.**

▼ To Start the Window List From the Command Line

- **Type `sdtwinlst` at the command line.**

Performing Window List Tasks From the Window Menu

There are a number of tasks that you can perform using the Window List. They are:

- “To Go To a Window” on page 214 – Goes to the selected window and gives it focus. If it is in another workspace, you are moved to that workspace.
- “To Get a Window” on page 214 – Moves the selected window from whatever workspace it is in to the one you are currently in and gives it focus.
- “To Lower a Window in the Stack” on page 215 – Lowers the selected window to the bottom of the window stack.
- “To Minimize the Selected Window(s)” on page 215 – Minimizes the selected window(s).
- “To Close a Window” on page 215 – Closes the selected window(s). If the window to be closed is the only window associated with an application, a confirmation dialog box appears.
- “To Terminate an Application” on page 215 – A confirmation dialog box appears and all windows associated with that application are closed.
- “To Move the Selected Window(s) Into Another Workspace” on page 215 – Moves the selected window(s) to the specified workspace.
- “To Occupy the Selected Workspace” on page 216 – Opens the Workspace Chooser dialog box and places the selected window in the workspace chosen from the list.
- “To Unoccupy the Selected Workspace” on page 216 – Removes the selected window from the current workspace. If this is the only workspace the selected window resides in, this option is greyed out.

- “To Cascade all Non-minimized Windows in a Workspace” on page 216 – Cascades all windows in the current workspace.
- “To Tile all Non-minimized Windows in a Workspace” on page 216 – Tiles all windows in the current workspace. Tiling can be horizontal or vertical.

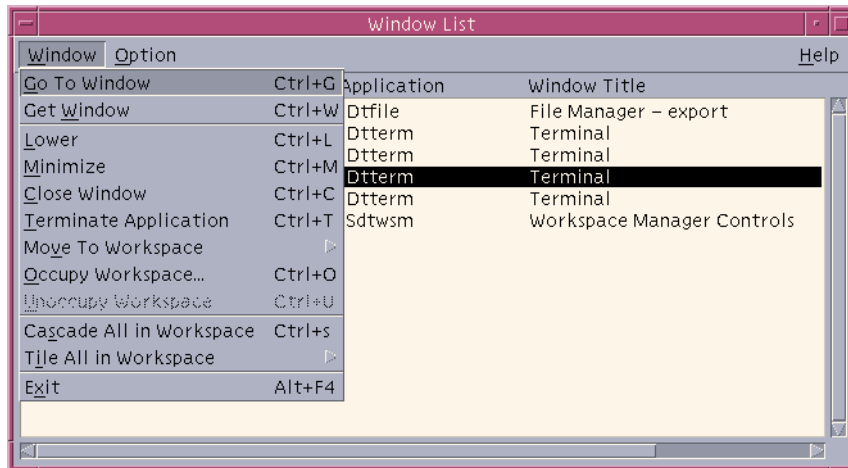


FIGURE 7-6 Window List Window Menu

▼ To Go To a Window

1. Select a window from the Window List.
2. Choose Go To Window from the Window menu.

Note – Depending on the setting of the Window List Options, you may be able to double-click on the Window List entry and move to the workspace that contains the selected window or have the window move to the current workspace. Refer to “To Set the Action of a Double-click on a Window Entry” on page 218.

▼ To Get a Window

1. Select a window from the Window List.
2. Choose Get Window from the Window menu.
Window appears in the current workspace.

▼ To Lower a Window in the Stack

1. Select a window from the Window List.
2. Choose Lower from the Window menu.

▼ To Minimize the Selected Window(s)

1. Select a window(s) from the Window list.
2. Choose Minimize from the Window menu.

▼ To Close a Window

1. Select a window(s) from the Window List.
2. Choose Close Window from the Window menu.
3. (Optional) If the window being closed is the only window that contains a given application, a confirmation dialog box will appear. Click OK, if you want to close the window and terminate the application.

▼ To Terminate an Application

1. Select a window from the Window List.
2. Choose Terminate Application from the Window menu.
3. (Optional) If the window being closed is the only window that contains a given application, a confirmation dialog box will appear. Click OK, if you want to close the window and terminate the application.

▼ To Move the Selected Window(s) Into Another Workspace

1. Select a window(s) from the Window List.
2. Choose Move to Workspace from the Window menu.
3. Choose a workspace or All Workspaces.

▼ To Occupy the Selected Workspace

1. Select a window(s) from the Window List.
2. Choose Occupy a Workspace from the Window menu.
3. Choose the workspace you want the window to occupy from the Occupy Workspace dialog box.

▼ To Unoccupy the Selected Workspace

1. Select a window(s) from the Window List.
2. Choose Unoccupy a Workspace from the Window menu.

▼ To Cascade all Non-minimized Windows in a Workspace

This occurs only in the current workspace.

- Choose Cascade All in Workspace from the Window menu.

▼ To Tile all Non-minimized Windows in a Workspace

This occurs only in the current workspace.

1. Choose Tile All in Workspace from the Window menu.
2. Click Horizontal or Vertical from the submenu.

Performing Window List Tasks from the Option Menu

There are two tasks that can be performed from the Option Menu. They are:

- “Sorting Options” on page 217
- “Opening the Options Dialog” on page 217

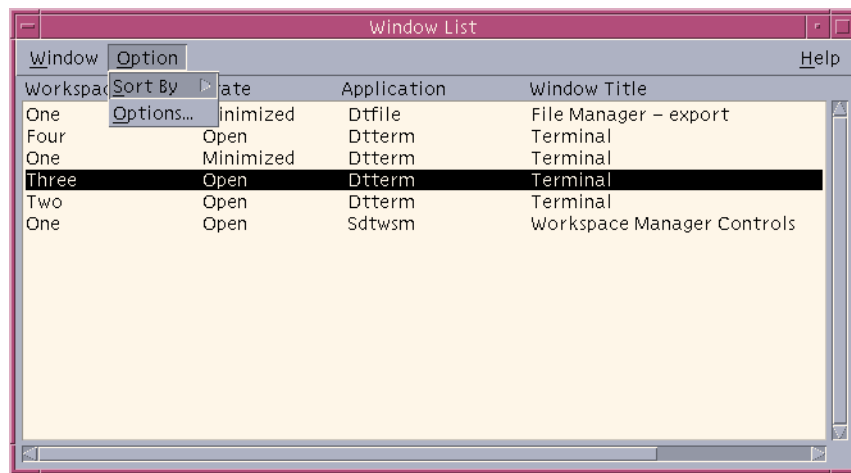


FIGURE 7-7 Window List Option Menu

▼ Sorting Options

1. Select **Sort By** from the **Option** menu.
2. Choose one of the four sort options.

▼ Opening the Options Dialog

- Select **Options** from the **Option** menu.

Window List Options

There are two options that you can change using the Window List – Options dialog box:

- Show Column
- Double-clicking on a window in the list

These two options allow the setting of which columns will appear in the Window List and what action will be taken when you double-click on a window item in the Window List.

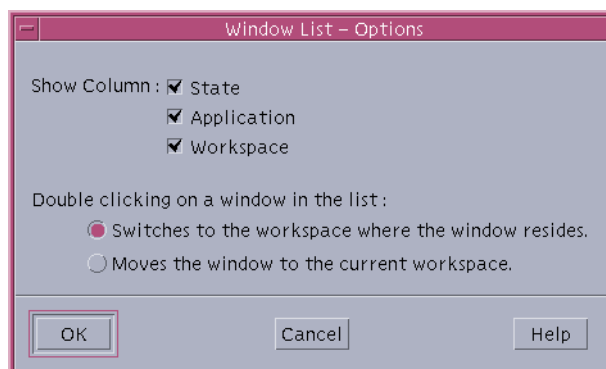


FIGURE 7-8 Window List – Options Dialog

▼ To Show Columns

- **Click the State, Application, or Workspace check boxes for that column to be displayed.**

The lack of a checkmark means the column will not be displayed.

Note – The Window Title column will always be visible.

▼ To Set the Action of a Double-click on a Window Entry

Window List provides the ability to select the effect of double-clicking a window entry in the Window List.

1. **Click the Switches to the workspace where the window resides check box.**
This has the effect of switching to the workspace that contains the selected window.
2. **Click the Moves the window to the current workspace check box.**
This has the effect of moving the selected window to the current workspace.

Workspace Manager

The Workspace Manager provides a Graphical User Interface (GUI) for controlling behavior and the number of workspaces. You will be able to add and delete

workspaces using the slide bar. Workspace Manager enables you to show the Workspace Switch Area on the Front Panel instead of the workspace buttons. You will also be able to return to the default settings.

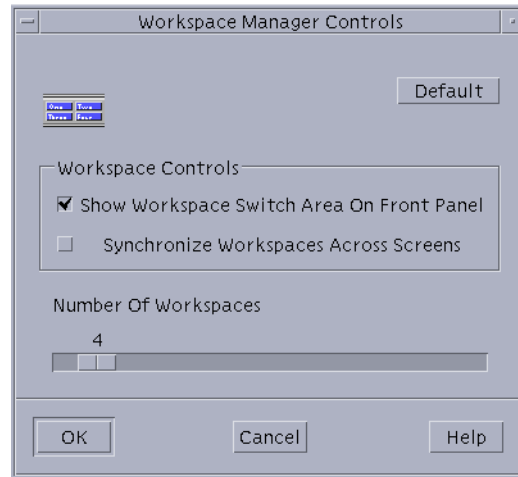


FIGURE 7-9 Workspace Manager Main Screen

Starting Workspace Manager

You can start the Workspace Manager either from the Workspace Menu or at the command line.

▼ To Start the Workspace Manager From the Desktop

1. **Right-click on the Desktop to open the Workspace Menu.**
2. **Choose Applications.**
3. **Choose Application Manager from the submenu.**
4. **Double-click Desktop_Apps.**
5. **Double-click Workspace Manager Controls.**

▼ To Start the Workspace Manager From the Command Line

- **Type `sdtwsm` at the command line.**

Using Workspace Manager Controls

There are a number of functions that can be performed using the Workspace Manager:

- “To Display the Workspace Switch Area on the Front Panel” on page 220
- “To Synchronize Workspaces Across Screens” on page 220
- “To Set the Number of Workspaces” on page 220
- “To Restore the Default Settings” on page 220

▼ To Display the Workspace Switch Area on the Front Panel

1. Select the **Show Workspace Switch Area On Front Panel** check box.
2. Click **OK**.

▼ To Synchronize Workspaces Across Screens

1. Select the **Synchronize Workspaces Across Screens** check box.
2. Click **OK**.

▼ To Set the Number of Workspaces

1. Move the **Number of Workspaces** slide bar until the desired number of workspaces appears.
2. If the resulting number of workspaces is an addition, the new workspace icons will appear on the Front Panel.
3. (Optional) If the resulting number of workspaces is a reduction, the **Workspace Manager Delete Workspace** dialog box will appear. Click **OK**, if you want to delete the workspace(s).

▼ To Restore the Default Settings

- Click the **Default** button in the **Workspace Manager Controls** window.

Using Application Manager

Application Manager is a container for the applications and other tools available on your system. (The relationship between Application Manager and the Front Panel and Workspace menu is explained in “Running Applications” on page 45.)

This chapter explains how to use and make personal customizations to Application Manager. Customizations are typically carried out by the system administrator.

- To Open Application Manager
- Application Manager Windows
- To Run an Application
- Setting Up Applications

To Open Application Manager

1. **Open the Application subpanel by clicking the tab above the Text Note control on the Front Panel.**

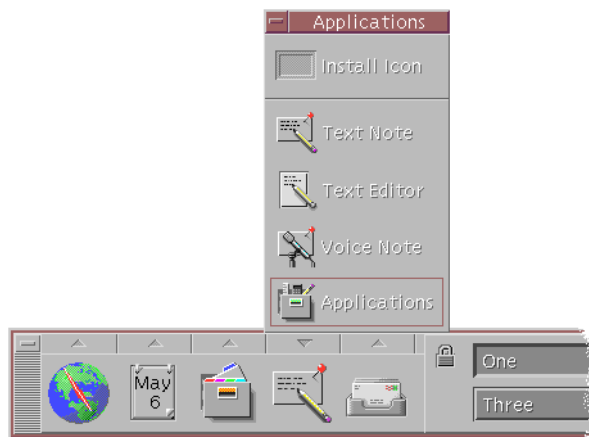


FIGURE 8-1 Application Manager control

2. Click Applications.

The main Application Manager window is displayed

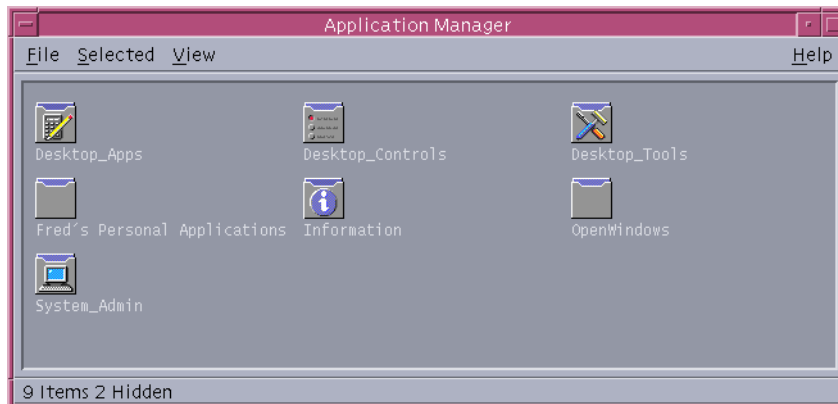


FIGURE 8-2 Personal Applications Group in Applications Manager

Application Manager Windows

The Application Manager window is a special File Manager view of the Application Manager in your file system. It looks and behaves somewhat like a File Manager

window, but it is populated each time you log in, and you cannot copy new applications and files directly into it.

The main window contains a set of *application groups*, or folders containing icons that you use to start applications; some application groups contain other useful application files such as sample data files, templates, and “read me” files. The application groups may be located on your system or on other systems throughout the network. An icon that starts an application is called an *action icon* or *application icon*.

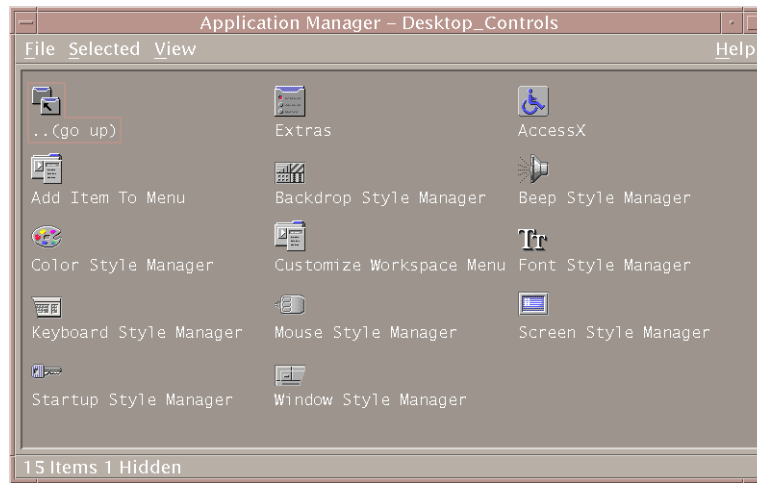


FIGURE 8-3 Action (Application) Icons in the Desktop_Apps Application Group

The application groups in your Application Manager are either built in or registered by your system administrator. CDE provides the built-in application groups listed in the following table.

TABLE 8-1 Application Groups in Application Manager

Application Group	Description
Desktop_Apps	Applications and accessories typically found in a desktop environment, (for example: Calculator, File Manager and Text Editor).
Desktop_Controls	Applications typically used for setup and customization of the desktop (for example, Customize Workspace Manager and Restore Front Panel).
Desktop_Tools	File manipulation tools that are typically used by people who understand actions and file types
Information	Online documentation and release notes.

TABLE 8-1 Application Groups in Application Manager *(Continued)*

Application Group	Description
OpenWindows	Standard applications from the OpenWindows desktop environment for users transitioning from it
System_Admin	Tools for use by the system administrator and for people working with hardware devices such as CD-ROM drives and disks.

Menus and Commands

Since Application Manager is closely related to the File Manager window, it uses most of the same menus, commands, and other features.

For more information about using the File Manager menus and dialog boxes, see Chapter 5.

To Run an Application

1. **Open Application Manager.**
2. **Double-click the application group's icon to display its contents.**
3. **Double-click the application's action icon.**

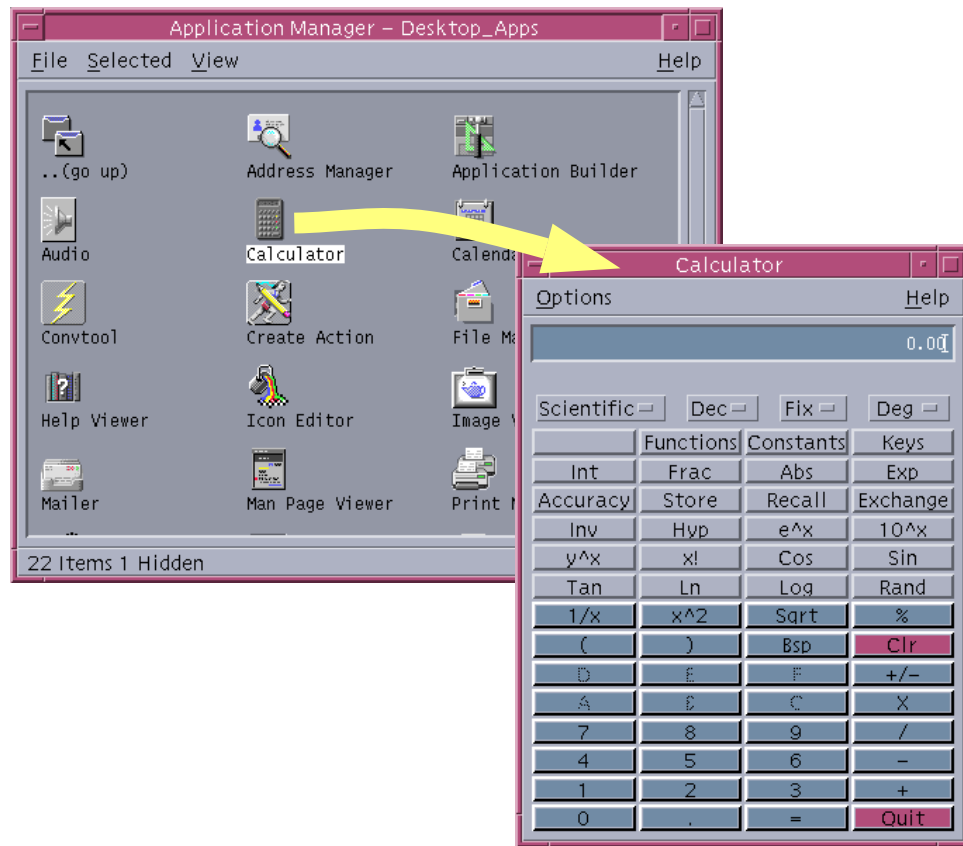


FIGURE 8-4 Opening an Application Window from Application Manager

Setting up Applications

You can put an application on the Front Panel or on your desktop. You can also create your own application group in Application Manager.

▼ To Put an Application Icon in the Front Panel

1. Display the application's icon in Application Manager.
2. Display the subpanel to which you want to add the application.

3. Drag the action icon from Application Manager to the Install Icon control in the subpanel.

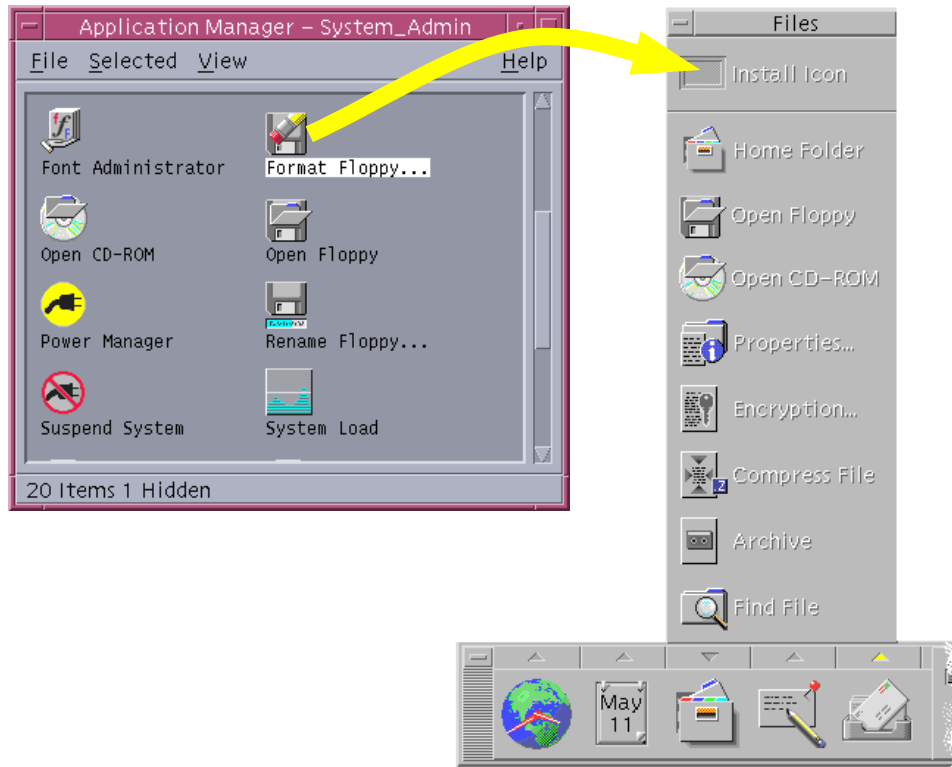


FIGURE 8-5 Installing an Application (Action Icon) in the Front Panel

▼ To Put an Application Icon on the Workspace Backdrop

This procedure copies an application icon from Application Manager to the workspace (backdrop). This makes the icon available when you don't have an Application Manager window open

1. Open the application group containing the application you want to add.
2. Drag the application from Application Manager to the workspace backdrop.

▼ To Create a Personal Application Group

A personal application group is an application group that you can alter, since you have write permission to it.

1. **From your home folder, change to the `.dt/appmanager` subfolder.**
2. **Create a new folder and name it.**
The folder name will become the name of the new application group.
3. **Double-click Reload Applications in the Desktop_Controls application group.**
Your new application group will become registered at the top level of Application Manager.

▼ To Add Applications to a Personal Application Group

- Copy icons from other application groups to the personal application group.
For example, you can copy (by dragging) the Calculator icon from the Desktop_Tools application group to your new personal application group.
- Create an action for an application and then place an application (action) icon in the personal application group.

▼ To Update Application Manager

The contents of your Application Manager are built each time you log in. Each time it is built, it searches certain system and network locations for applications.

If your system administrator adds an application to your system or to an application server while you are in a session, you must update your Application Manager if you want the new application to be registered immediately.

There are two ways to update Application Manager:

- Open the Desktop_Controls application group and double-click Reload Applications.
- *Or*, log out and log back in.

Advanced Application Manager Concepts

This section describes several advanced Application Manager concepts:

- The relationship between file names and icon labels
- The folder location of Application Manager
- Creating personal actions and data types
- Where to obtain additional information about customizing Application Manager

File Names in Application Manager

Unlike regular files displayed in File Manager, the name displayed below an application icon in Application Manager is the action icon's label, not the action file name. Normally, you do not need to know the action file name.

However, there are situations where you may see the file name, for example, if you use the Copy File dialog box to copy the icon. In such cases, select the file and choose Copy To from the Selected menu, and the Copy To dialog box will display the file name.

Folder Location of Application Manager

Application Manager behaves much like File Manager. This is because Application Manager is a File Manager view of a special folder on your system used to gather registered applications. Ordinarily, you do not need to know the location of this special folder. However, its location may be useful to you if you are trying to troubleshoot problems.

Login Manager creates the Application Manager folder each time you log in. Its location is:

```
/var/dt/appconfig/appmanager/special_folder_name
```

where *special_folder_name* is a name assigned by the system that is unique for your system and login name.



Caution – You should *never* attempt to directly modify the *special_folder_name* folder from a command line.

Creating Personal Actions and Data Types

The desktop provides a tool that helps you create icons for running scripts, applications, and other commands. You may want to use this tool if you have a personal application your system administrator has not configured for you.

For example, suppose you have your own favorite spreadsheet application that you usually start by typing a command into a terminal emulator window:

```
FavoriteSpreadSheet -file data_file
```

You can create an icon that runs this command so that you won't have to continue manually typing it. To do this, you must create a special desktop "macro" called an *action*. You can also create a data type for each *data_file*.

The desktop includes a tool called Create Action that makes it easy to create actions and data types. To open the Create Action window, double-click the Create Action icon in the Desktop_Apps application group.

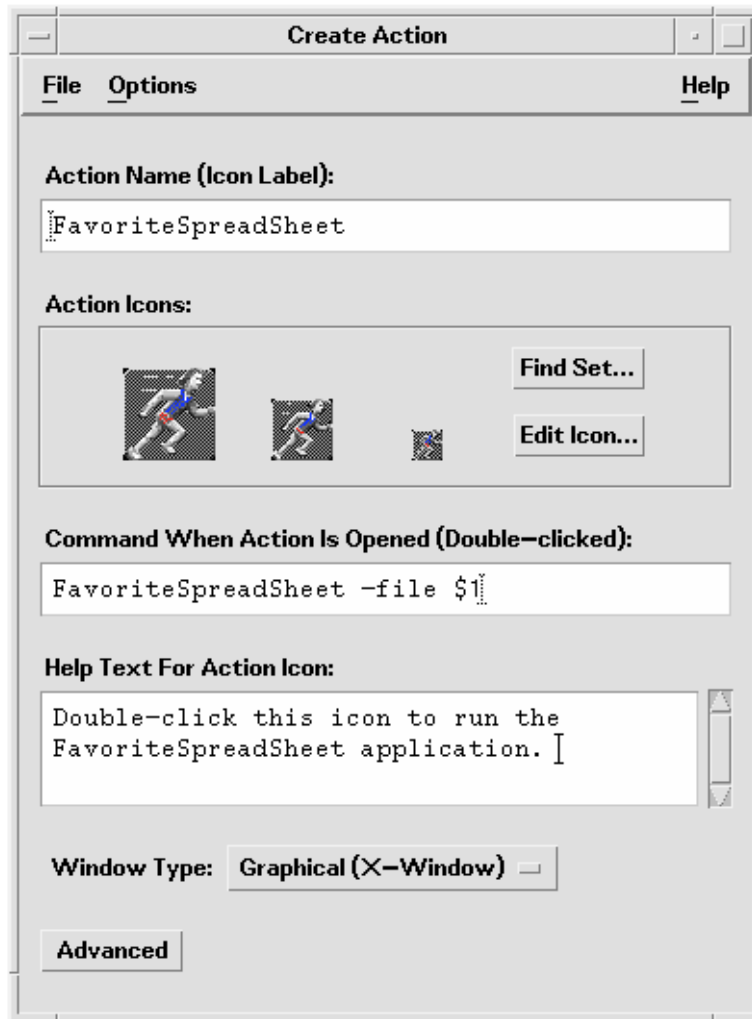


FIGURE 8-6 Create Action Window

▼ To Get Help on the Create Action Window

1. Choose Tasks from the Create Action window's Help menu.
2. Click the hyperlink "To Create an Action With Create Action."

Create Action:

- Creates an action for your application
- Places an action icon in your home folder.

You can move or copy that icon to other locations—for example, to a personal application group that you've created.

Registering Applications

When an application is registered in Application Manager, it has its own application group. This application group is available to all users on the system.

Registering applications is an advanced task, since it requires you to be the root user. For instructions, see the *Advanced User's and System Administrator's Guide*.

Customizing the Desktop Environment

Style Manager can be used to customize the appearance of the desktop.

- “Customizing Screen Appearance” on page 235
- “Customizing System Behavior” on page 244
- “Customizing Startup and Logout” on page 250

Note – By default, your customizations will affect only the current session unless you save them as the home session, as explained in “To Set a Home Session” on page 251.

Introducing Style Manager

To start Style Manager:

- Click the Style Manager control in the Front Panel.



FIGURE 9-1 Style Manager Front Panel control

The Style Manager controls and the items that they control are:

Color - Workspace colors and palettes

Font - Application font sizes and font groups

Backdrop - Workspace backdrop patterns

Keyboard - Key click volume and character repeat capability

Mouse - Mouse button click settings, double-click speed, pointer acceleration, and pointer movement threshold

Beep - Beeper volume, tone, and duration

Screen - Number of minutes before your screen blanks and whether your screen is covered and locked at that time

Window - How a window acquires focus, if the window raises when it receives focus, and where window icons are placed

Startup - How your session begins and ends



FIGURE 9-2 Style Manager controls

Customizing Screen Appearance

You can change the following aspects of your screen appearance:

- Color Palettes
- Workspace backdrops
- Font sizes and font groups

Color Palettes and Color Flashing

You set your workspace colors through a color palette. The number of colors in the palette is determined by your display type and the Number of Colors selection.

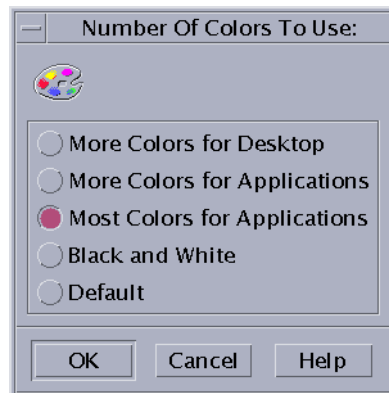


FIGURE 9-3 Number of Colors Dialog Box

Running certain applications may result in a phenomenon known as *color flashing* or *colormap flashing*, where the application appears with incorrect colors while the rest of

the desktop appears normal, and when given the focus it displays with correct colors but the rest of the desktop does not. Color flashing is typically found in either of the following circumstances.

- Your workstation does not use a 24 bit graphics card
- You are running applications that are designed to use their own colormaps (thus placing a burden on the frame buffer)

This is due to fundamental limitations in XWindows when dealing with applications that do not use the default colormap. While you can't use more colors than your display allows, you can reduce the number of colors used by the desktop by choosing a lower-valued color usage in the Number of Colors to Use dialog box, or by exiting other graphics-intensive applications.

For example, if you have a high-color display and have selected More Colors for Desktop but you want to run a color-rich application such as a computer-aided design (CAD) program, you should choose More Colors for Applications or Most Colors for Applications to decrease the number of colors that the desktop uses. The remaining colors are available for the CAD program.

▼ To Overcome Color Flashing

If you have closed all other graphics-intensive applications and your application is still experiencing color flashing, the following procedure *may* help eliminate the problem.

1. **Open Style Manager.**
2. **Click Color.**
The Color dialog box is displayed.
3. **Click Number of Colors.**
The Number of Colors To Use dialog box (see Figure 9-3) is displayed.
4. **Select Most Colors For Applications and click OK.**
5. **Click Desktop background and choose a simple workspace background such as Gray Lt.**
6. **Make this session your home session by following the procedure in "To Set a Home Session" on page 251.**
7. **Exit Style Manager and logout of CDE.**

8. Login to CDE and re-open the application that previously experienced color flashing.

If the application no longer experiences color flashing, make a note of the current Style Manager settings; if it is still experiencing color flashing, the application has probably specified a list of colormaps to be installed, CDE is only installing the first colormap in this list, so you will need to cycle through the colormaps as explained in the following steps.

9. Use the following special keyboard keys to cycle through the colormaps.

Control-L2 (or Control-Again)	Steps forward through the colormaps
Control-L4 (or Control-Undo)	Steps backward through the colormaps

Cycling through the colormaps *may* end up installing the correct colormap, and will not affect the other windows on the desktop in any way. If you continue to experience colormap flashing, have your system administrator seek further information on SunSolveSM.

Running OpenWindows Applications

During startup, `dtsession` will set `*foreground`, `*background` and other OpenWindows global color resources so that OpenWindows applications will be in the same color scheme as CDE applications. You can still control the appearance of their applications by setting application-specific resources; alternatively, change the palette in Style Manager and restart the OpenWindows application.

Color Buttons

Your display type and the Number of Colors selection determine the number of color buttons that make up a palette. You will have two, four, or eight color buttons in the Color dialog box. The different color buttons in the palette control the colors used for different areas of the screen.

If you have eight color buttons, they will be used as follows (buttons numbered from left to right, top to bottom):

1. Active window borders
2. Inactive window borders
3. Switch for workspace 1 and every fourth additional workspace (workspace 5, 9, ...)
4. Text and list areas
5. Main window background and switch for workspace 2 and every fourth additional workspace (workspace 8, 12, ...)

6. Dialog box background and menu bar and switch for workspace 3 and every fourth additional workspace (workspace 7, 11, ...)
7. Switch for workspace 4 and every fourth additional workspace (workspace 6, 10, ...)
8. Front Panel background

If you have four color buttons, they will be used as follows (buttons numbered from left to right):

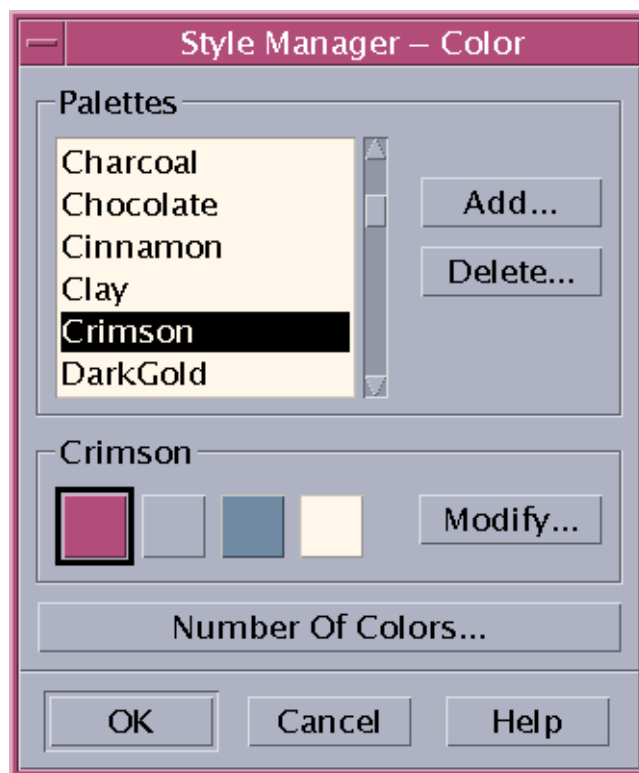
1. Active window borders
2. Window bodies:
 - a. Inactive window borders
 - b. Main window and dialog box backgrounds and menu bar
 - c. Front Panel background
3. Workspace switches and backgrounds
4. Text and list areas

If you have two color buttons, they will be used as follows (buttons numbered from left to right):

1. Active window borders
2. Everything else

▼ To Select a Palette

1. **Click the Style Manager Color control.**
2. **Select a palette from the Palettes list.**



3. Click OK.

Workspace colors come from predefined color palettes. The Color dialog box lists the palettes that came with your system plus any palettes you have added.

▼ **To Modify an Existing Palette**

1. Click the Style Manager Color control.

2. Select a palette in the Color dialog box.

3. Double-click a color button to open the Modify Color dialog box, or click a color button and then click Modify.

4. Adjust the settings for the level of red, green, blue, brightness, or hue by adjusting the corresponding slider.

The old and new color samples will be displayed in the upper left corner of the Modify Color dialog box.

5. Click OK in the Modify Color dialog box.
6. Repeat steps 2-4 to modify another color button.
7. Click OK in the Color dialog box.

▼ To Grab a Color from the Workspace

1. Click the Style Manager Color control.
2. Select a palette in the Color dialog box.
3. Double-click a color button to open the Modify Color dialog box, or click a color button and then click Modify.
4. Click Grab Color to display the grab pointer.
5. Move the pointer to an area of color on the screen that you want to grab.
6. Click to make that color the new color.

Note – This causes the desktop to use one more color so applications have one fewer color available to them.

▼ To Create a Custom Palette

You can create your own palette by copying and modifying an existing palette.

1. Click the Style Manager Color control.
2. Choose Add in the Color dialog box.
3. Type the new palette name and click OK in the Add Palette dialog box.
4. Modify the palette.
5. Click OK in the Color dialog box.

Adding a palette makes a copy of the currently selected palette with a unique name. You then create your custom palette by modifying the copy and the original palette is not changed.

▼ To Delete a Palette

1. Click the **Style Manager Color control**.
2. Select the palette from the **Palettes list**.
3. Click **Delete**.
4. Click **OK in the Delete Palette dialog box**.

When you delete a palette, Style Manager prefixes the name of the palette with a ~ and stores a copy in the *HomeDirectory/.dt/palettes* directory.

▼ To Restore a Deleted Palette

1. Open a **File Manager view showing *HomeDirectory/.dt/palettes***.
2. For system-supplied palettes, delete the file *~palette_name.dp*.
For user-added palettes, rename the deleted palette from *~palette_name.dp* to *palette_name.dp*.
3. **Restart Style Manager (close, then reopen)**.

▼ To Change the Number of Colors Used by the Desktop

1. Click the **Style Manager Color control**.
2. Click **Number of Colors in the Color dialog box**.
3. Select an option to set the number of colors used by the desktop.
See “Color Palettes and Color Flashing” on page 235.
4. Click **OK**.
You must log out and back in for the change to take effect.

Fonts



The font size and font group you select in Style Manager is used on titles, menu bars, window labels and text. The new font size and font group is used as applications are started. Existing windows will not reflect the change.

▼ To Select a Font Size

1. Click the Style Manager Font control.
2. Select a font size under Size.
3. Click OK to enable newly started applications to use the selected typeface, or click Cancel to cancel the operation.

▼ To Select a Font Group

1. Click the Style Manager Font control.
2. Select a font group under Font Group.
3. Look at the Preview window labels and text, which show the new font typeface.
4. Click OK to enable newly started applications to use the selected typeface, or click Cancel to cancel the operation.

▼ To Add a Font Group

1. Click the Style Manager Font control.
2. Choose Add in the Font dialog box.
3. Choose a font group from the System scrolling list and a font group from the User scrolling list.
4. Click OK to open the Font Group Name dialog box.

5. Enter a name in the New Font Group Name field of the Font Group Name dialog box for the new font group.
You can enter any non-blank name that you want.
6. Click OK to add a font group to the Font dialog box scrolling list.

▼ To Delete a Font Group

1. Click the Style Manager Font control.
2. Select a font group from the Font Group scrolling list on the Font dialog box.
3. Click the Delete button.
The Delete Font Group dialog box appears.
4. Click OK to delete the font group from the Font Group scrolling list.

▼ To View Font Attributes

1. Click the Style Manager Font control.
2. Click the Attributes button.
The Font Attribute dialog box appears. It provides name and location information on the font size and font group you selected. This information varies according to the alias family (system, user, user bold) and character set you choose from the combo boxes at the top of the dialog box.
3. Click Close to dismiss the Font Attribute dialog box.

Backdrops



You can select a backdrop pattern to cover each of your workspaces (the screen area underneath your windows). A unique backdrop for each workspace adds variety and helps you to quickly identify the workspace you are in.

▼ To Select a Backdrop

1. Switch to the workspace where you want the backdrop.
2. Click the Style Manager Backdrop control.
3. Select a backdrop.
4. Click Apply.

Customizing System Behavior

You can adjust the following settings for system devices:

- Keyboard click volume and character repeat
- Mouse button click settings, double-click speed, pointer acceleration, and pointer movement threshold
- Beeper volume, tone, and duration
- Screen blanking when not in use
- Window focus, movement, and icon behavior

▼ To Change Keyboard Behavior



1. Click the Style Manager Keyboard control.
2. Select the settings you want:
 - Auto Repeat: Sets characters to repeat when you hold down their keys
 - Click Volume: Determines the volume of key clicks (turned off at 0%)
3. To save the changes, click OK. To return to the default settings, click Default.

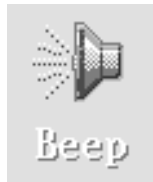
▼ To Change Mouse Behavior



1. **Click the Style Manager Mouse control.**
2. **Select the settings you want:**
 - **Handedness:** Reverses mouse buttons 1 and 3.
 - **Button 2:** Determines whether the middle mouse button is used to extend selections (Adjust) or drag-and-drop objects (Transfer). If Adjust is selected, transfer actions (drag) will require the use of mouse button 1.
 - **Double-Click:** Determines the maximum time between clicks of a double-click. (Test the speed by double-clicking in the mouse picture provided.) A new double-click speed does not take effect until the next time you log in.
 - **Acceleration:** Sets how fast the mouse pointer moves across the display.
 - **Threshold:** The distance in pixels the pointer moves at a slow speed before moving at the accelerated rate.
3. **To save the changes, click OK. To return to the default settings, click Default.**

Note – You can also set the edge Move Threshold (the minimum proximity of the mouse pointer to an object without the object becoming selectable) for the mouse. See the `dtwm` man page.

▼ To Change Beep Settings



1. Click the Style Manager Beep control.
2. Select the settings you want:
 - Volume: Determines the volume of the beep (turned off at 0%)
 - Tone: Determines the pitch of the beep from 82 to 9000 Hertz
 - Duration: Determines the length of the beep
3. To save the changes, click OK. To return to the default settings, click Default.

Screen without Lock Extensions



You can customize the screen blanker or Front Panel lock, or return the settings to the default. If your system supports lock on timeout, see “Screen with Lock Extensions” on page 248.

If you have a color display, bright colors on the screen can burn into the picture tube. Setting the screen to go blank or be covered prevents this from happening.

Power Management

If you select a blank background screen, and your hardware is capable of turning the power off, it does so to save energy.

To disable power management when using Solaris CDE, change the Style Manager's screen saver default blank screen to a screen pattern. It can also be disabled by running the following command in a terminal emulator window:

```
% xset s noblank
```

▼ To Change Screen Blanker Settings

1. **Click the Style Manager Screen control.**
2. **Select the settings you want:**
 - **Screen Blanker:** Enables (On) or disables (Off) the screen blanker immediately, even before you click OK. When Screen Blanker is On the Start Blanker slider is active.
 - **Start Blanker:** Specifies the number of minutes from the last pointer movement or keystroke before the screen is blanked. When this value is changed, the new value goes into effect immediately, even before you click OK.
3. **To save the changes, click OK. To return to the default settings, click Default.**

▼ To Change Front Panel Lock Settings

1. **Click the Style Manager Screen control.**
2. **Select the settings you want:**
 - **Use Backgrounds For Lock:** Enables the lock backgrounds.
 - **Transparent Lock:** Backgrounds are not used when the screen is locked.
 - **Backgrounds List:** Displays the available backgrounds in a multiple-select list. Select or deselect a background by clicking on the list item. The last background selected will be displayed to the right of the list.
 - **Time Per Background:** Specifies the number of minutes each selected background runs before the next one starts when the screen is being saved. The backgrounds are cycled through in the same sequence as they appear in the list. A setting of 0 (zero) results in only the last background (the one currently in the preview area) being used.
3. **To save the changes, click OK. To return to the default settings, click Default.**

Screen with Lock Extensions

You can customize the screen saver or screen lock, or return the settings to the default. If your system does not support lock on timeout, see “Screen without Lock Extensions” on page 246.

If you have a color display, bright colors on the screen can burn into the picture tube. Setting the screen to go blank or be covered prevents this from happening.

Power Management

If you select a blank background screen, and your hardware is capable of turning the power off, it does so to save energy.

To disable power management when using Solaris CDE, change the Style Manager’s screen saver default blank screen to a screen pattern. It can also be disabled by running the following command in a terminal emulator window:

```
% xset s noblank
```

▼ To Change Screen Saver Settings

1. **Click the Style Manager Screen control.**
2. **Select the settings you want:**
 - **Screen Saver:** Enables (On) or disables (Off) the screen saver immediately, even before you click OK. When Screen Saver is On the Start Saver slider is active.
 - **Screen Saver List:** Displays the available screen savers in a multiple-select list. Select or deselect a screen saver by clicking on the list item. The last screen saver selected will be displayed to the right of the list.
 - **Start Saver:** Sets the number of minutes from the last pointer movement or keystroke before the screen saver starts. When this value is changed, the new value goes into effect immediately, even before you click OK.
 - **Time per Saver:** Specifies the number of minutes each selected screen saver runs before the next one starts.
3. **To save the changes, click OK. To return to the default settings, click Default.**

▼ To Change Screen Lock Settings

If the screen saver and screen lock are both enabled (On) and the Start Lock value is smaller than the Start Saver value, when the screen lock times-out it replaces the

contents of the screen with the currently selected screen savers. If Start Lock is greater than Start Screen, then the automatic screen lock simply continues the current screen saver.

If the screen saver is disabled (Off) and automatic screen lock is enabled (On), when the screen lock times-out the contents of the screen are not covered with a screen saver.

1. **Click the Style Manager Screen control.**
2. **Select the settings you want:**
 - **Screen Lock:** Enables (On) or disables (Off) Screen Lock on a timeout. When this setting is changed, the new setting goes into effect immediately, even before the dialog box is closed.
 - **Start Lock:** Specifies the number of minutes from the last pointer move or keystroke before the screen lock starts. When this value is changed, the new value goes into effect immediately, even before you click OK.
3. **To save the changes, click OK. To return to the default settings, click Default.**

Windows



You can change the window focus policy, how active windows are displayed, and where window icons are displayed.

▼ To Change Window Behavior

1. **Click the Style Manager Window control.**
2. **Select the settings you want:**
 - **Point In Window To Make Active:** Makes a window active when the mouse pointer enters it
 - **Click In Window To Make Active:** Makes a window active when the mouse pointer enters it and you click mouse button 1

3. To save your changes, click OK.
4. Click OK when asked to Restart the Workspace Manager.

▼ To Change How Active Windows Are Displayed

1. Click the **Style Manager Window control**.
2. Select the settings you want:
 - Raise Window When Made Active: Select this if you want a partially concealed window to be brought to the top when it becomes active
 - Allow Primary Windows On Top: Select this if you want the main window to be displayed on top of secondary windows when you click the primary window
 - Show Contents During Move: Select this if you want to move the whole window during a window move instead of just moving the outline at first
3. To save your changes, click OK.
4. Click OK when asked to Restart the Workspace Manager.

▼ To Change Where Window Icons Are Displayed

1. Click the **Style Manager Window control**.
2. Select the settings you want:
 - Use Icon Box: Displays your window icons in an icon box
 - Place On Workspace: Displays your window icons on the workspace backdrop
3. To save your changes, click OK.
4. Click OK when asked to Restart the Workspace Manager.

Customizing Startup and Logout



You can change the following options for startup and logout:

- Session started when you log in
- Session to be your home session
- Logout confirmation preference

Whenever you are logged into the desktop, you are working in a *current session*. By default, when you log out, the desktop saves your current session and restores it the next time you log in.

You can also save a *home session*, a session you want to be able to return to regardless of what you do during the current session.

▼ To Change How Your Next Session Starts

1. Click the Style Manager Startup control.

2. Select the settings you want:

- Resume current session: Starts your next session the way you left your last one including any setting, client, or resource modifications
- Return to Home session: Starts the session you set as your home session
- Ask me at Logout: Select this if you want to be asked at logout whether to restart the current session or restore the home session

To define a new home session based on your current session, select Set Home Session.

3. To save your changes, click OK.

▼ To Set a Home Session

When setting a home session, be sure to first select and save your desired startup settings.

1. Click the Style Manager Startup control.

2. **Click Set Home Session.**
3. **Click OK in the confirmation dialog box that appears.**
4. **Click OK in the Startup dialog box.**

If you have never set a home session, the system default session is used when you select Return to Home session.

▼ To Set Your Logout Confirmation Preference

1. **Click the Style Manager Startup control.**
2. **Select On or Off for Logout Confirmation.**
If you set Logout Confirmation to On, whenever you log out you will be asked for confirmation that you want to log out.
3. **Click OK.**

Using Mailer

Mailer is an application for sending, receiving, and managing your electronic mail (email) messages. It is fully integrated into the desktop, allowing you to drag and drop messages and files between Mailer and other applications.

- “Starting Mailer” on page 253
- “Logging In to Your IMAP Inbox” on page 255
- “Using the Mailer Main Window” on page 255
- “Viewing Your Mail Messages” on page 256
- “Acting on Your Mail Messages” on page 258
- “Sending Mail Messages” on page 268
- “Editing and Formatting Outgoing Messages” on page 278
- “Creating and Using Mailboxes” on page 281
- “Printing Mail Messages” on page 285
- “Working with Attachments” on page 286
- “Customizing Mailer” on page 289
- “Using the File Selection Dialog Box” on page 292

The instructions in this chapter assume you are familiar with basic desktop skills and keyboard navigation.

For more information, see Chapter 1 and Appendix A. Many of the tasks you do in Mailer can be done using drag and drop.

Starting Mailer

- **Click the Mailer control in the Front Panel.**



FIGURE 10-1 Mailer icon showing new mail



FIGURE 10-2 Mailer icon showing read mail



FIGURE 10-3 Mailer icon showing no mail

When you start Mailer for the first time on your system, it looks for a local or remote Internet Messaging Access Protocol (IMAP) mailbox in your email setup.

- If the setup does not indicate the type of mailbox you have, Mailer prompts you to specify the mailbox type.
- If the setup indicates that your mailbox is local, Mailer opens your Inbox (which usually resides in the directory `/var/mail/username`).
- If the setup indicates that your mailbox is remote, Mailer opens the Mailer Login dialog box so you can log in to the IMAP server.

After Mailer starts, the mailbox is displayed, along with message headers and a view of the selected message.

Logging In to Your IMAP Inbox

With the Login dialog box displayed, do the following:

- 1. Type the server name in the IMAP Server field.**

The name that you type in this field becomes the default. Next time you log in, Mailer displays it in the IMAP Server field.

To change this default, see “To Change the Default Mailbox Directory” on page 284.
- 2. Type your login name in the Login field.**
- 3. Type your password in the Password field.**
- 4. Determine when you want Mailer to load attachment contents when it loads messages.**

To have Mailer load both the message text and attachment contents when it retrieves a message, select Always under Retrieve attachments.

To have Mailer load the message text but not the attachment contents when it retrieves a message, select When Open under Retrieve attachments. Mailer will retrieve the contents of the attachment when you double-click the attachment icon.
- 5. Click Login.**

Your IMAP Inbox opens.

Using the Mailer Main Window

The Mailer main window is shown in Figure 10–4.

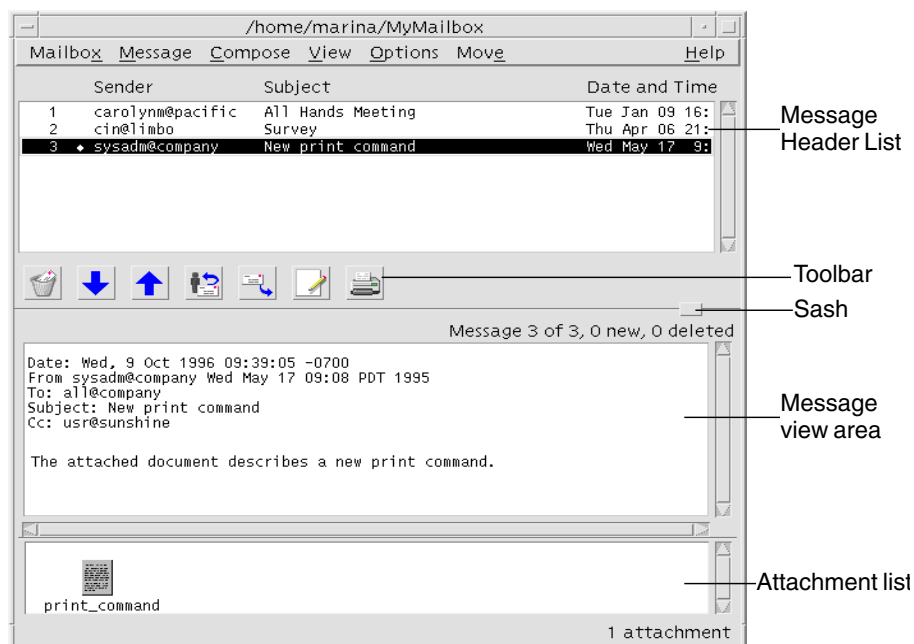


FIGURE 10-4 Mailer main window

The main window contains the following areas:

Message Header List	Displays information about mail messages
Toolbar	Contains buttons for tasks that you perform frequently
Sash	Resizes the Message Header List and message view area
Message view area	Contains header fields and message text
Attachment list	Displays icons of mail message attachments, if any

Viewing Your Mail Messages

Once you've started Mailer and begun to collect email messages, you'll want to read and perhaps sort them.

▼ To Read a Mail Message

1. **Choose Check for New Mail from the Mailbox menu to retrieve any new messages that have been delivered to your mailbox.**

2. **Click to select the message to be viewed from the Message Header List.**

The text of the message is displayed in the message view area.

Use the Next and Previous buttons on the Toolbar or options on the View menu to continue to select and read messages in the message view area.

To open a message into a separate window for reading:

- **Select the message and choose Open from the Message menu. From this window, the Edit and Attachments menus become available.**

The message remains in the separate window even when you select another message in your Message Header List. You can then view two messages at the same time.

▼ To Change the Character Set of an Incoming Message

On occasion, you may receive an email message from a machine that uses an encoding that is different from the default encoding for your machine. To be able to read the message, change the character set for your machine to one that matches the message's encoding (for example, US-ASCII).

1. **Select the message in the Message Header List.**
2. **Choose Change Char Set from the View menu or press Control+Y, the keyboard accelerator.**

Mailer displays the name of a character set (for example, US-ASCII) in the footer immediately below the Toolbar icons.

3. **Choose the Change Char Set menu item or press Control+Y again to cycle through the choices until the correct one is displayed.**

Selecting Default Char Set displays your message in the default encoding for your machine.

Mailer converts the text of the message to the character set that you selected, not its header or attachments.

Sorting Mail Messages

You can use the options on the View menu to order your messages.

By Date/Time	Sorts messages with the most recent at the bottom
By Sender	Sorts messages alphabetically by sender name
By Subject	Sorts messages alphabetically by subject
By Size	Sorts messages from the smallest to the largest
By Status	Sorts messages together by read and new (useful if you read your mail in non-sequential order)

The message headers are rearranged and redisplayed in the mailbox in the new order.

Acting on Your Mail Messages

After reading your email, you may want to reply to, search for, delete, and (possibly) undelete some messages.

▼ To Reply to a Message

1. **Select the message to which you want to reply.**
2. **Decide on the type of reply:**
 - To reply to the sender, choose Reply from the Compose menu.
A Compose window is displayed with the email address of the recipient and the message subject filled in.
 - To reply to the sender and all recipients, choose Reply to All from the Compose menu.
A Compose window is displayed with the email addresses of the recipients and the subject of the message filled in.
 - To reply to the sender or all recipients and include a copy of the message, choose Reply, Include Message or Reply to All, Include Message from the Compose menu.
A Compose window is displayed that includes the text of the message with the email addresses of the recipients and the subject filled in. Attachments are not included in the reply.

3. **Type your reply and click Send.**

For more information, see “To Address, Compose, and Send a Mail Message” on page 269.

▼ To Forward a Message

1. **Select the message you want to forward.**
2. **Choose Forward from the Compose menu, or click the Forward button on the Toolbar.**

The text of the message to be forwarded is displayed within a new message, as well as its attachments, if any.

If you do not want to forward the attachments, choose Forward, no Attachments.

3. **Type the addresses of the message recipients in the To or Cc fields, or use the To or Cc button menus to access any aliases that you have set up.**
4. **Add any additional text and click Send.**

See “To Address, Compose, and Send a Mail Message” on page 269 for more information.

▼ To Edit an Incoming Message

1. **Select the message you want to change.**
2. **Choose Forward from the Compose menu.**
3. **Address the message to yourself.**
4. **Edit the message in the Compose window and send it.**

Note – You may want to create a separate mailbox for these edited messages as they can add to the size of your Inbox.

▼ To Save an Incoming or an Outgoing Message as Text

1. **Select a received message, then choose Save As Text from the Message menu or, for an outgoing message in a Compose window, choose Text from the Save As submenu of the File menu.**

2. **Type a file name and location in the File Selection dialog box that appears, then click Save.**

If a file of the name specified already exists, you are asked whether you want to overwrite the file or cancel the operation.

▼ To Append a Message to A Text File

1. **Select a received message, then choose Save As Text from the Message menu or, for an outgoing message in a Compose window, choose Text from the Save As submenu of the File menu.**

Mailer displays a file selection dialog box.

2. **Type the file name and location of an existing file, and click Append.**

Mailer appends the text of the mail message to the file.

▼ To Delete a Mail Message

To remove a message from the Message Header List:

1. **Select the message for deletion.**

You can drag to select multiple messages. Shift+Click selects several messages in a row by moving the highlight up or down the Message Header List. Control+Click selects discontinuous messages from the list, one at a time.

2. **Choose Delete from the Message menu, or click the Delete button in the Toolbar.**

The messages are deleted from the list.

Note – Even if a message has been deleted, you can get it back unless you made your deletions permanent by choosing Destroy Deleted Messages from the Mailbox menu. See the following section.

▼ To Undelete a Mail Message

Do one of the following to undelete a mail message:

- To restore a message you just deleted, choose Undelete Last from the Message menu.
- To restore an earlier message, choose Undelete from List from the Message menu, then select one or more messages from the list of deleted messages, and click the Undelete button.

Note – To make the deletions in the list permanent, choose Destroy Deleted Messages from the Mailbox menu.

▼ To Destroy Deleted Messages When Closing the Mailbox

You can set your options so that when you close your mailbox, the messages you deleted will be permanently destroyed. Doing so means that once you close your mailbox, you cannot restore the messages that you deleted.

- 1. Choose Basic from the Options menu.**
The Basic Options dialog box is displayed.
- 2. Select “When I close the mailbox” under Destroy Deleted Messages.**
To remove the confirmation notice that appears each time you close the mailbox and asks if you want to destroy deleted messages, deselect “Show confirmation notice.”
- 3. Click OK or Apply to make your changes take effect.**

Searching for Mail Messages Within a Mailbox

You can search for mail messages within a mailbox according to the search criteria that you define. Basic search criteria fields in the Basic window of the Search dialog box include: the addressees (To), the sender (From), the subject (Subject), the carbon copy recipients (Cc), and the message text, including the headers (Entire Message).

By creating a search script in the Advanced window of the Search dialog box with keywords and arguments, you can define more sophisticated search criteria for finding messages.

The tables that follow show the keywords you can use in search scripts, grouped under the following categories:

- Headers – Keywords that denote the headers or the text part of the messages (Table 10-1)
- Dates – Keywords that indicate when the messages were sent (Table 10-2)
- States – Keywords that describe the status of the messages (Table 10-3)
- Operators – Keywords that join together other keywords to form a search criterion (Table 10-4)

Note – Those keywords you can type manually but are not available through the menus in the Advanced window of the Search dialog box are marked with an asterisk (*).

TABLE 10-1 Headers Search Keywords

Keyword	Explanation
TO	
FROM	
SUBJECT	
Cc	
TEXT	A keyword that pertains to the entire message, including headers and attachments
BCC	
HEADER*	A keyword to use according to the syntax: header <i>HeaderName</i> <i>HeaderValue</i> , such as header x-sun-charset us-ascii
BODY*	A keyword that applies to the message text and the text attachments, but not the headers

Table 10-2 lists and describes the Dates keywords.

Note – The date format is dd-mmm-yyyy (for example, 02-Apr-1996).

TABLE 10-2 Dates Search Keywords

Keyword	Explanation
BEFORE	
SINCE	
ON	
DURING	
SENTSINCE*	
SENTBEFORE*	
SENTON*	

TABLE 10–2 Dates Search Keywords (Continued)

Keyword	Explanation
TODAY	An argument for the keywords that are associated with dates, such as <i>before</i>
YESTERDAY	Same as above
LASTWEEK	Same as above
THISMONTH	Same as above
LASTMONTH	Same as above
JANUARY . . DECEMBER	
SUNDAY . . SATURDAY	

Table 10–3 lists and describes the States keywords.

TABLE 10–3 States Search Keywords

Keyword	Explanation
READ	
UNREAD	
NEW*	
OLD*	
DELETED*	A keyword for messages that you have deleted, but not permanently
UNDELETED*	
RECENT*	
FLAGGED*	
ANSWERED*	
UNANSWERED*	
KEYWORD*	
UNKEYWORD*	
DRAFT*	
UNDRAFT*	
ALL*	A keyword that denotes all the messages in the mailbox
LARGER/ SMALLER*	A keyword that requires two arguments, such as <i>smaller 300</i> , the numeric denoting bytes

Table 10–4 lists and describes the search operators.

TABLE 10–4 Search Operators

Operator	Explanation
AND	
OR	
~ (not)	A symbol that represents the logical not operator. Place it in front of the search keyword, for example: ~ text "good morning"
(A symbol that denotes the beginning of an expression
)	A symbol that denotes the end of an expression

Search scripts are not case sensitive.

Here are some examples:

To search for messages that were sent from john in April with either “urgent” or “important” in the subject line:

```
from john and (subject urgent or subject important) and during april
```

To search for messages that were sent from bill with no carbon copy to tigerteam and not yet read:

```
from bill and ~(cc tigerteam) and unread
```

To search for messages that were addressed to bill or sent with a carbon copy to bill, with “monthly report” in the message, including the headers and attachments:

```
(to bill or cc bill) and text "monthly report"
```

▼ To Find a Mail Message Within a Mailbox

1. Choose Search from the Message menu.

The Search dialog box is displayed.

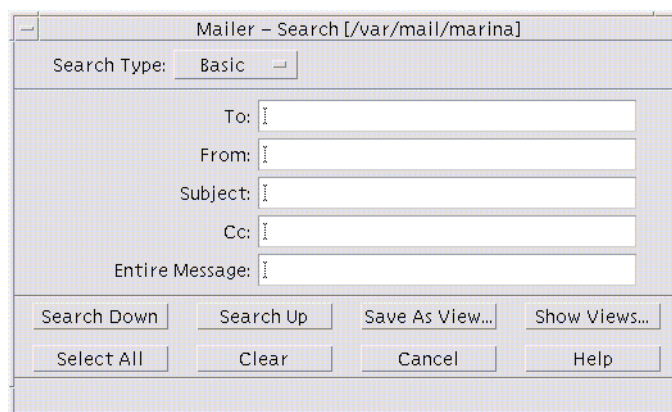


FIGURE 10-5 Mailer Search dialog box

2. Type the text you want to search for in the appropriate field.

You can search for a match on one or more of the To, From, Subject, or Cc fields. If you type the criteria in multiple fields, Mailer searches for messages that match *all* of the criteria.

Within each field, Mailer considers the input as one criterion even if there are multiple strings separated by spaces or commas. For example, if you type wood smith in the To field, Mailer looks for a message that is addressed to wood smith, not wood or smith.

The fields are *not* case-sensitive.

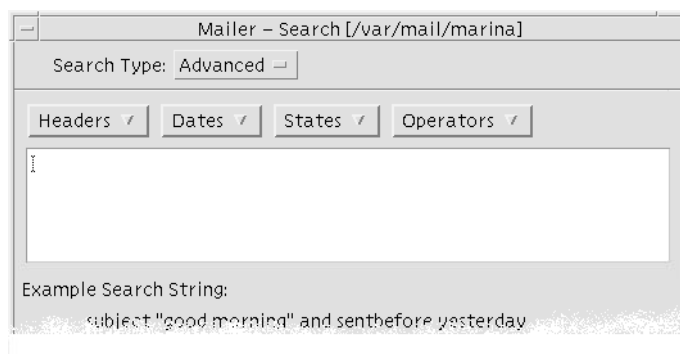
3. Click Search Down or Search Up to find the next or previous matching message in your mailbox. To find all the matches, click Select All.

Note – To remove all the text in the fields in the Search dialog box, click Clear.

▼ To Create Advanced Search Scripts

1. Choose Advanced from the Search Type menu.

The Advanced Search dialog box is displayed.



2. Type your script in the text area.

Choose keywords from the menus to help you create the script.

The keywords are *not* case sensitive.

Using Views

Occasionally, you may want to display only the messages in your mailbox that match one or more search criteria, such as messages to or from a certain individual. You can do so by defining the criteria and saving them as a view.

▼ To Create a View

1. Choose Search from the Message menu.

The Mailer Search dialog box is displayed.

2. Specify your search criteria.

3. Click Save As View.

The Mailer Save As View dialog box is displayed.

4. Type a name in the Enter View Name field.

You cannot use All or New as a view name; they are listed under Default Views. You may want to use a name that reflects the search criteria.

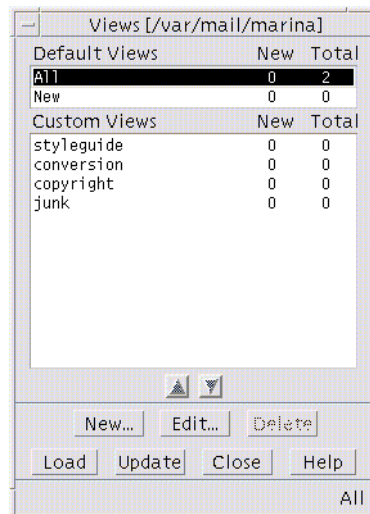
5. Click OK.

Mailer creates a new view and places it in the Custom Views list in the Views dialog box. To see the list, click Show Views in the Search dialog box or choose Show Views from the Mailbox menu.

▼ To Display, Delete, or Update Views

1. Choose Show Views from the Mailbox menu.

If the Search dialog box is open, you can also click Show Views in that dialog box. The Views dialog box is displayed.



Listed are:

- Default Views: Message statistics for the entire mailbox (All) and messages that you have not yet read (New)
- Custom Views: Message statistics for the views that you have created. Mailer displays the name of the view being loaded in the title bar of the main window.

2. To display a view, double-click the view in the list, or select it and click Load.

The messages that match the search criteria for that view are displayed in the mailbox.

3. (Optional) To update views, click Update.

Mailer revises the message statistics for all of the views for the mailbox.

4. (Optional) To delete a view, select it and click Delete.

5. Click Close to close the dialog box.

▼ To Edit a View

1. Select a view in the Custom Views list.

2. Click Edit.

The Search dialog box is displayed with the fields filled in with the search criteria for that view.

3. Edit the fields.

If Mailer cannot display the search criteria in the Basic window, then it loads the search script in a text area in the Advanced window for you to edit.

4. Click Save as View.

Mailer displays the view name in the Enter View Name field.

5. Click OK to save the view with the same name.

Alternately, type a new name for the view and click OK to save it.

▼ **To Rearrange the Order of the List Under Custom Views**

- **Select a view under Custom Views. Click the up or down arrow button to move the view up or down the list.**

Sending Mail Messages

An email address is like your personal address for receiving electronic mail messages. This is also the way you send messages to other email users. The format used for email addresses is *username@hostname*. Your system administrator uses this format to set up email addresses.

This section gives you most of the information you need to address, compose, and send a message to another user.

Using Aliases

An alias is a private name for one or more user names (or user addresses). By creating a distribution list of user addresses to which you frequently send mail and giving the list a name, you can select the alias in the To or Cc fields instead of typing each address every time you send a message (see Figure 18-1).

The name you give to your alias can be descriptive of a group of users, or just a name you will remember. These aliases are also displayed as Personal Alias cards in Address Manager (see "Alias Cards" on page 482).

▼ To Create, Modify, or Delete an Alias

1. **Choose Aliases from the Options menu in the main window, from the Format menu in a Compose window, or from the To or Cc button menu in the Compose window.**
The Aliases Options dialog box is displayed.
2. **Type the name for your alias in the Alias field.**
3. **Type the user addresses that will make up the alias in the Addresses field.**
Each of these addresses should be in the form *username@hostname* and be separated by a comma, a space, or both.
4. **Click Add to add the information in the Alias and Addresses fields to the scrolling list.**
5. **(Optional) To change an alias, select it and edit the Alias or Addresses field, as appropriate, then click Change.**
6. **(Optional) To remove an alias, select it and click Delete.**
7. **Click OK or Apply to make the settings take effect.**

Note – You can also work with aliases using Address Manager (see “To Create a Personal Alias Card” on page 492).

▼ To Address, Compose, and Send a Mail Message

Once you have the receiving party’s email address, you can send a message.

Note – If this is the first time you are using email and if you know your own email address, you can use these procedures to send a test message to yourself.

1. **If Mailer is not already started, click the Mailer control in the Front Panel.**
The Inbox is displayed.
2. **Choose New Message from the Compose menu.**
The (New Message) Compose window is displayed.



FIGURE 10-6 Mailer Compose window

3. Type the email address of the recipient in the To field and press Return.

You can address a message to one or more people, or to an alias.

If one or more of the email addresses contains a space, then separate the email addresses with commas; otherwise, separate them with commas or spaces.

Alternatively, if you have created aliases, use the To button menu to access them.

For information on aliases, see "Using Aliases" on page 268.

4. (Optional) Type the topic or title of the message in the Subject field and press Return.

5. (Optional) Type the email addresses of users you want to be carbon copy recipients of this message in the Cc field, or, if you have created aliases, use the Cc button menu to access any aliases that you have set up.

6. Once your message is addressed, press Return to go to the text area and compose the message.

To insert a text file, see "To Include a Text File in a Mail Message" on page 275. Also see "Using a Template to Compose a Mail Message" on page 272 and "Using a Draft to Compose a Mail Message" on page 273.

To find out about editing text in your message, see "Editing Text" on page 278 or "Formatting Text" on page 279.

You can save the message you are composing at any time by choosing Text from the Save As submenu of the File menu or from the Save As button menu at the bottom of a Compose window.

7. **(Optional) Choose Include Signature from the Compose Format menu to place your signature in the text area if you have deselected “Include signature in every message” in the Signature Options dialog box.**
See “Using a Signature” on page 275 for details.
8. **(Optional) To format the text to the width of your Compose window, select the text and choose Word Wrap from the Compose Format menu.**
9. **(Optional) Add files to the message as attachments, if necessary.**
To find out how to do so, see “To Add an Attachment” on page 287.
10. **(Optional) Choose Save Outgoing Mail from the Compose File menu to save a copy of the message to the file that stores your outgoing messages (HomeDirectory/Mail/sent.mail by default).**
To change the default file name, choose Basic from the Options menu and edit the “Save a copy of outgoing mail in” field.
11. **Click the Send button, choose Send from the Compose File menu, or press F3.**
The Compose window closes, and the message is sent.

Note – Clicking Close removes the Compose window and discards your message. Be sure to save any text you might want later before closing a Compose window.

To Change the Character Set of an Outgoing Message

If you need to send an email message to a machine that uses a different encoding from the one for your machine, you can convert its text to your recipient’s encoding.

1. **After typing your message in the Compose window, choose Change Char Set from the Format menu or press Control+Y, the keyboard accelerator.**
Mailer displays the name of a character set (for example, ISO-2022-JP) in the footer of the Compose window.
2. **Choose the Change Char Set menu item or press Control+Y again to cycle through the choices until the correct one is displayed.**
Selecting Default Char Set means that your message is sent in the default encoding for your machine.
The display of the message in your Compose window does not change; however, Mailer delivers it in the selected character set when you click Send.

Note – Mailer converts only the text of the outgoing message, not its header or attachments.

Using a Template to Compose a Mail Message

You can save a message as a template for use repeatedly, such as a template for a status report that you send out monthly. The status report template might contain, for example, the addresses, subject, and headings for the message body. You could use that template and fill in the contents before emailing it as a status report every month.

▼ To Create a Template

- 1. Choose Templates from the Options menu of the Mail Options dialog box.**
The Templates Options dialog box is displayed.
- 2. Click the New Template button.**
A Compose window is displayed.
- 3. Type the headers and template body.**
- 4. Choose Template from the Save As button menu at the bottom of the window, or from the Save As submenu of the File menu.**
The Mailer Save As Template dialog box is displayed.
- 5. Type the template name in the text field, and click Save.**
The template is saved in the default directory *HomeDirectory/MailTemplates*. Its name and path are displayed in the Templates scrolling list.
You can save an attachment as part of a template. Doing so is equivalent to copying the attachment there. Editing or moving the source of the attachment after it has been included in the template does not affect the attachment in the template.

▼ To Use a Template

- 1. From the main window, choose New, Use Template from the Compose menu, then choose the template you would like to use from the submenu.**
The Compose window opens with the template loaded.

Note – If the Compose window is already open, you can load the template by choosing its name from the Use Template submenu of the Format menu in the Compose window.

2. Edit the headers and body, as necessary, and send the message as usual.

For more details, See “Editing and Formatting Outgoing Messages” on page 278.

Using a Draft to Compose a Mail Message

Occasionally, while composing a message, you may want to save it as a draft, then continue to work on it later before sending it as a message. A draft is intended for one-time use only. Once you click Send after working on a draft in the Compose window, Mailer deletes it from your file system.

▼ To Create a Draft

1. Choose New Message from the Compose menu.

A Compose window is displayed.

2. Compose the message as you normally would.

3. Choose Draft Message from the Save As button at the bottom of the window, or from the Save As submenu of the File menu.

The Mailer Save As Draft dialog box is displayed.

4. Type a file name under Draft Name.

5. Click Save.

Mailer saves the draft in the default mailbox *HomeDirectory/MailDrafts*.

Note – You can also save the message body only as text by choosing Text from the Save As button.

▼ To Use a Draft

1. Choose Continue Composing Draft from the Compose menu, then choose the draft you would like to work on from the submenu.

The Compose window opens with the draft loaded.

Note – If the Compose window is already open, you can load the draft by choosing its name from the Use Draft submenu of the Format menu.

2. **Continue with your edits and send the message as usual.**

After you have clicked Send, Mailer posts a message that asks if you want to delete that draft from the file system once the message is sent.

▼ To Delete a Draft

Use this procedure if you have saved a message as a draft, but no longer intend to send it.

1. **Choose the draft from the Continue Composing Draft on the Compose menu.**

The New Message dialog box is displayed containing the draft message.

2. **Re-address the message to yourself and click Send.**

The New Message dialog box disappears.

3. **When the message arrives in your Inbox, delete it.**

Note – If your workstation has experienced system crashes while Mailer was running, you may also notice drafts named `DeadLetter1`, `DeadLetter2`, and the like. You can delete these drafts by deleting the corresponding files in the `$HOME/MailDrafts` folder.

▼ To Include Multiple Messages in a New Message

1. **From the Message Header List, select the email messages to be included in your new message.**

Shift+Click selects several messages in a row by moving the highlight up or down the Message Header List. Control+Click selects discontinuous messages from the list, one at a time.

2. **Choose Forward from the Compose menu.**

3. **Compose and send your message as usual.**

▼ To Include a Text File in a Mail Message

You can drag and drop a text file from File Manager to a Compose window or follow these steps:

1. **Choose New Message from the Compose menu.**
A Compose window is displayed.
2. **Choose Include from the File menu in the Compose window.**
3. **Select the text file to be included in your email message.**
4. **Click Include.**
The file is included in the text area of your message.
5. **Compose and send your message as usual.**

Using a Signature

A signature is text you can include with each mail message that you send. For example, a typical signature might include your name, job title, company name, and so on:

John Person
Marketing Manager
ABC Products, Inc.
Email: john.person@mymachine
Phone: (100) 555-1234

You can either include this signature with each email message, or choose to include it on an individual message basis.

▼ To Create a Signature

1. **Choose Signature from the Options menu in the main window or the Format menu in a Compose window.**
The Signature Options dialog box is displayed.
2. **Type the text for the signature in the Signature text pane.**
3. **Click OK or Apply.**
Your signature is saved in the default file *HomeDirectory/.signature*. You can change this default location by typing a new path in the Save signature to Path/File field.

▼ To Include a Signature in All Messages

1. **Choose Signature from the Options menu in the main window or the Format menu in a Compose window.**

The Signature Options dialog box is displayed.

2. **Select the “Include signature in every message” option.**
3. **Click OK or Apply.**

▼ To Include a Signature Only in Specific Messages

1. **Choose Signature from the Options menu in the main window or the Format menu in a Compose window.**

The Signature Options dialog box is displayed.

2. **Deselect the “Include signature in every message” option.**
3. **Click OK or Apply.**
4. **In the Compose window for the message in which you want to include your signature, choose Include Signature from the Format menu.**

▼ To Create an Automatic Reply (Vacation Message)

If you plan to be away from your mail for a period of time, such as during a vacation, you can set up an automatic reply to alert the senders of your incoming mail about your absence.

1. **Choose Vacation Message from the Options menu.**

The Vacation Message Options dialog box is displayed.

2. **Select On next to Vacation.**
3. **Type the date you want the vacation reply to start under Start Date.**

The default is today’s date.

4. **Type the End Date.**

Your vacation message takes effect at 12:01 a.m. or later of the Start Date, and ends at 12:01 a.m. of the End Date. If the start and end dates are the same, then the vacation notifier ends at midnight of the End Date.

5. **(Optional) Under “Interval between replies to repeat senders,” set a number for the interval during which the sender will receive one automatic reply from you.**

The default is seven days, which means the senders of your incoming mail will receive only one automatic reply from you within seven days of your absence, regardless of how many messages they send you during that period.

6. **Type a subject and the text for your vacation message.**

The default for this field is “Out of the office.” If you use the variable `$SUBJECT` in your message, the subject of the incoming mail will be quoted in your vacation message. For example:

I am on vacation, and will read your message regarding “`$SUBJECT`” when I return.

7. **Click OK or Apply.**

Once your vacation message is on, Mailer adds `[vacation]` to the mailbox name on the title bars of your Inbox and other mailboxes until your vacation message is off.

Note – To stop sending your vacation message before the End Date, select Off next to Vacation, then click OK or Apply.

Sending Mail Messages in MIME or Sun Mail Tool Format

Mailer sends messages in MIME format (a published standard officially known as RFC 1521 or RFC-MIME). If your email recipients see confusing codes like `=20` or `=09` in the messages that you send, their mail applications are not MIME-compliant.

You can solve this problem by having your email recipients use a MIME-compliant mail application. If that is not possible, then send your email in Sun Mail Tool format. However, most MIME-compliant mail readers do *not* understand this proprietary format.

▼ To Send Mail Messages in MIME or Sun Mail Tool Format

1. **Choose Send As from the Compose File menu.**
2. **Choose either Internet MIME or Sun Mail Tool from the submenu.**

Your message is sent in the selected format.

If you do not specify a format, the default is Internet MIME. To change this default:

1. **Choose Advanced from the Options menu.**
The Advanced Options dialog box is displayed.

2. Deselect the option, "Send mail in MIME format."
3. Click OK.

Editing and Formatting Outgoing Messages

While composing an outgoing message, you can use Mailer to edit and format your text, as well as check the spelling.

Editing Text

You can use the Edit menu options in a Compose window to change the message text you are composing.

TABLE 10-5 Mailer Compose Window Editing Options

Undo	Reverses the last editing action in the text area.
Cut	Removes the selected text and stores it on the clipboard. Only one selection can be stored at a time. If text is already there, the most current selection overwrites it.
Copy	Stores a copy of the selected text on the clipboard. Only one selection can be stored at a time. If text is already there, the most current selection overwrites it.
Paste	Inserts the contents of the clipboard at the insertion point.
Paste Special (Bracketed or Indented)	Inserts the contents of the clipboard at the insertion point surrounded above and below by Begin and End Included Message text, or by indented markers.
Clear	Removes the selection and leaves the resulting white space.
Delete	Removes the selection and the resulting white space.
Select All	Selects all the text in the text area.
Find/Change	Opens a dialog box for you to search for words or phrases in your message and make changes to occurrences that are found.

TABLE 10-5 Mailer Compose Window Editing Options *(Continued)*

Check Spelling	Runs the spelling checker on your mail message and displays a dialog box that lists words that might be spelled incorrectly. You can Find, Change, or Change All instances of a word.
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For more information on editing functions, see Chapter 12.

Formatting Text

You can use two of the Format menu options in the Compose window to make formatting changes to the message you are composing.

Word Wrap	Toggles the text entry mode that causes lines to automatically wrap at the edge of the message. Note that if you have Word Wrap on and the recipient's window is of a different size, you may cause display problems.
Settings	Displays a dialog box for setting margins and paragraph alignment, and applying format settings to your message.

For more information on editing functions, see Chapter 12.

▼ To Find or Change Text

1. **Choose Find/Change from the Compose Edit menu.**

The Find/Change dialog box is displayed.

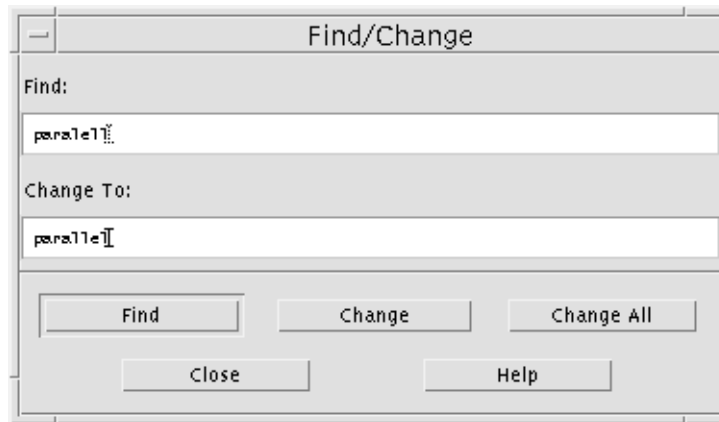


FIGURE 10-7 Mailer Find/Change dialog box

2. **Type (or copy and paste) the text you want to locate in the Find field.**
3. **(Optional) To automatically change the located text to replacement text, type the replacement text in the Change To field.**
4. **Select the appropriate option:**
 - Click Find to find and select the text.
 - Click Change to change the first instance.
 - Click Change All to change all instances.
5. **Click Close to dismiss the dialog box.**

▼ To Check Spelling

You can use the spelling checker in Mailer to verify and correct the spelling in the message you are composing.

1. **Choose Check Spelling from the Edit menu in the Compose window.**

The Spell dialog box is displayed, showing the first instance of a potentially misspelled word under Word. Suggestions for the correct spelling are displayed in a scrolling list. For details, see “Correcting Misspelled Words” on page 328 in Chapter 12.

Note – The spelling checker is case sensitive.

2. Click **Close** to exit the **Spell** dialog box.

Creating and Using Mailboxes

You may want to file certain mail messages for safekeeping. All your messages are received by default in the mailbox (Inbox). Since keeping all your mail messages in your Inbox probably is not practical, you may want to set up other mailboxes to store groups of messages together.

Mailboxes help you organize your mail. You can create mailboxes by project, by user, by email list, or any other system that works for you. You should place these mailboxes in the default mailbox directory *HomeDirectory/Mail*.

To find out how to change the default mailbox directory, see “To Change the Default Mailbox Directory” on page 284.

▼ To Create a Mailbox

1. **Choose New Mailbox from the Mailbox menu.**

The File Selection dialog box is displayed.

2. **Specify the mailbox name and location.**

See “Using the File Selection Dialog Box” on page 292 for details.

3. **Click New.**

The new mailbox is created in *HomeDirectory/Mail*, the default mailbox directory, and opened.

To find out how to change this directory, see “To Change the Default Mailbox Directory” on page 284.

▼ To Rename a Mailbox

1. **Choose Rename Mailbox from the Mailbox menu.**

The File Selection dialog box is displayed.

2. **Select or type the name and location of the mailbox you want to rename, then click Rename.**

The Rename Mailbox dialog box is displayed.

3. **Type the mailbox name in the New mailbox name field.**
4. **Click Rename.**

▼ To Open a Mailbox

1. **Choose Open Mailbox from the Mailbox menu.**
2. **Choose one of the following items in the submenu:**
 - **Inbox** – The mailbox where you receive email by default
 - **Sent Mail** – The file that contains your outgoing messages (*HomeDirectory/Mail/sent.mail* by default). This item is active only if you have saved outgoing messages in this file.
 - **Select Mailbox** – A mailbox that you specify from the File Selection dialog box
 - **Other Mailboxes** – One of the mailboxes in the default mailbox directory
 - **The mailboxes that you opened, or moved or copied messages to previously in this Mailer session**

▼ To Close a Mailbox

To close a mailbox:

- **Choose Close from the Mailbox menu or Window menu, or press Alt+F4.**

When the last open mailbox is closed, Mailer exits.

Filing Messages in Other Mailboxes

You can file some incoming messages by manually moving or copying them into specific mailboxes.

▼ To Manually File Messages in Other Mailboxes

- **Select the messages that you want to file and do one of the following:**

- Choose **Select Mailbox** from the **Move** menu (or the **Copy To** submenu of the **Message** menu) and select the desired mailbox in the **File Selection** dialog box.
- Choose **Other Mailboxes** from the **Move** menu (or the **Copy To** submenu of the **Message** menu) and indicate the desired mailbox.
- Drag and drop messages to other mailboxes.
See “**To Drag and Drop Messages to Other Mailboxes**” on page 283 for more information.

For convenience, you can:

- Add mailboxes where you frequently file messages to your **Move** menu (and the **Copy To** submenu of the **Message** menu).
For information on adding mailboxes to your **Move** menu, refer to “**Customizing the Open, Move, and Copy To Menus**” on page 284.
- Set your **Move** menu to display the most recently visited mailboxes.
For details, refer to “**To Change the Number of Mailboxes Displayed in the Move Menu and Copy To Mailbox Submenu**” on page 285.

▼ To Drag and Drop Messages to Other Mailboxes

1. **Make sure Mailer is open on the desktop and its Message Header List is visible.**
2. **Open the mailbox to which you want to move the message and make sure you can see the Message Header List.**
3. **Select the message to be moved.**
4. **Drag the message and drop it onto the appropriate mailbox Message Header List.**
The message is moved to the end of the target mailbox.
You can also drag and drop a message to the file icon of the target mailbox in **File Manager**. With this method, Mailer places a copy of the message in the target mailbox instead of moving it.

▼ To Delete a Mailbox

1. **Choose Delete Mailbox from the Mailbox menu.**
The **File Selection** dialog box is displayed.
2. **Select or type the mailbox name and location of the mailbox you want to delete, then click Delete.**
The mailbox is deleted.

▼ To Change the Default Mailbox Directory

1. **Choose Move Menu Setup from the Options menu.**
The Move Menu Setup Options dialog box is displayed.
2. **Type the directory name in the Default Mailbox Folder field.**
3. **(Optional) Type the IMAP server name in the IMAP Filing Server field.**
You can also specify the default mailbox folder for your IMAP server by editing the Default IMAP Folder field; the default is *HomeDirectory/Mail*.
4. **Click OK or Apply.**

Customizing the Open, Move, and Copy To Menus

Once you have set up a number of mailboxes, you may discover that there are several mailboxes you use frequently. You can customize your Move menu, the Open Mailbox submenu of the Mailbox menu, and the Copy To Mailbox submenu of the Message menu to show these key mailboxes. Opening and filing to mailboxes is much more efficient this way.

Adding the names of the mailboxes that you recently opened to the Move Menu and Copy To Mailbox submenu of the Message menu can save you time when you next move or copy messages to these mailboxes.

▼ To Add Mailboxes to the Open, Move, and Copy To Menus

1. **Choose Move Menu Setup from the Options menu.**
The Move Menu Setup Options dialog box is displayed.
2. **Select Local or IMAP Server to specify the server where the mailboxes are located.**
If you select IMAP Server, type the server name in the text field.
3. **Type the path to the mailbox under Path/Mailbox Name, then click Add.**
The mailbox is added to the Move menu, as well as the Open Mailbox submenu of the Mailbox menu and the Copy To Mailbox submenu of the Message menu.
4. **(Optional) Make further customizations:**
 - To alter what is in the Path/Mailbox Name field once a mailbox name is selected, edit that field and click Change.
 - To delete a mailbox name from the scrolling list, select it and click Delete.

- To display the mailboxes in alphabetical order, click Alphabetize.
- To change the position of a selected mailbox in the scrolling list, click Move Up or Move Down.

5. **Click OK or Apply.**

▼ To Change the Number of Mailboxes Displayed in the Move Menu and Copy To Mailbox Submenu

To change the number of mailboxes that are displayed on these menus:

1. **Choose Move Menu Setup from the Options menu.**

The Move Menu Setup Options dialog box is displayed.

2. **Increase or decrease the number of mailboxes you have recently opened in the “Display up to: Recently visited mailboxes” field.**

3. **Click OK or Apply to make the change take effect.**

Up to the desired number of mailboxes now appear on the Move menu and the Copy To Mailbox submenu of the Message menu.

Printing Mail Messages

You can print messages with the default options, or set different print options before starting the print job.

▼ To Print a Copy of a Message with Default Options

1. **Select the message to be printed in the Message Header List.**

Shift+Click selects several messages in a row by moving the highlight up or down the Message Header List. Control+Click selects discontinuous messages from the list, one at a time.

2. **Choose Print One from the Message menu.**

▼ To Print a Message with Specific Options

1. **Select the message to be printed.**

Shift+Click selects several messages in a row by moving the highlight up or down the Message Header List. Control+Click selects discontinuous messages from the list, one at a time.

2. **Choose Print from the Message menu.**

3. **Set the options you want to change:**

- Type a new printer name in the Printer field.
- Indicate the number of copies in the Copies field.
- Type a banner page title in the Banner Page Title field.
- Select Print Page Numbers to print page numbers in your document.
- Type print command options in the Print Command Options field.

4. **Click Print.**

▼ To Print a Message Using Drag and Drop

1. **Select the message to be printed.**

2. **Drag the message onto the Printer control in the Front Panel.**

The Print dialog box is displayed.

3. **Set the print options as desired and click Print.**

For more information, see "To Print a Message with Specific Options" on page 286.

Note – For information on how to change the print action, see the section "Configuring and Administering Printing from the Desktop" in *Common Desktop Environment: Help System Author's and Programmer's Guide*

Working with Attachments

An attachment is an image, document, or executable file that you send or receive with your email.

▼ To View an Attachment

1. Select the attachment icon in the attachment list.



FIGURE 10–8 Example of an attachment icon

2. Choose **Open** from the **Attachments** submenu in the **Message** menu, or double-click the attachment icon.

Note – If **Open** does not appear on the **Attachments** submenu, you cannot open the attachment.

▼ To Print an Attachment

1. Select the attachment.
2. Choose **Print** from the **Attachments** submenu in the **Message** menu.

Note – If your system does not provide the ability to print attachments, or if the attachment cannot be printed, the **Print** item will not be available.

▼ To Add an Attachment

1. Compose your email message.
2. Choose **Add File** from the **Attachments** menu in the **Compose** window.
The **Mailer - Attachments - Add** dialog box is displayed. See “Using the File Selection Dialog Box” on page 292 for more information.
3. (Optional) Click the **Keep dialog box open on desktop** check box.
This indicates that you do not want the dialog box to close after the **Add** button is clicked. This eliminates the need to choose **Add File** from the **Attachments** menu to

add more than one attachment.

4. Select a file to attach and click Add.

The attachment is added to the attachment list in the lower portion of the Compose window.

To remove an attachment you just added, select its icon and choose Delete from the Attachments menu.

To restore a deleted attachment, choose Undelete from the Attachments menu.

5. (Optional) Choose Rename from the Attachments menu to change the name of a selected attachment.

If you drag and drop messages from the Message Header List in the main window to the attachment list, Mailer creates one mailbox that contains all of the messages.

▼ To Save an Attachment to Your File System

1. **Select the attachment you want to save.**
2. **Choose Save As from the Attachments menu.**
3. **In the File Selection dialog box, indicate where you want to save the attachment.**
4. **Type a new name, if desired, for the file.**
5. **Click Save.**

The file is saved to the selected location.

Note – You can also drag and drop an attachment to File Manager. See Chapter 5 for more information.

▼ To Attach a File from File Manager

1. **Select the file within File Manager.**
2. **(Optional) If the attachment list is not displayed, choose Show List from the Attachments menu in a Compose window.**
3. **Drag the file from File Manager and drop it onto the attachment list in a Compose window.**

4. Send the message as usual.

Note – You can also drag an attachment from the attachment list to File Manager. See Chapter 5.

▼ To Attach a Calendar Appointment

1. Create the calendar appointment in Calendar.
2. Drag the appointment from the Calendar Appointment Editor dialog box and drop it onto the attachment list in the Compose window.
3. Send the message as usual.

Note – You can also drag a calendar appointment attachment from the attachment list to Calendar. See “To Drag an Appointment From Mailer to Calendar” on page 364 in Chapter 13.

Customizing Mailer

Once you have used Mailer for some time, you may want to change some of its defaults. The Options menu provides you with these choices:

- Basic
- Aliases
- Compose Window
- Message View
- Move Menu Setup
- Notification
- Signature
- Templates
- Toolbar
- Vacation Message
- Advanced

The following sections describe some of the customizations you can do using the options in these dialog boxes.

▼ To Display Message Numbers in Your Mailbox

1. **Choose Basic from the Options menu.**
The Basic Options dialog box is displayed.
2. **Select the Display message numbers option.**
3. **Click OK or Apply to make your changes take effect.**
The numbering appears on the left side of your Message Header List.

▼ To Change the Character Marker for Included Text in a Reply

Having a marker for text you include when you reply to a message sets it off from the text you want to add. Mailer provides a right-angle bracket (>) as the default. You can customize this marker to a character of your choice.

1. **Choose Compose Window from the Options menu.**
The Compose Window Options dialog box is displayed.
2. **Type the character you want to use under Indent Characters For Included Message.**
3. **Click OK or Apply to make your changes take effect.**

▼ To Set How Often Mailer Checks for Messages

1. **Choose Basic from the Options menu.**
The Basic Options dialog box is displayed.
2. **Increase or decrease the setting in the “Check for new mail every” field.**
3. **Click OK or Apply to make your changes take effect.**

▼ To Add Custom Fields to the Format Menu

Besides the To, Subject, Cc, and Bcc fields in the Format menu of a Compose window, you may want to add your own fields, such as Reply-To, Return-Receipt-To, and so on.

1. **Choose Compose Window from the Options menu.**
The Compose Window Options dialog box is displayed.

2. **Type a name in the Header Name field as it will appear in the Compose window header (for example, Return-Receipt-To).**
3. **(Optional) Type a default entry for the defined header field in the Default Value field (for example, your email address).**
4. **Click Add to add the values to the scrolling list.**
To change a custom field, select it and edit the Header Name or Default Value field, as appropriate, then click Change.
To remove a custom field, select it and click Delete.
5. **Click OK or Apply to make your changes take effect.**

▼ To Customize Mail Notification

To determine how Mailer signals the arrival of new mail:

1. **Choose Notification from the Options menu.**
2. **Under “Signal new mail with,” specify whether you want Mailer to beep, the Header window to flash, or Mailer to play an audio file when new mail arrives. You can choose to have all three signals if you desire.**
Set the number of beeps and flashes by clicking on the up or down arrow under Beeps and Flashes.
To play an audio file, either type the full path name of the file in the Sound File text field, or click Select to specify that file in a File Selection dialog box.

Configuring the Appearance of the Toolbar

From the settings in the Toolbar Options dialog box, you can change the appearance of the Toolbar buttons (as icons or with text), determine which buttons display, and set the order in which they are displayed.

By default, the following commands appear as icons: Delete; Next; Previous; Reply, Include Message; Forward; New Message; Print One; Open Mailbox; and Reply.



▼ To Customize the Toolbar

- 1. Choose Toolbar from the Options menu.**

The Toolbar Options dialog box is displayed. Under Commands is a list of the commands you can choose to be displayed in the Toolbar, either as icons or with text. Those commands you have chosen to be displayed in the Toolbar are shown in the Toolbar scrolling list.

- 2. Select Icons or Text as your preference for the display.**

- 3. (Optional) Click Add or Remove to add or remove a selected command from the Toolbar.**

- 4. (Optional) Click Move Up or Move down to change the order in which the buttons are displayed.**

- 5. Click OK or Apply to make your changes take effect.**

Using the File Selection Dialog Box

When you perform certain functions (like opening a mailbox or saving a message), there is a standard method to access your file system. From a File Selection dialog box, you are presented with a place to enter a path or folder name or a place to select from the folders and files in your file system.

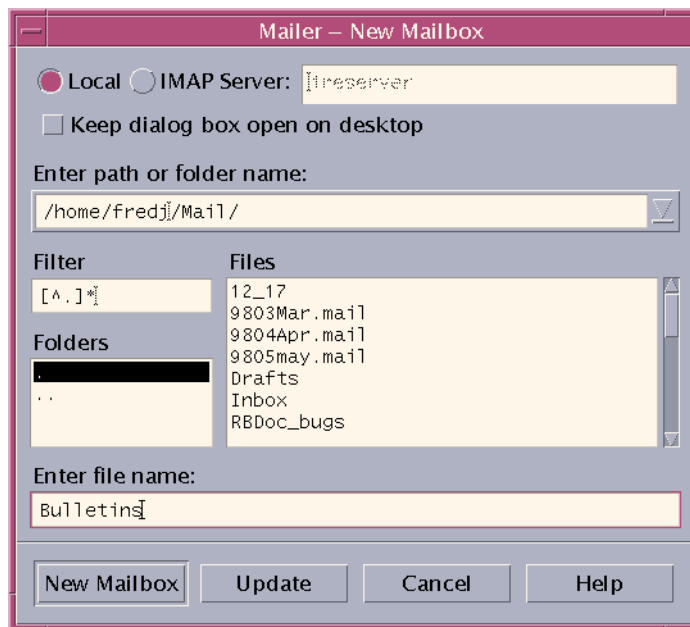


FIGURE 10-9 File Selection dialog box

The title bar and the buttons of the dialog box vary, depending on the operation you wish to perform.

The fields are:

- Local or IMAP Server – Specifies the mail server type. If you select IMAP Server, type its name in the text field.
- Keep dialog box open on desktop – Indicates that you do not want the New Mailbox dialog box to disappear after you click New Mailbox (same affect as Apply button on most dialog boxes).
- Enter path or folder name – Indicates the path to the item. It can be a location anywhere in your file system. If folders or file names are selected, the path appears here.
- Filter – Shows the filter criteria; an asterisk (*) shows all files. You can enter wildcard characters to display only those files that match a suffix. For example, *.doc lists only those files with a .doc suffix.
- Folders – Lists the folders in the current directory.
- Files – Lists the files within the current folder.
- Enter file name – Shows the name of the mailbox. You can either type in the name or select it from the list.

You can:

- Click Open Mailbox (or whatever action is specified in the leftmost button) to perform the operation and dismiss the dialog box.
- Click Update to display a new list of files after changing the filter key or changing to a new folder.
- Click Cancel to halt the operation without applying the changes and dismiss the dialog box.
- Click Help to display information about this dialog box.

Printing

You can easily print files, find or cancel print jobs, and get information about printers and print jobs through the desktop.

- “Your Default Printer” on page 295
- “Printing Files” on page 296
- “Printer Applications” on page 300

Your Default Printer

Your system may have more than one printer that you can use for printing. One of the printers will be designated as the *default* printer. The default printer is the printer that your desktop automatically uses if you submit a document for printing and you don't specify a printer name. When you first open your desktop, the default printer is shown in the Front Panel.

To find out how to display a printer other than your default printer in the Front Panel, see “To Change the Front Panel Printer” on page 306.

▼ To Determine the Default Printer

- **To find out the name of your default printer, double-click the Default printer control in the Personal Printers subpanel in the Front Panel.**

This starts the Printer Jobs application. The name under the printer icon is the name of your default printer.

▼ To Change the Default Printer

To designate a different printer as the default printer:

1. Go to your home folder and open the file `.dtprofile`.
2. Add or edit a line that sets a value for the `LPDEST` environment variable:

```
LPDEST=printer_device; export LPDEST
```

If you are using `cs`h the syntax is:

```
setenv LPDEST printer_device
```

Note – This change will take effect the next time you log out and back in again.

For example, the following line would change the default printer to the printer whose device name is `laser3d`.

```
LPDEST=laser3d; export LPDEST
```

If you are using `cs`h the syntax is:

```
setenv LPDEST laser3d
```

Printing Files

The desktop can print different types of files, as listed in Table 11–1.

TABLE 11–1 Types of Data That Can Be Printed (Initial Configuration)

Type of Data	Data Type Requirement	Description
Text file	File name ends with <code>.txt</code>	Text files containing ordinary (ASCII) text data
PostScript	File name ends with <code>.ps</code> , or content is recognized as PostScript data	PostScript files (requires a PostScript printer)
PCL	File name ends with <code>.pcl</code> , or content is recognized as PCL data	Printer Control Language files (requires a PCL printer)
Data	Contains text data	The default data type assigned to all files containing ASCII data that do not match other data types

If applications are installed on your system that create other types of files, your system administrator can add printing capabilities for them.

Note – Ensure that your destination printer is capable of printing PostScript™ or PCL files before you try to print them.

Submitting a File to a Printer

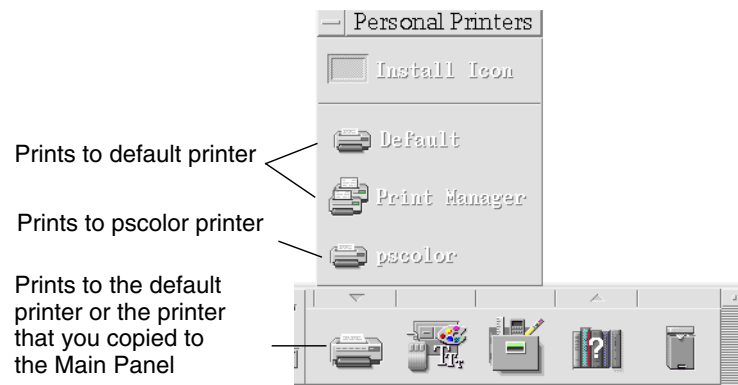
There are many ways to submit a file to a printer:

- Using the Front Panel
- Using File Manager
- Using Print Manager
- Using applications

▼ To Print Using the Front Panel

1. **Drag a single file or multiple files from File Manager to the Printer control in the Front Panel or to a Printer icon in the Personal Printers subpanel.**

The system then displays a Print dialog box for specifying print options. A Print dialog box appears for each file you drag to the Printer control.



Note – pscolor will not show on your system. It is only included as an example of a printer that has been added to a system.

2. *Optional.* Use the text fields in the Print dialog box to set additional print options. (See “Setting Print Options Using the Print Dialog Box” on page 299.)
3. Click OK in the Print dialog box to send the job to the printer.

▼ To Print Using File Manager

1. Select the file in File Manager.
2. Choose Print from the Selected menu or the file’s pop-up menu.
The system displays a Print dialog box for specifying various print options.
3. *Optional.* Use the text fields in the Print dialog box to set additional print options. (See “Setting Print Options Using the Print Dialog Box” on page 299.)
4. Click OK in the Print dialog box to send the job to the printer.

▼ To Print Using Print Manager

1. Start Print Manager from the Personal Printers subpanel.
2. Drag a file from File Manager to a printer icon in Print Manager.
In Print Manager, you can submit a document by dropping it on a printer icon or into the jobs list area to the right of a printer.

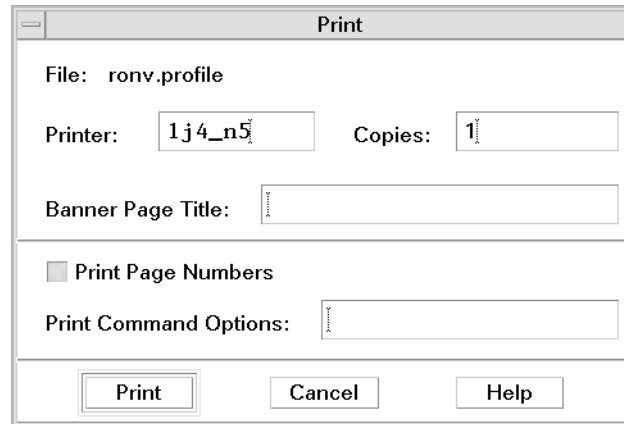
Note – If you submit a job to a printer that is down (flag is showing), it may never be printed even though it appears in the jobs list.

The system displays a Print dialog box for specifying various print options.

3. *Optional.* Use the text fields in the Print dialog box to set additional print options. (See “Setting Print Options Using the Print Dialog Box” on page 299.)
4. Click OK in the Print dialog box to send the job to the printer.

Setting Print Options Using the Print Dialog Box

The desktop displays the Print dialog box when you print text, PCL, PostScript, and data files (see Table 11–1).



When application data files, such as word processor documents, are submitted for printing, they may display their own unique Print dialog boxes.

Use the Print dialog box to set these print options:

TABLE 11–2 Setting Print Options

Printer	The destination for the print job. The text field initially displays the printer on which you dropped the data file. In this example, the document was dropped on a printer named lj4_n5.
Copies	The number of copies to print. The default is 1.
Banner Page Title	A title to appear on the banner page. The banner page is a sheet of paper that the printer prints before it prints the first page of your document.
Print Page Numbers	Prints page numbers on each page. If page numbering is selected, Print Manager will not display the true name of your document. Instead, the name in the jobs list will be STDIN:XXXXX, where XXXXX is a five-digit number.
Print Command Options	Other options that change the way printing is done. See the next section for more details on using this field.

Print Command Options

You can use the Print Command Options text field in the Print dialog box to set other print options. Type the proper `lp` command flag in the text field for the print option you want to use. To see a list of the `lp` command flags, type `man lp` in a Terminal window.

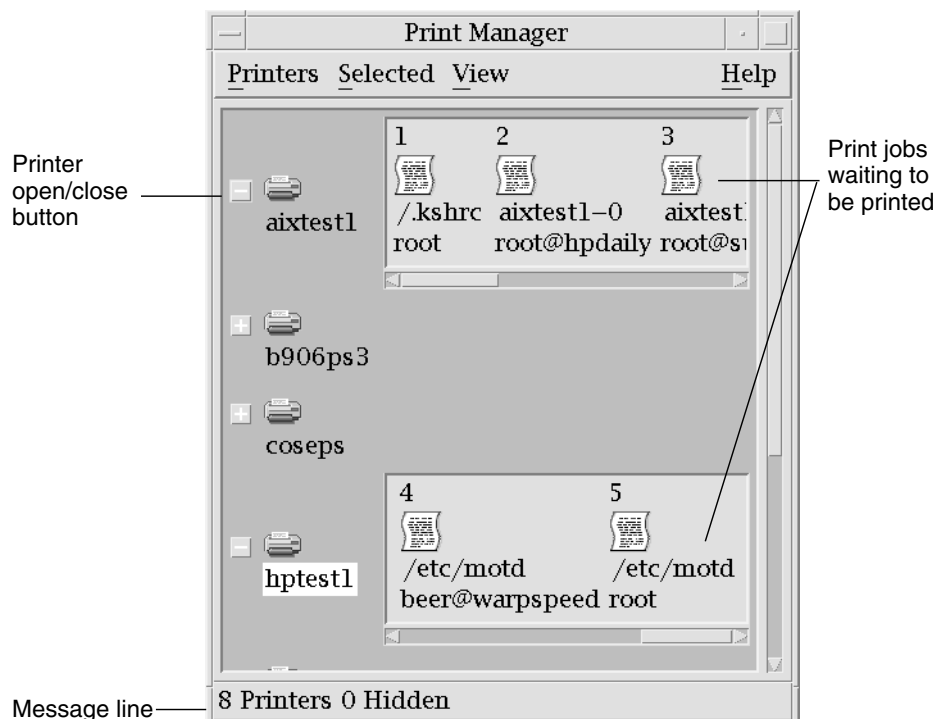
For example, one of the `lp` flags is `-m`. This flag tells the print server to send you a mail message that tells you when it is done printing your document. To use this flag you would type `-m` in the Print Command Options field of the Print dialog box. Then when your document is done printing, a message appears in your mailbox from the printer.

Printer Applications

After you submit a document (print job) for printing, you can use the Print Manager or Printer Jobs applications to find out about the progress of the printing. Printer Jobs gives you information about jobs on a single printer. Print Manager shows all the printers that are on your system.

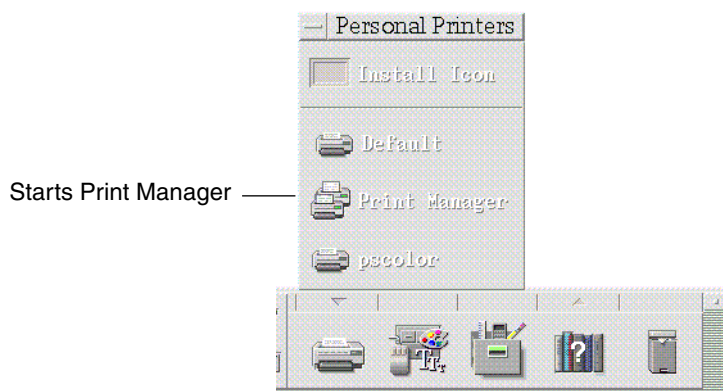
Print Manager

The Print Manager window is shown below. To find out how to modify it, see “Changing the Print Manager Display” on page 306.



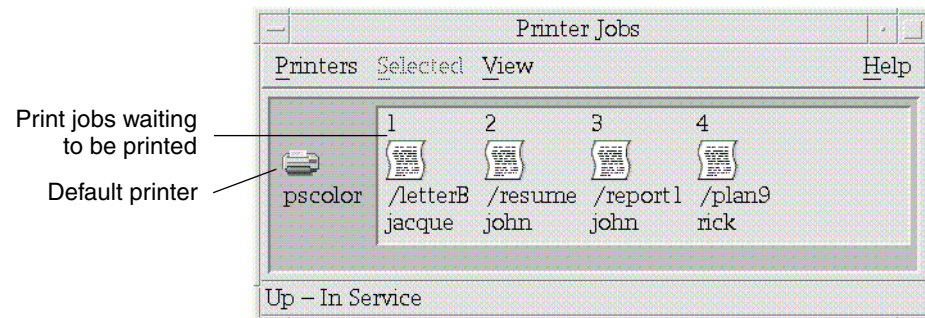
▼ To Start Print Manager

- Click the Print Manager control in the Personal Printers subpanel in the Front Panel.



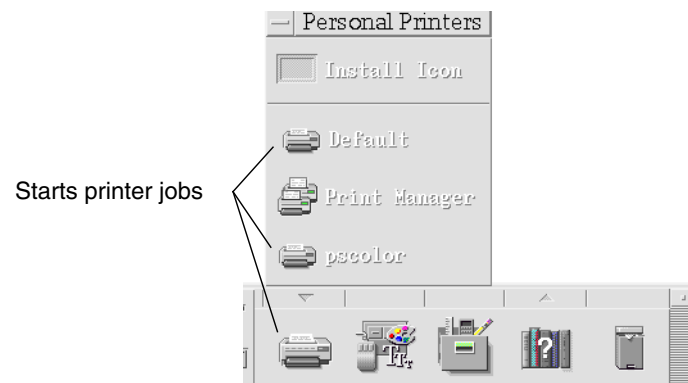
Printer Jobs Application

The Printer Jobs application is the application you see when you open a single printer from the Front Panel. The Printer Jobs application is a simplified version of Print Manager that shows only a single printer instead of all the printers on your system. The functions that are available inside Printer Jobs work the same way as they do in Print Manager.



▼ To Start the Printer Jobs Application

- Click the Printer control in the Front Panel.



Note – The pcolor printer is only shown in the figure as an example of a printer that has been added to a system. It will not be on your subpanel.

Displaying Print Job Information

Information about the jobs waiting to be printed on a printer is displayed when you open a printer icon. A display area to the right of the printer icon displays an icon for each of the jobs waiting to be printed on it, and each job's position in line, job name, and owner.

▼ To Open a Printer Icon

There are three ways to open a printer:

- Click the Open [+] button to the left of the printer icon.
- Select a printer, then choose Open from the Selected menu or from the printer's pop-up menu (displayed by pressing Shift+F10 or mouse button 3).
- Double-click the printer icon.

Note – Your job will not appear in the Print Manager or Printer Jobs window if there are no jobs waiting to be printed when you send your job to the printer.

▼ To Close a Printer Icon

Close a printer if you don't want to see the jobs waiting to be printed on it.

- Click the Close [-] button to the left of the printer icon.
- Select a printer, then choose Close from the Selected menu or from the printer's pop-up menu (displayed by pressing Shift+F10 or mouse button 3).

▼ To Find a Print Job

1. Choose Find from the Printers menu.

Find is available in Print Manager but not in the Printer Jobs application.

2. **Type the name of the print job you want to find in the Job Name field.**

For example, typing `cat` will find all jobs that include the fragment “cat” in their name, such as “Catchall” and “catalog,” regardless of case.

To find jobs with the name “cat” only, you would select Exact match.

To find only jobs that match your capitalization, deselect Ignore case.

Note – Find only finds print jobs that list you as the owner and it searches all printers, even those that are not currently displayed.

3. **Click Start Find.**

4. **Once you have found a job, you can go directly to it in Print Manager or cancel it. To go to a found job, select the job and click Goto. To cancel a found job, select it and click Cancel Print Jobs.**

▼ To Cancel a Print Job

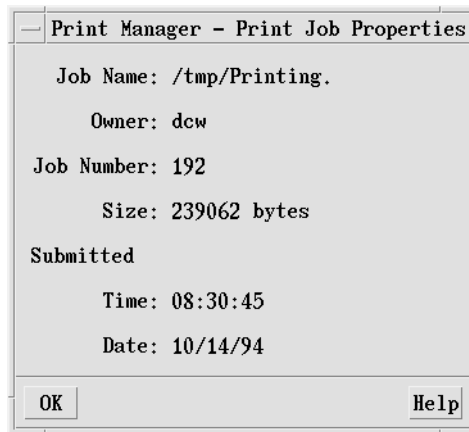
1. **Select a print job in the Print Manager or Printer Jobs window.**
2. **Choose Cancel from the Selected menu or from the print job’s pop-up menu (displayed by pressing Shift+F10 or mouse button 3).**
3. **Click Yes in the confirmation dialog box.**

Print Job Properties

The following properties can be displayed for print jobs:

- Job name
- Job owner
- Job number
- Job size
- Time job submitted
- Date job submitted

Note – The term “not available” may appear in some fields to indicate that the print system is not supplying that information.



▼ To Display Print Job Properties

1. Select a print job.
2. Choose Properties from the Selected menu or the print job's pop-up menu (displayed by pressing Shift+F10 or mouse button 3).
The properties are displayed.

Printers and the Front Panel

The printer shown in the Front Panel is usually your default printer. You can change it to another printer, or add a printer to the Personal Printers subpanel.

▼ To Change the Front Panel Printer

Note – This does not change your default printer assignment. To find out how to change the default printer, see “To Change the Default Printer” on page 296.

1. **Open the Personal Printers subpanel (by clicking the arrow above the Printer control in the Front Panel) and verify that the icon for the printer you want to move to the Front Panel appears.**

If the printer is not in the Personal Printers subpanel, add it by following the steps in “To Add a Printer to the Personal Printers Subpanel” on page 306.

2. **In the subpanel, point to the printer icon you want to add to the Front Panel and select Put In Main Panel from the icon’s pop-up menu (displayed by pressing Shift+F10 or mouse button 3).**

To verify that the printer has been changed, click the Printer control in the Front Panel and check the name of the icon in the Printer Jobs window that appears.

▼ To Add a Printer to the Personal Printers Subpanel

1. **Open the Personal Printers subpanel (by clicking the arrow above the Printer control in the Front Panel).**
2. **Start Print Manager.**
3. **Drag a printer icon from the Print Manager window to the Install Icon control in the open subpanel.**

Changing the Print Manager Display

This section describes how to change display parameters in Print Manager.

▼ To Change How Printers and Print Jobs Are Displayed

1. Start Print Manager.
2. Choose Set Options from the View menu.
3. Select how you want the print jobs represented:
 - Large Icon – Displays printers and print jobs as large icons
 - Small Icon – Displays printers and print jobs as small icons
 - Name Only – Displays printer and print jobs as only text
 - Details – Displays job owner, size, job number, and the date and time each job was submitted
 - Show Labels – Displays a description of each details row to the left of the job list area

Note – The term “not available” may appear in some fields to indicate that the print server is not supplying that information

4. Click OK.

▼ To Change the Update Frequency

1. Start Print Manager.
2. Choose Set Options from the View menu.
3. Adjust the interval gauge to specify how frequently printers are queried for information about their print jobs. The default is every 30 seconds.
4. Click OK.

▼ To Determine Which Jobs Are Displayed

1. Start Print Manager.
2. Choose Set Options from the View menu.
3. Select which jobs you want shown:
 - Only Mine – Displays just your print jobs

- Everyone's – Displays all print jobs

4. Click OK.

▼ To Display the Print Manager Message Line

1. **Start Print Manager.**
2. **Choose Set Options from the View menu.**
3. **Select Message Line to display a message line at the bottom of the Print Manager window.**

The message line shows the number of printers on your system and the number that are currently hidden. It also presents messages telling you when printer updates are being done.

4. Click OK.

▼ To Display the Print Manager Problem Flag

1. **Start Print Manager.**
2. **Choose Set Options from the View menu.**
3. **Select Problem Flag to have a flag icon displayed next to printers when a problem is found with one of them.**

For more information on the problem, you can double-click the Flag icon.

4. Click OK.

▼ To Determine Which Printers Are Shown

1. **Start Print Manager.**
2. **Choose Modify the Show List from the View menu.**
Printers that are visible in the Print Manager window have highlighted names.
3. **Click a non-highlighted printer to make it visible in the Print Manager window.**
Click a highlighted printer to remove it from the main window. You can also use Select All to show all the printers or Deselect All to hide all the printers.
4. Click OK.

Printer Properties

The following properties can be displayed:

- Icon label
- Icons
- Description
- Printer queue
- Printer queue status
- Device name
- Device status

▼ To Show a Printer's Properties

1. Select a printer in the Print Manager window or the printer in the Printer Jobs window.
2. Choose Properties from the Selected menu or from the printer's pop-up menu (displayed by pressing Shift+F10 or mouse button 3).

▼ To Change a Printer's Icon

1. Select a printer in the Print Manager window or the printer in the Printer Jobs window.
2. Choose Properties from the Selected menu or from the printer's pop-up menu (displayed by pressing Shift+F10 or mouse button 3).
3. Click Find Set.
4. Select the new icon you wish to use.
If the icon you want is not visible, choose another folder from the Icon Folders menu. This dialog box will only display icons that have a complete set of all three sizes.
5. After you have selected an icon, click OK.
6. Click OK in the Properties dialog box.

▼ To Change a Printer's Icon Label

1. Select a printer in the Print Manger window or the printer in the Printer Jobs window.
2. Choose Properties from the Selected menu or from the printer's pop-up menu (displayed by pressing Shift+F10 or mouse button 3).
3. Type the new icon label in the Icon Label field.
4. Click OK.

Using Text Editor

This chapter describes how to create and edit short documents such as memos, mail messages, or resource files using Text Editor.

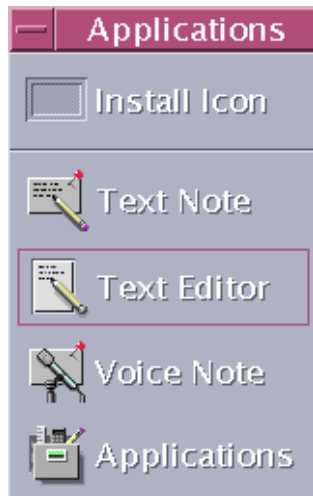
- “Opening and Closing Text Editor” on page 311
- “Text Editor Window” on page 313
- “Opening and Saving Documents ” on page 314
- “Entering Text” on page 319
- “Moving the Cursor in a Document” on page 320
- “Selecting Text” on page 322
- “Editing Text” on page 324
- “Correcting Misspelled Words” on page 328
- “Using Drag and Drop” on page 335
- “Searching a Document” on page 336
- “Formatting and Printing Documents” on page 337
- “Recovering a File” on page 340
- “Text Editor and Other Applications” on page 340
- “Using Text Note” on page 341

Opening and Closing Text Editor

There are several ways to start Text Editor from your desktop.

▼ To Open Text Editor

- Open the Applications subpanel in the Front Panel and click the Text Editor control.



Text Editor can also be started from the command line by typing this command in a Terminal window:

```
dtpad filename &
```

The file name is optional.

Note – If the path `/usr/dt/bin` has not been set in your `.cshrc` file, then type `/usr/dt/bin/dtpad` to run Text Editor from the command line.

▼ To Close Text Editor

- Choose **Close** from the **File** menu or press **Alt+F4**.

Note – If your keyboard does not have an Alt key, ask your system administrator to identify the corresponding key.

Text Editor Window

You create and edit a document in the Text Editor window. The title bar displays the name of the current document. A new document is named (UNTITLED).

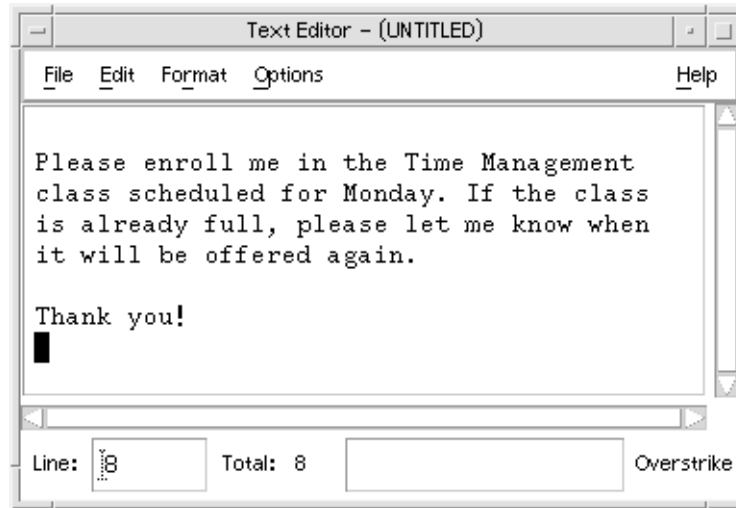


FIGURE 12-1 Text Editor window

You can optionally display a status line that reports the number of lines in your document and enables you to go to a specific line number.

▼ To Display the Status Line

The status line displays the line number where the insertion cursor is located and the total number of lines in the document. It also reports Text Editor messages and indicates whether Overstrike mode is active.



- **Choose Status Line from the Options menu. To remove the status line, choose Status Line again from the menu.**

Opening and Saving Documents

You can create a new document or open an existing document. Opening a document displays the contents of a selected file in the Text Editor window.

Saving a document stores the edited contents into a file. You can save a document to its original file or to a new file.

You can choose that Text Editor maintains a file containing the previously saved version of a file each time it performs a save during the current session.

▼ To Create a New Document

A new document named (UNTITLED) is created when you start Text Editor. To enter text in your document, see “Entering Text” on page 319. You provide a new file name when you save the document.

After finishing a document, you can create another document using the New command.

- **Choose New from the File menu.**

The Text Editor window is cleared and a new document is created. If you have not saved your current document, a dialog box is displayed that enables you to save your document.

▼ To Save a Document to a New File

1. Choose Save As from the File menu.

The Save As dialog box lists files and folders located in your current folder. You can store your document in the current folder, a subfolder, or a folder that you specify.

If you used Wrap To Fit, the dialog box includes an additional choice about handling line endings. If Wrap To Fit is set off, the dialog box omits this choice (see “Using Wrap To Fit” on page 319).

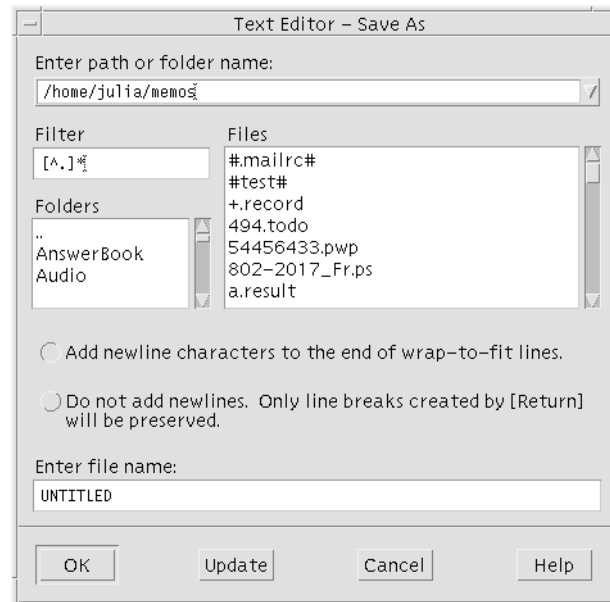


FIGURE 12-2 Save As dialog box

2. *Optional.* If you do not want to save the file to the current folder, choose a subfolder or indicate a different folder.

- For a subfolder, select the subfolder in the Folders list and press Return.
- For a different folder, use the .. (go up) icon to change to a folder or type its path name in the Enter path or folder name field.

3. Type a new file name in the Enter file name field.

4. Press Return or click OK.

Note – To save your document to a diskette that has been mounted, choose `/floppy/floppy_name` through the menu button at the end of the text field, Enter path or folder name. Type a name in the Enter file name text field and click OK.

▼ To Save a Document to the Original File

- **Choose Save from the File menu to save your work and continue editing your document.**

If you used Wrap To Fit, the Save dialog box includes an additional choice about handling line endings (see “Using Wrap To Fit” on page 319).

Opening an Existing Document

You can open an existing document in these ways:

- Open the document in Text Editor.
- Select the file icon in File Manager and choose Open from the File Manager Selected menu.
- Double-click the file icon in File Manager.
- Drag the document’s file icon to the Text Editor control in the Front Panel.

▼ To Open an Existing Document from Text Editor

1. Choose Open from the File menu.

The Open a File dialog box lists files and folders in your current folder. You can browse the documents listed, or change to a new folder to locate other files on your system.

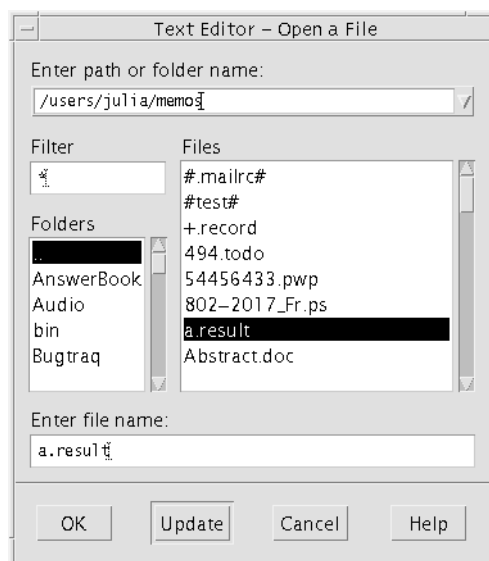


FIGURE 12-3 Open a File dialog box

2. Select the name of the document you want to open, or type the document name in the Enter file name field.
3. Press Return or click OK.

Note – You can also use this shortcut: double-click the document name in the dialog box.

Note – To save a file from a CD-ROM or diskette that has been mounted, choose /cdrom/*cd_name* or /floppy/*floppy_name* through the menu button at the end of the text field, Enter path or folder name. Select the file name and click OK.

▼ To Open an Existing Document from File Manager

1. Display the document's file icon in a File Manager window.

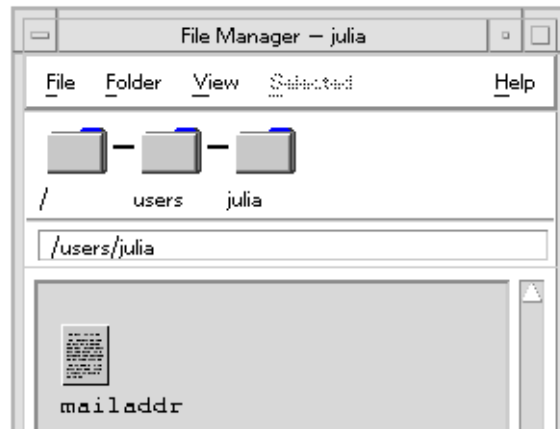


FIGURE 12-4 Document file icon

2. Open the document in one of the following ways:

- Double-click the document.
- Select the document, then choose Open from the File Manager Selected menu.
- Drag the document file icon to the Front Panel and drop the icon on the Text Editor control.

Working with Backup Versions

You can choose that Text Editor maintains a file containing the previously saved version of a file each time it performs a save. You do this using the Backup on Save menu item on the Options menu. The default setting is un-selected, so each time you run Text Editor, the setting reverts to the default.

When performing a save with Backup on Save selected, Text Editor first copies the original file to a new file name (the old file name with a percent character "%" appended), and then saves the edited file to the original file name.

▼ To Recover the Backup Version of a File

You can revert to the previously saved version of a file in which you are interested as follows:

- 1. Choose Open from the File menu.**

Text Editor displays the Open a File dialog.

- 2. Browse to the folder containing the file in which you are interested, and select the corresponding file name with a percent character “%” appended.**

Text Editor opens the file.

- 3. Use the Save As command in the file menu to overwrite the original file.**

The original file now contains the contents of the previous version.

Entering Text

As you create a document, you type and edit text. A cursor (I) shows your current position. Characters are inserted unless you set Overstrike mode (see “To Set Overstrike Mode” on page 325).

▼ To Enter New Text

- **Click in the document and start typing.**

To start a new line, press Return. Or, you can use the Wrap To Fit option to automatically wrap text at the edge of the window.

To start a paragraph, press Return twice.

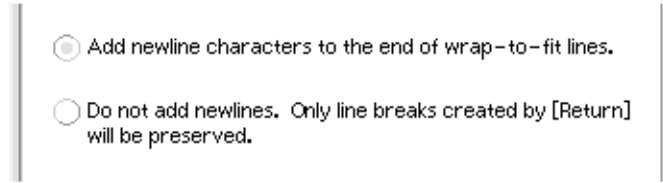
Using Wrap To Fit

Wrap To Fit controls whether lines are automatically wrapped to fit the width of the window. When Wrap To Fit is set on, lines are broken automatically at the edge of the window. Because these line breaks are dynamic, you can resize the Text Editor window and the text automatically adjusts to fit the new window width.

When you save your document, you decide whether to add a line break to each of the wrapped lines, or to discard the dynamic line endings. When you save your document, you choose one of these options:

- Add a newline character (hard return) to the end of each wrapped line to preserve each line ending as it currently appears.

- Or, preserve only line breaks that were created by pressing Return.



▼ To Set Wrap To Fit On or Off

- To set **Wrap To Fit on**, choose **Wrap To Fit** in the **Options** menu. To set **Wrap To Fit off**, choose it from the menu again.

Entering Special Characters

Different systems often use certain key combinations to insert special characters (see “Composing Special Characters” on page 70).

In some instances, a key combination may be reserved by Text Editor. For example, a Text Editor mnemonic for displaying a menu might conflict with a key sequence you want to use on your keyboard. To insert the correct character you may need to override the reserved behavior by preceding the key combination with Control+Q.

Moving the Cursor in a Document

As you enter and edit text, you move the insertion cursor using the mouse and keyboard cursor keys. Using the mouse, move the pointer to the new location in the document and click mouse button 1.

You can also use the keyboard cursor movement keys:

Key	Cursor Movement
Up Arrow	Up one line
Down Arrow	Down one line

Key	Cursor Movement
Left Arrow	Left one character
Right Arrow	Right one character
Control+Left Arrow	Move left to previous word
Control+Right Arrow	Move right to next word
Home	Beginning of the current line
End	End of the current line
Control+Up Arrow	Beginning of the previous paragraph
Control+Down Arrow	Beginning of the next paragraph
Control+Home	Beginning of the document
Control+End	End of the document
Control+G	To the Line field in the status line

Note – If your keyboard uses different key labels, ask your system administrator to identify the corresponding keys.

▼ To Go to a Specific Line

1. Display the status line (see “To Display the Status Line” on page 314).
2. Press Control+G or click in the Line field of the status line.
3. Type the line number you want to go to and press Return.

▼ To Scroll a Document

- Select and drag the vertical scroll bar to view more text. Use the horizontal scroll bar to view long lines.

You can also use the scrolling keys:

Key	Scroll Movement
Page Up	Up one page

Key	Scroll Movement
Page Down	Down one page
Control+Page Up	Left one page
Control+Page Down	Right one page

Selecting Text

Before using edit commands such as cut and paste, you must select the text. You can select text using the mouse or the keyboard.

▼ To Select Text with the Mouse

1. Click at the beginning of the text you want to select.
2. Press and hold mouse button 1 and drag to the end of the text.

To deselect text, click any area in the window.

Note – To modify a selection you have made, press and hold the Shift key and mouse button 1. Then drag forward or backward to adjust the amount of selected text. Or, hold down the Shift key and one of the arrow keys to change the selection.

You can also use these shortcuts for selecting text:

Word	Double-click the word
Line	Triple-click the line
All text	Quadruple-click in the text

Secondary Selection

This method enables you select text and replace it with another selection, which is used as the replacement text.

▼ To Replace Text Using Secondary Selection

1. Select the text that you want to replace.
2. Move the pointer to the beginning of the text you want to replace the first selection with. Hold down the Alt key and mouse button 2 and drag to the end of the text you want to use.

The text is underlined.

Note – If your keyboard does not have an Alt key, ask your system administrator to identify the corresponding key.

3. Release the Alt key and mouse button.

The underlined text overwrites your first selection.

▼ To Select Text with the Keyboard

Text to Select	Action
Text block	Move the cursor to the beginning of the text block. Hold down the Shift key and an arrow key to move the cursor to the end of the text block.
Cursor to beginning of line	Shift+Home
Cursor to end of line	Shift+End
Cursor to beginning of paragraph	Shift+Control+Up Arrow
Cursor to end of paragraph	Shift+Control+Down Arrow
Cursor to beginning of document	Shift+Control+Home
Cursor to end of document	Shift+Control+End
All text	Control+/
Deselect all text	Control+\

Editing Text

Minor edits can be made using the editing keys. You may also want to copy, move, or delete portions of text, find and change a word or phrase, or check the spelling of your document.

Editing Keys

Key	Action
Backspace	Deletes the character before the cursor
Delete	Deletes the character following the insertion cursor
Control+Backspace	Deletes the previous word
Shift+Backspace	Deletes characters from the cursor to the beginning of the line
Control+Delete	Deletes all the characters from the cursor to the end of the current line
Insert	Toggles Overstrike and Insert mode

Menu Shortcut Keys

You can also use these shortcut keys when making edits.

TABLE 12-1 Shortcut Keys

Control+C	Copy selected text
Control+X	Cut selected text
Control+V	Paste selected text
Control+F	Find/Change text
Control+Z	Undo a cut, delete, clear, include, copy, or paste command

UNIX Key Bindings

UNIX[®] key bindings enable you to use a set of extended Emacs keys, such as Alt+B (back word) or Control+N (next line), in Text Editor. To enable UNIX key bindings (which are set off by default) you edit a file in your home directory.

▼ To Enable UNIX Key Bindings

1. Add the following line to the `.Xdefaults` file in your home directory:

```
#include "/usr/dt/app-defaults/language/UNIXbindings"
```

Replace `language` with the name of your language environment.

If the `.Xdefaults` file does not exist, create the file in your home directory.

2. Log out of your current session.
3. Log in and restart Text Editor.

Some Text Editor menu accelerators conflict with UNIX key bindings. When UNIX key bindings are enabled, Text Editor provides alternate menu accelerators for these commands:

Command	Alternate Menu Accelerator
Find/Change (Control+F)	Control+S
Paste (Control+V)	Shift+Insert
Print (Control+P)	No alternate accelerator
Undo (Control+Z)	Control+_

If you want to modify these menu accelerators, copy the contents of the `/usr/dt/app-defaults/language/UNIXbindings` file into your `.Xdefaults` file and then make your changes.

Note – When using UNIX key bindings, the Delete key deletes the previous character rather than the character that follows the cursor.

▼ To Set Overstrike Mode

As you type, new characters are inserted. If you want to type over existing characters, change to Overstrike mode.

- Choose Overstrike from the Options menu. To return to Insert mode, choose Overstrike again from the menu.
- Or, use the Insert key to switch between Insert and Overstrike mode.
When Overstrike mode is on, the cursor changes to a solid block. If you use Overstrike mode often, you may want to display the status line (see “To Display the Status Line” on page 314) because it indicates whether Overstrike mode is on or off.

▼ To Type Over Text

1. **Select the text.**

2. **Type the replacement text.**

You can also choose Overstrike from the Options menu to turn off Insert mode and type over the text directly.

▼ To Delete Text

1. **Select the text.**

2. **Choose Delete from the Edit menu or press the Delete key.**

Deleted text cannot be pasted, but it can be recovered with the Undo command (see “To Undo an Edit” on page 326).

If you intend to paste the text that you delete, use the Cut command (see “To Undo an Edit” on page 326).

▼ To Clear Text

The Clear command replaces the selected text with spaces or blank lines.

1. **Select the text to be cleared.**
2. **Choose Clear from the Edit menu.**

▼ To Undo an Edit

- **Choose Undo from the Edit menu or press Control+Z.**

Undo reverses the last cut, paste, clear, delete, change, include, or format operation.

▼ To Copy Text

1. **Select the text to be copied.**
2. **Choose Copy from the Edit menu or press Control+C.**
A copy of the text is stored on a clipboard where it can be accessed or replaced by other applications.
3. **Click where you want to insert the text.**
4. **Choose Paste from the Edit menu or press Control+V.**
You can also use drag and drop to copy text (see “To Copy Text Using Drag and Drop” on page 335).

Note – Use this shortcut to copy a word or phrase: Select the text, move the pointer to where you want to insert the text, and click mouse button 2. This is a quick way to copy text into a dialog box.

▼ To Move Text (Cut and Paste)

1. **Select the text.**
2. **Choose Cut from the Edit menu or press Control+X.**
The text is erased from the document and stored on a clipboard where it can be accessed or replaced by other applications.
3. **Move the cursor to where you want to insert the text.**
4. **Choose Paste from the Edit menu or press Control+V.**
You can also use drag and drop to move text (see “To Move Text Using Drag and Drop” on page 335).

▼ To Include a File

You can insert a text file into your document using a menu command or by dragging a file icon into the Text Editor window (see “To Include a File Using Drag and Drop” on page 335).

1. **Position the cursor where you want to insert the text file.**

2. Choose Include from the File menu.

The Include a File dialog box lists files and folders on your system. You can browse the documents listed, or change to a new folder to locate other files on your system.

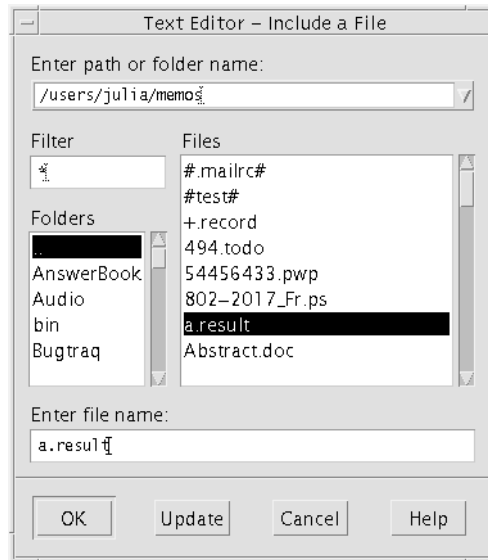


FIGURE 12-5 Include a File dialog box

3. Select the document you want to insert in the Files list.

4. Press Return or click OK.

Note – To include a file from a CD-ROM or diskette that has been mounted, choose `/cdrom/cd_name` or `/floppy/floppy_name` through the menu button at the end of the text field, Enter path or folder name. Select the file name and click OK.

Correcting Misspelled Words

You can correct misspelled words with the Spelling Checker. You can also customize your Personal Dictionary and Main Dictionary; see “To Correct Misspelled Words” on page 329 for more information.

▼ To Correct Misspelled Words

1. Choose Check Spelling from the Edit menu.

Note – Your Spelling Checker dialog box may look different than the one pictured in Figure 12–6. If so, go to Figure 12–7 and follow the instructions after that figure.

The Spell dialog box lists misspelled or unrecognized words.

The Check Spelling (Version 1) feature is only available for the English language.

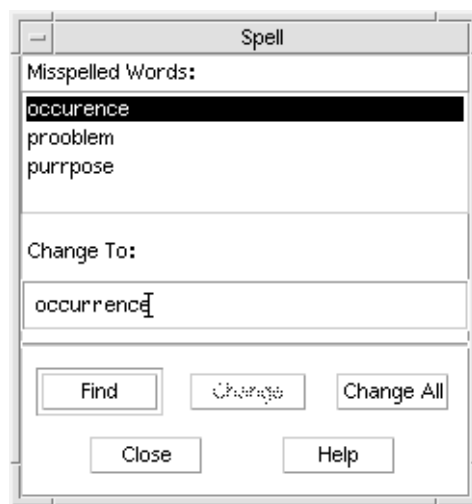


FIGURE 12–6 Spell dialog box - Version 1

2. Select the misspelled word in the Misspelled Word list that you want to find and press Return. Or, just double-click the word.

The next occurrence of the word is highlighted in your document.

3. Type the correct word into the Change To field.
4. Click Change to correct a single occurrence.
Or, click Change All to replace all occurrences.
5. To find and change additional single occurrences, click Find and then Change.

6. Click Close when you are done.

Note – If your Spelling Checker dialog box resembles Figure 12–7, follow the instructions after the figure.

The Spelling Checker dialog box displays a misspelled or unrecognized word and lists suggestions. To start a new spelling check while the Spelling Checker dialog box is open, click Start Check.

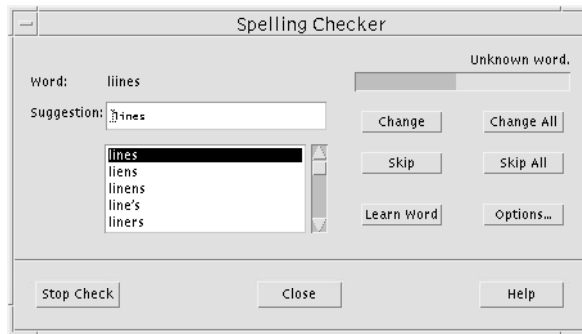


FIGURE 12–7 Spelling Checker dialog box - Version 2

1. Take action on the first word found by the spelling checker:

- If the suggested replacement is correct, click Change to correct this occurrence, or Change All to change all occurrences. (You cannot Undo a Change All.)
- If you see the correct replacement in the list, select it and click Change or Change All.
- If the correct replacement is not in the list, type it in the suggestion field and click Change or Change All.
- If the word is correct and you want to add it to your Personal Dictionary, click Learn Word.
- If the word is correct but you do not want to add it to your Personal Dictionary, click Skip to skip this occurrence, or Skip All to skip all occurrences.

2. Continue through the misspelled words found by the Spelling Checker.

3. To stop the Spelling Checker and leave the dialog box displayed, click Stop Check.

To stop Spelling Checker and close the dialog box, click Close.

Customizing Spelling Checker Dictionaries

When you run Spelling Checker, it uses both your Personal Dictionary and Main Dictionary. You can edit your Personal Dictionary and set your Main Dictionary.

You can run Spelling Checker with or without your Personal Dictionary. You can also remove words from your Personal Dictionary, import another user's Personal Dictionary, and export your Personal Dictionary to make it accessible to other users. When you import another user's Personal Dictionary, you can choose whether you want to append the imported Personal Dictionary to your own Personal Dictionary, or overwrite your own Personal Dictionary with the imported one.

Spelling Checker automatically sets your Main Dictionary to the default locale installed on your system. You can change the Main Dictionary to a different locale whenever Spelling Checker starts or change the locale just for the current session.

▼ To Run Spelling Checker Without Your Personal Dictionary

1. Click **Options** in the Spelling Checker dialog box.
2. Choose **Personal Dictionary** as the Category.

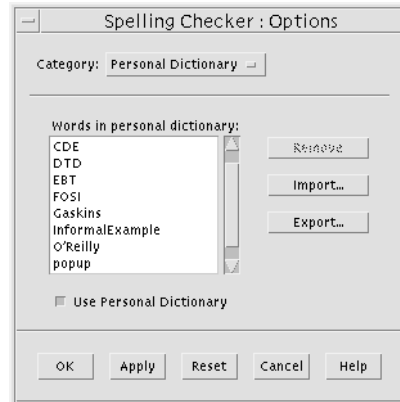


FIGURE 12–8 Personal Dictionary dialog box

3. Deselect the **Use Personal Dictionary** checkbox.
4. Click **OK** to save your changes and close the dialog box.
Spelling Checker will now run only with your Main Dictionary.

▼ To Remove a Word From Your Personal Dictionary

1. Click **Options** in the Spelling Checker dialog box.
2. Choose **Personal Dictionary** as the Category.
3. Select the word in the scrolling list.
To select more than one word, select the first word and then Shift-Click (or Control-Click) to choose the other words. You can drag choose contiguous words.
4. To delete the word from the list, click **Remove**.
5. To save your changes and close the dialog box, click **OK**.

▼ To Import Another User's Personal Dictionary

1. Click **Options** in the Spelling Checker dialog box.
2. Click **Import** in the Spelling Checker Options dialog box.
The Spelling Checker Import dialog box is displayed.

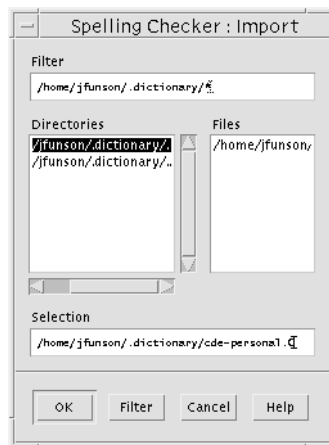


FIGURE 12-9 Personal Dictionary Import dialog box

3. Select the dictionary you want to import in the **Files** list, or type the dictionary name in the **Selection** field.

4. Press Return or click OK.

Note – You can also double-click the dictionary name in the dialog box.

5. In the dialog box that appears, choose whether you want to append the imported personal dictionary to your own personal dictionary, or overwrite your own personal dictionary with the imported one.

▼ To Export Your Personal Dictionary

1. Click Options in the Spelling Checker dialog box.
2. Click Export in the Spelling Checker Options dialog box.
The Spelling Checker Export dialog box is displayed.

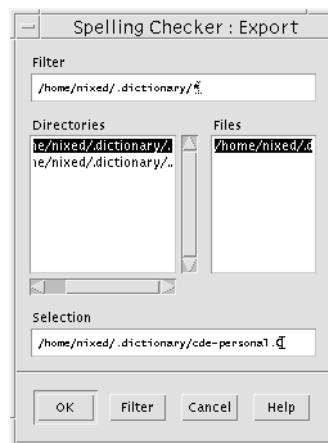


FIGURE 12-10 Personal Dictionary Export dialog box

3. Select the dictionary you want to export in the Files list, or type the dictionary name in the Selection field.
4. Press Return or click OK.

Note – You can also double-click the dictionary name in the dialog box.

Now other users can import your dictionary. You can send your personal dictionary to another user or tell them where it is in your file system.

▼ To Set Your Current Dictionary Locale

1. Click **Options** in the **Spelling Checker** dialog box.
2. Choose **Main Dictionary** as the **Category**.
The **Main Dictionary** dialog box is displayed.



FIGURE 12–11 Main Dictionary dialog box

3. Choose the desired locale as the **Current Dictionary**.

Note – This locale setting is for the current Spelling Checker session only. The next time you restart Spelling Checker it will run with your default locale.

4. To save your changes and close the dialog box, click **OK**.

▼ To Set Your Default Dictionary Locale

1. Click **Options** in the **Spelling Checker** dialog box.
2. Choose **Main Dictionary** as the **Category**.
3. Determine your main dictionary locale:
 - To have your Main Dictionary match the default locale installed on your system, select **Set Dictionary to Match Locale Language**.
 - To override the system default locale, **Set Dictionary To** and choose the desired locale.
4. To save your changes and close the dialog box, click **OK**.

Using Drag and Drop

You can use drag and drop to move or copy text between Text Editor documents or other applications. You can also include a file into your document using drag and drop.

▼ To Move Text Using Drag and Drop

1. **Select the text that you want to move.**
2. **With the pointer on the selection, press and hold mouse button 1, and drag to where you want to insert the text.**
3. **Release the mouse button.**

The text is inserted into your document relative to the position of the drag icon.

▼ To Copy Text Using Drag and Drop

1. **Select the text you want to copy.**
2. **With the pointer on the selection, press and hold the Control key and mouse button 1, and drag to where you want to copy the text.**
3. **Release the Control key and mouse button.**

The text is copied relative to the position of the drag icon.

▼ To Include a File Using Drag and Drop

When using drag and drop, the contents of the file are copied into the Text Editor window at the position of the insertion cursor. The original file remains intact.

1. **Click in your document where you want to include the file.**
2. **Drag the file icon that you want to include into the Text Editor window.**

Searching a Document

You can search for a word or phrase in your document. The Find command begins from the position of the insertion cursor and proceeds through the entire document. You can automatically replace or delete occurrences found in your document.

Searches are case sensitive. To find all occurrences, search for both lowercase and uppercase instances.

▼ To Find Text

1. Choose Find/Change from the Edit menu or press Control+F.

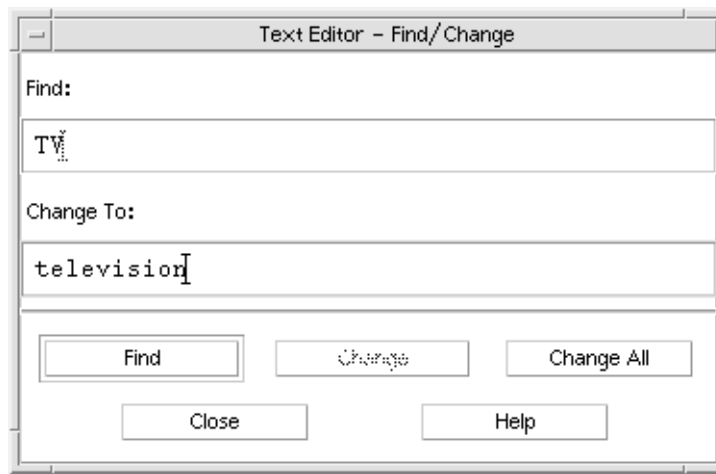


FIGURE 12-12 Find/Change dialog box

2. Type the text you want to find in the Find field.
3. Press Return or click the Find button to locate the next occurrence of the text.
4. To find additional occurrences, press Return or click Find again.

▼ To Find and Change Text

1. Choose Find/Change from the Edit menu or press Control+F.
2. Type the text you want to find in the Find field.
3. Type the replacement text in the Change To field.
4. Press Return or click the Find button to locate the next occurrence of the text.
5. Click Change to replace a single occurrence.
6. To find and change additional occurrences, click Find and then Change.
Or, click Change All to replace all occurrences.



Caution – There is no Undo for Change All.

7. Click Close when you are done.

▼ To Find and Delete Text

1. Choose Find/Change from the Edit menu or press Control+F.
2. Type the text you want to delete in the Find field.
3. Leave the Change To field blank.
4. Press Return or click Find to locate the next occurrence.
5. Click Change to delete a single occurrence.
6. To find and change additional occurrences, click Find and then Change.
Or, click Change All to replace all occurrences.
7. Click Close when you are done.

Formatting and Printing Documents

Once your editing is complete, format your document by choosing margins and text alignment.

▼ To Format a Document

1. Choose Settings from the Format menu.

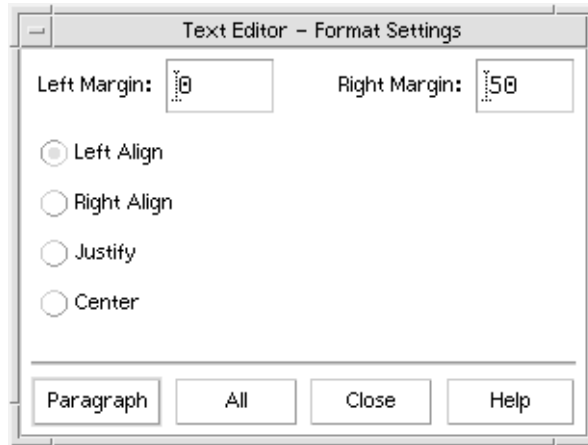


FIGURE 12-13 Format Settings dialog box

2. Enter margins.

The default left margin is 0 and the right margin is dynamically set to the width of the Text Editor window. Margins are specified as a number of character columns.

3. Select left, right, justify (block style), or center alignment.

4. Determine the scope of the formatting:

- To format a single paragraph, place the cursor in the paragraph, then click Paragraph.
- To format the entire document, click All.

5. After closing the dialog box, choose Paragraph or All from the Format menu to apply the settings.

▼ To Print an Open Document

1. Open the document in Text Editor.

2. Choose Print from the File menu or press Control+P.

The Print dialog box displays the name of your system's printer and enables you to set printing options. By default, your document is printed on your system printer. If

desired, you can direct your job to a different printer.

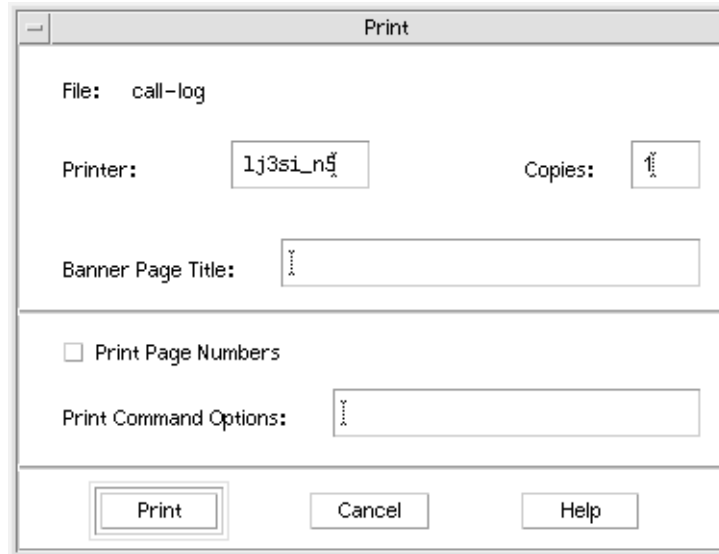


FIGURE 12-14 Print dialog box

3. Optional. Set any of these printing options:

- Type the number of copies to print.
- Type text to appear on the printer banner page.
- Click Print Page Numbers if you want to number the pages.
- Type command-line printer options.

4. Click Print.

The Print dialog box closes when you print your document. To close the dialog box without printing your file, click Cancel.

▼ To Print a Closed Document

1. Display the document's file icon in File Manager.

2. Drag the file icon to the Printer control in the Front Panel.

The Print dialog box is opened.

3. Optional. Set printing options.

4. Click Print.

Recovering a File

If Text Editor is interrupted due to a system error, it attempts to save your changes in a recovery file in your current folder. The recovery file is named *#filename#*, where *filename* is the name of the document. If you had never named your document, the recovery file name is *#UNTITLED#*.

▼ To Recover a File

1. **Start Text Editor.**
2. **Open the recovery file.**
3. **Save the document using your original file name or provide a new name for a previously unsaved document.**

Text Editor and Other Applications

Other applications can use Text Editor as a tool to edit documents or other types of information. Under certain conditions, an application may choose to restrict your editing choices. In the example below, the File menu has been modified. The Save As command has been replaced with a Copy To File command and the New and Open commands are not available.

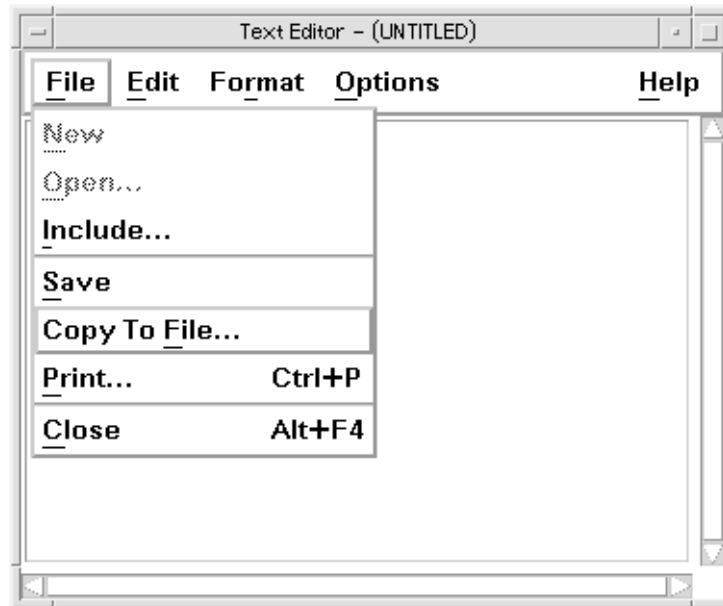


FIGURE 12-15 Text Editor with modified File menu

Using Text Note

When you click the Text Note control on the Front Panel, Text Editor opens in note mode; this enables you to type some text and post it on the Workspace for fast retrieval. If you exit Text Editor while it is in note mode, the text note is saved in your home folder and displayed as an icon on the Workspace backdrop. You can reopen a text note by double-clicking its icon on the Workspace.

▼ To Type a Text Note

1. **Click the Text Note control on the Front Panel.**
Text Editor is opens in note mode.
2. **Type your note.**

3. Choose Close from the File menu.

The Save dialog box is displayed.

4. Choose Yes to save changes.

The text note is put on the Workspace.

▼ **To Put a Note on the Workspace**

- **Exit Text Editor while you are editing the text note, making sure you choose to save current changes if prompted by the Save dialog box.**

The note icon is displayed in the upper right corner of the workspace.

▼ **To Remove a Note from the Workspace**

- **Double-click the text note icon on the Workspace.**

File Naming

Text notes are saved as files in your home directory using file names derived from the first twenty characters of the note. For example, if our fictional user Fred Jones had a note containing the text `Reminder: Call John Smith about meeting`, it would be saved in the file `/home/fredj/Reminder: Call John .`

Using Calendar

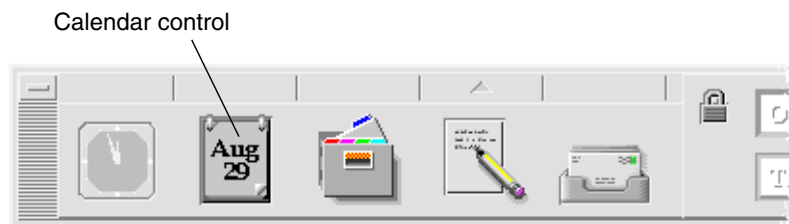
Calendar is a desktop application that enables you to schedule appointments and To Do items, set reminders, make and print appointment and To Do lists, browse other calendars, and schedule group appointments.

- “Calendar Startup” on page 343
- “Calendar Main Window” on page 345
- “Calendar Views” on page 347
- “Appointments” on page 351
- “To Do Items” on page 355
- “Printing Calendars, Appointment, or To Do Lists” on page 358
- “Browsing Calendars on a Network” on page 360
- “Scheduling Appointments on Other Calendars” on page 361
- “Customizing Calendar” on page 366
- “Other Calendar Tools” on page 373
- “Using Federated Naming with Calendar” on page 380

Calendar Startup

You can start Calendar in one of two ways:

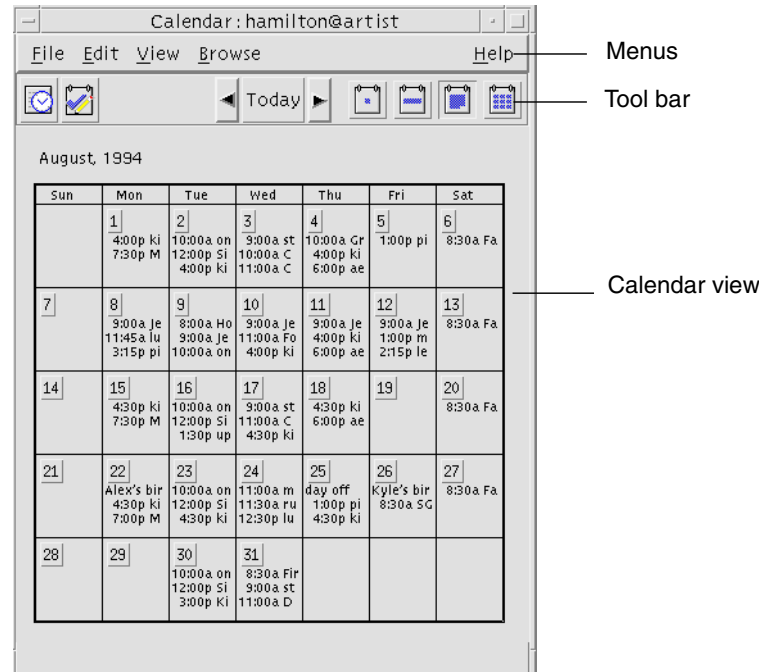
- **Click the Calendar control in the Front Panel.**



- Type `dtcm` to start Calendar from the command line.

Calendar Main Window

The menus and tool bar controls are at the top of the main window. The selected Calendar view is displayed in the lower part of the main window.



Calendar Tool Bar

Calendar's tool bar provides controls for quick navigation through calendars. The tool bar controls and their functions are described in Table 13-1.

TABLE 13-1 Calendar Tool Bar Icons










Control	Function
	<i>Appointment Editor icon</i> opens the Appointment Editor so you can insert, delete, or edit Calendar appointments.
	<i>To Do Editor icon</i> opens the To Do Editor so you can create, modify, update, or set reminders for things you have to do.
	<i>Previous View arrow</i> changes the Calendar view to display the view before the current view. For example, if you are viewing August in Month view, clicking the Previous View arrow changes the Calendar display to July.
	<i>Today</i> changes the Calendar view to display the current day in the format you are viewing. For example, if you are viewing by month, clicking Today displays the current month.
	<i>Next View arrow</i> changes the Calendar view to display the view after the current view. For example, if you are viewing August in Month view, clicking the Next View arrow changes the Calendar display to September.
	<i>Day View icon</i> displays the calendar you are viewing with one day's appointments in the window plus a three-month mini-calendar.
	<i>Week View icon</i> displays the calendar you are viewing with a week's appointments in the window plus a week grid showing scheduled times.

TABLE 13-1 Calendar Tool Bar Icons (Continued)

Control	Function
	<i>Month View icon</i> displays the calendar you are viewing with a month's appointments in the window.
	<i>Year View icon</i> displays the calendar you are viewing with a year in the window. Appointments are not displayed.

Calendar Views

The Calendar view is the day, week, month, or year displayed in the main Calendar window.

Day View

Day view displays the calendar you are viewing with one day's appointments in the window. Day view also provides a three-month mini-calendar that displays the month you are viewing and the previous and next months.

Clicking on a day in the three-month mini-calendar changes the Day view to display the selected day. Clicking on a month name in the mini-calendar changes the Calendar display from Day view to Month view.

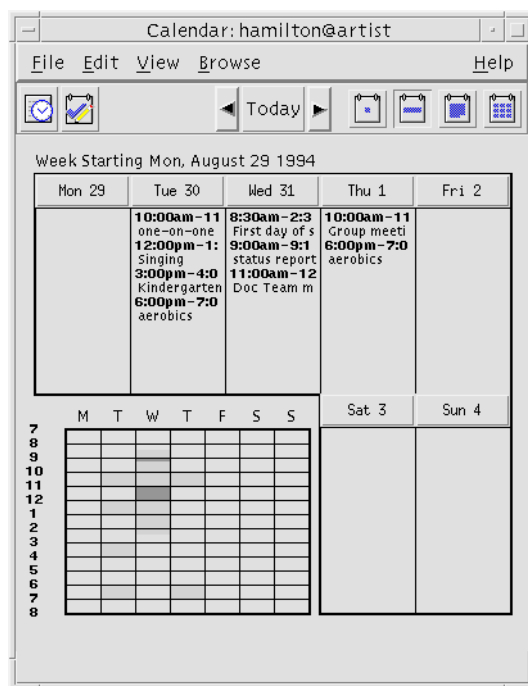


Week View

Week view displays the calendar you are viewing with one week's appointments in the window. The selected day is highlighted.

Week view also provides a week grid showing at a glance the times that are scheduled (shaded) and the times that are available (unshaded).

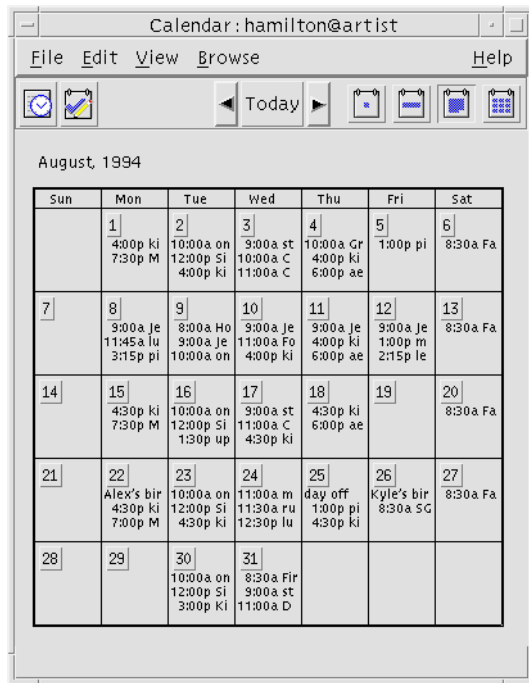
Clicking on a day name in the Week view changes the Calendar display from Week view to Day view.



Month View

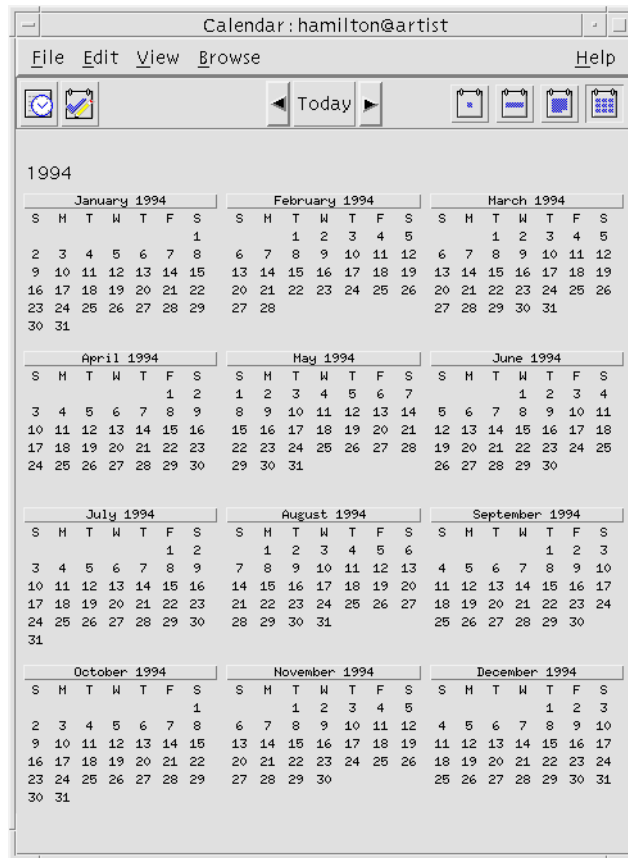
Month view displays the calendar you are viewing with one month's appointments in the window. The selected day is highlighted.

Clicking on a day in Month view changes the Calendar display to Day view.



Year View

Year view displays a year calendar. Appointments are not displayed. Clicking on a month name in Year view changes the Calendar display to Month view.



Appointments

Use the Appointment Editor to insert, change, or delete appointments on your calendar.

▼ To Schedule a Basic Appointment

1. In Day, Week, or Month view, display the day for which you want to schedule an appointment.

2. **Double-click that day to open the Appointment Editor.**
3. **Choose the Start and End times.**
The default appointment duration is one hour. If your appointment is longer or shorter, edit the time in the End field.
4. **Type a description of the appointment in the What field.**
For example, you may want to enter the appointment's location and purpose. If you want to add optional settings to an appointment, see "To Set Appointment Options" on page 352.
5. **Click Insert.**
The appointment is added to your calendar.
6. **Click Cancel to close the Appointment Editor.**

▼ To Set Appointment Options

1. **Set up a basic appointment, as described above.**
2. **Click the More button in the Appointment Editor to display additional appointment options.**
3. **Select the desired appointment in the Appointment Editor list.**
4. **Select Beep, Flash, Popup, or Mail (or more than one, in combination) for the types of reminders you want.**
5. **Edit the reminder intervals and the Mail To entry if necessary.**
6. *Optional.* **To repeat the appointment more than once, choose an option from the Occurs menu, and then choose an option from the For menu.**
If you don't see the interval you want, choose Repeat Every from the Occurs menu, and type the desired interval in days, weeks, or months.
7. **Choose an option from the Privacy menu.**

Others See Time and Text	Displays full appointment to others
Others See Time Only	Displays only time commitment, not description
Others See Nothing	Displays nothing to others

8. **Click Change.**

If you set the appointment options at the same time as setting up a basic appointment, click Insert at this step.

Note – If you are inserting multiple appointments one after another, be sure to click Clear between insertions. This will reset options that you may not want to carry over from one appointment to the next.

9. **Click Cancel to close the Appointment Editor.**

▼ To Change an Appointment

1. **Click the Appointment Editor icon.**
2. **Select the appointment in the appointment list that you want to change.**
3. **Edit the appointment date, start or end time, description, reminders, frequency, or privacy.**
4. **Click Change.**
5. **Click Cancel to close the Appointment Editor.**

▼ To Delete an Appointment

1. **Click on the Appointment Editor icon to open it.**
2. **Select the appointment in the appointment list.**
3. **Click Delete.**
4. **Click Cancel to close the editor.**

▼ To Find an Appointment

1. **Choose Find from the View menu.**
The Find dialog box is displayed
2. **Type some text in the in the Find field that can become a keyword for the search; for example, conference.**
The Find field is not case-sensitive.

By default, Calendar searches the past and future six months in your calendar. If you want to change the search range, click Search all to search your entire calendar (can take a long time) or edit the dates in the Search from fields.

3. Click Find.

Appointments with matching text are displayed in the Find window.

4. Select the desired appointment in the list.

5. Click Show Appointment to display the entire appointment.

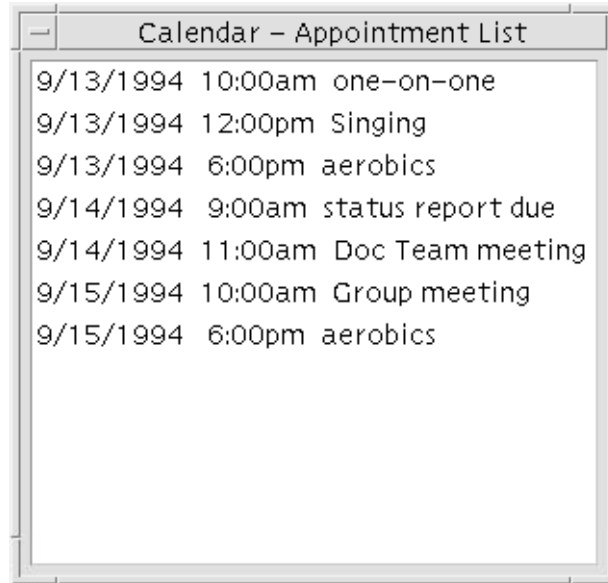
6. Click Close to close the Find dialog box.

▼ To View an Appointment List

This section describes how to create an appointment list and display it on your system. If you want to print your Appointment list, see “Printing Calendars, Appointment, or To Do Lists” on page 358.

1. Display the view of the calendar that you want the appointment list to show.

2. Choose Appointment List from the View menu.



Appointments are listed chronologically and show date, time, and description. For example, if you are viewing by week, the Appointment List displays the week's appointments.

To Do Items

Use the To Do Editor to insert, update, or delete To Do items in your Calendar.

▼ To Insert a To Do Item

1. Click the To Do Editor icon.



2. Type or edit the due date for the item in the Due Date field.
3. Type a description of the To Do item in the What field.
4. Click Insert.
5. Click Cancel to close the To Do Editor.

▼ To Change a To Do Item

1. In Day, Week, or Month view, display the day for which you want to change a To Do item.
2. Select that day.
3. Click the To Do Editor icon.
4. Select the To Do item in the To Do list.
5. Edit the due date or the description of the To Do item.
6. Click Completed to change the status of the To Do item, if applicable.
7. Click Change.
8. Click Cancel to close the To Do Editor.

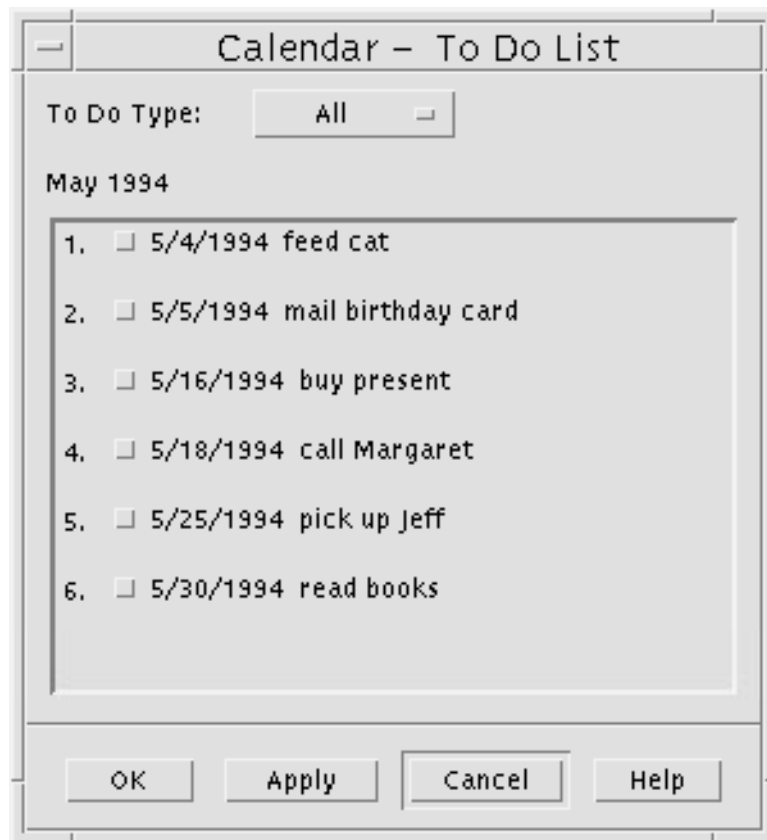
▼ To Delete a To Do Item

1. Click the To Do Editor icon to open it.
2. Select the To Do item in the To Do list.
3. Click Delete.
4. Click Cancel to close the editor.

▼ To View a To Do List

This section describes how to create a list of To Do items and display it on your system. If you want to print your To Do list, see “Printing Calendars, Appointment, or To Do Lists” on page 358.

1. Display the view of the calendar that you want the To Do list to show.
2. Choose To Do List from the View menu.



To Do items are listed chronologically and show a check box beside each item, due date, and description. For example, if you are viewing by day, the To Do List displays the day's To Do items.

Marking To Do Items Completed

Calendar keeps track of the state of To Do items: whether they're *completed* or *pending*. In the To Do List dialog box, you can choose to display all To Do items, only completed items, or only pending items.

If you make a To Do list and then want to check off an item on the list, use one of the two methods described below.

▼ To Mark an Item Directly in the To Do List

1. **Choose To Do List from the View menu.**
2. **Click the check box beside the To Do item you've completed.**
3. **Click Apply or OK.**

This changes the item's state to completed.

To return the item's state to pending, click the check box again and apply your changes.

▼ To Use the To Do Editor To Mark an Item

1. **Click the To Do Editor icon.**
2. **Select the To Do item in the To Do list.**
3. **Click Completed to mark the item completed.**
To return the item's state to pending, click Completed again.
4. **Click Change.**
This changes the item's state to completed.
5. **Click Cancel to close the To Do Editor.**

Printing Calendars, Appointment, or To Do Lists

You can print any of the four Calendar views, plus appointment and To Do lists. Calendar uses the default printer settings when you choose Print Current View from

the File menu. To customize printer settings, see “To Change the Printer Settings for Future Print Jobs” on page 372.

▼ To Print Current Day, Week, Month, or Year Views

1. Display the Calendar view you want to print.
2. Choose Print Current View from the File menu.

▼ To Print Your Appointment or To Do List

1. Display the Calendar view containing the day for which you want to print an appointment or To Do list.
2. Select that day.
3. Choose Print from the File menu.
The Print dialog box is displayed.
4. Choose Appointment List or To Do List from the Report Type menu.
5. Specify a printer in the Printer Name field.
6. Click Print.

▼ To Change the Print Options for a Single Print Job

1. Choose Print from the File menu.
The Print dialog box is displayed.
2. Double-click in the Printer Name field to select the contents and type a printer name.
3. Choose the view or list you want to print from the Report Type menu.
4. Click the arrows next to the Copies field to adjust the number of copies to be printed or type the number.
5. *Optional.* Change the range of time to print in the From or To fields.
6. *Optional.* Add printer options in the Print Command Options field.
For example, to save paper, you may want to specify `-o nobanner` to suppress header pages.

7. **To print Calendar data to a file instead of to a printer, select Print to file.**
Click again on this setting to deselect it.
8. **Edit the file name, if desired.**
9. **Click Print.**
10. **Click Close to close the Print dialog box.**

Browsing Calendars on a Network

If you know the names of other calendars on a network, you can use Calendar to browse those calendars. A practical example is to set up a meeting or appointment for several people. You can use Calendar to check for free times.

To browse other calendars and possibly to insert an appointment, you need:

- The calendar names in the form *calendar-name@hostname*, such as `kent@dailyplanet`
- To add calendars to the Browse list
- To determine if you have access to other calendars

Note – Calendar doesn't yet provide a way for you to look up other calendar names. Call or talk to people and get them to tell you their *calendar-name@hostname* information.

By default, Calendar allows the "world" (all users) to have browse permission. Only the calendar owner has insert and delete permission. To change access and permissions, see "Changing Access and Permissions" on page 368.

▼ To Add or Delete Calendars in the Browse List

To add:

1. **Choose Menu Editor from the Browse menu.**
2. **Type *calendar-name@hostname* in the User Name field.**
3. **Click Add Name.**

4. Click OK to add the calendar to the Browse list and close the dialog box.

To delete:

1. Select a calendar name in the Browse list.
2. Click Remove Name.
3. To delete the calendar from the Browse list and close the dialog box, click OK.
To delete the calendar and leave the dialog box displayed, click Apply.
4. To erase your changes and leave the dialog box displayed, click Reset.
To erase your changes and close the dialog box, click Cancel.

▼ To Determine Whether You Have Access to Other Calendars

1. Choose Compare Calendars from the Browse menu.
2. Select one or more entries in the Browse list that you want to check for access.
3. Click Schedule to open the Group Appointment Editor.
4. Look at the Calendar Access list.

The Calendar Access list displays the calendar names that you selected in the Compare Calendars dialog box.

A “Y” in the Access column means you have insert access. An “N” means you don’t.

Note – To add appointments or To Do items to other calendars, ask the owners to grant you *insert access*. To find out how to grant or deny access to your calendar by others, see “Changing Access and Permissions” on page 368.

Scheduling Appointments on Other Calendars

Once you’ve browsed calendars for free times and have permission to insert appointments on other calendars, you can schedule a group appointment.

Use the Group Appointment Editor to insert, change, or delete a group appointment on your and other calendars. If you don't have insert access to other calendars, you can use the Group Appointment Editor to mail notices of group appointments to other users.

▼ To Schedule a Group Appointment

1. **Choose Compare Calendars from the Browse menu.**
2. **Click one or more entries in the Browse list.**
Notice that the grid overlays calendars one on top of another and displays busy times shaded darker and available times unshaded.
3. **Click in an unshaded time block in the grid.**
4. **Click Schedule.**
The Group Appointment Editor is displayed with the fields for date, time, and mail automatically filled out.
5. **Type (or edit) the group appointment start time in the Start field.**
6. **Type (or edit) the group appointment end time in the End field.**
7. **In the What field, type the appointment description, such as its location or purpose.**
8. **Click More.**
9. **Choose the repeat interval and duration for the group appointment.**
10. **Click Insert to add the group appointment to the selected calendars.**
If you don't have insert access on all the calendars, you can send mail to notify others about the group appointment. See "To Mail Reminders to a Group Using Calendar" on page 362.
11. **Click Cancel to close the Group Appointment Editor.**

▼ To Mail Reminders to a Group Using Calendar

Once you've set up a group appointment (date, start and end times, description, repeat interval), you may want to mail the group a reminder. With the group appointment displayed in the Group Appointment Editor:

1. **Click More to display additional options.**

2. Click Mail.

Calendar displays a Compose window containing an appointment attachment. The appointment attachment is pre-addressed to the selected users and automatically filled out with the date and appointment start and end times.

3. Click Deliver in the Compose window.

Calendar mails the reminder to the selected users.

Recipients of a mail message with a calendar-formatted reminder can drag the message from the mailer header window and drop it on their calendars to automatically schedule the pre-formatted appointment.

▼ To Create an Appointment Message Using a Mail Program

1. Start Mailer (or your regular mail program).

2. Open a compose window or create a blank message.

3. Add a section to the message that includes exactly the following format. Replace <tab> with a tab character, <blank line> with a blank line, and replace the italicized format information with actual data.

```
<tab>** Calendar Appointment **  
  
<blank line>  
  
<tab>Date:<tab>mm/dd/yyyy  
  
<tab>Start:<tab>hh:mm am  
  
<tab>End:<tab>hh:mm pm  
  
<tab>What:<tab>description line 1  
  
<tab><tab>description line 2
```

An example might be:

```
  ** Calendar Appointment **  
  
  Date:    11/22/94  
  
  Start:   10:00 am  
  
  End:     11:00 am  
  
  What:    Staff meeting  
  
          Monet conference room
```

4. Insert any additional text into the mail message.

5. **Address the message to the recipient and include the subject of the message.**

6. **Send the message.**

For information about using Mailer, see Chapter 10.

▼ To Drag an Appointment From Mailer to Calendar

From Mailer, and possibly other applications, you can drag an appointment icon to Calendar to schedule it.

1. **In Mailer's Message Header List, click the header containing the formatted appointment.**

2. **Drag the header to Calendar and drop it.**

The pointer changes to an icon representing the moving file.

Calendar schedules your appointment and prints a message in the message area stating that the appointment was scheduled.

3. **Display the Calendar view containing the day on which you scheduled the appointment.**

4. **Double-click that day to open the Appointment Editor.**

Verify that the appointment is scheduled for the correct day and time.

For more information on using Mailer, see Chapter 10.

▼ To Drag an Appointment From File Manager to Calendar

From File Manager, and possibly other applications, you can drag an appointment icon to Calendar to schedule it.

If you have a file containing a formatted appointment:

1. **In an open File Manager window, navigate to a folder containing a file with a formatted appointment.**

2. **With both the formatted appointment and Calendar visible on your screen, drag the formatted appointment file to Calendar and drop it.**

Calendar schedules your appointment.

3. **Double-click that day to open the Appointment Editor.**

Verify that the appointment is scheduled for the correct day and time.

For more information about File Manager, see Chapter 5.

▼ To Drag an Appointment From Calendar to Mailer

From Calendar, you can drag an appointment icon to Mailer to mail it to someone.

- 1. Use the Appointment Editor to create an appointment but don't click Insert.**
- 2. Start Mailer and choose New Message from the Compose menu.**

Make sure both the Appointment Editor and Mailer's Compose window are visible on your screen.
- 3. Drag the Drag Appt icon from the Appointment Editor and drop it on Mailer's attachment list.**

The pointer changes to an appointment icon representing the moving file.
Mailer displays your appointment as a text file in the attachment list.
- 4. Compose and address your mail message and send it.**

For more information on using Mailer, see Chapter 10.

▼ To Drag an Appointment from Calendar to File Manager

From Calendar, you can drag an appointment icon to File Manager to save it in your file system.

- 1. Use the Appointment Editor to create an appointment but don't click Insert.**
- 2. In an open File Manager window, navigate to a folder where you want to save the appointment in a file.**
- 3. With both the File Manager window and Calendar Appointment Editor visible on your screen, drag the Drag Appt icon from the Appointment Editor and drop it on the File Manager window.**

The appointment is saved in a text file in the folder where you dropped it.
For more information about File Manager, see Chapter 5.

Customizing Calendar

Calendar provides Options dialog boxes to change the settings for all future appointments. To change the settings for *individual* appointments, see “To Set Appointment Options” on page 352.

▼ To Change Appointment Editor Defaults

- 1. Choose Options from the File menu.**
The Calendar Options dialog box is displayed.
- 2. Choose Editor Defaults from the Category menu.**
- 3. *Optional.* Change the default appointment duration in the Duration field.**
- 4. *Optional.* Change the default appointment start time by choosing from the Start menu.**
- 5. Select Beep, Flash, Popup, or Mail reminders.**

Beep	Causes your system to emit an electronic beep
Flash	Causes your calendar to flash
Popup	Displays a reminder dialog box
Mail	Sends electronic mail

- 6. Edit the default time intervals if necessary.**
The time interval fields are active for each reminder you select. They specify the time *before* an appointment that the reminder is activated.
- 7. Choose a privacy option from the Privacy menu.**

Others See Time Only	The default – displays only the time of an appointment so others can see you’re busy
Others See Time and Text	Displays the time and text of an appointment in your calendar
Show Nothing	Displays nothing about an appointment in your calendar for maximum privacy

- 8. Click Apply to apply the new defaults to all future appointments.**

9. Click **Cancel** to close the **Calendar Options** dialog box.

Changing the Display Settings

You can customize many parts of the Calendar display:

- Determine the initial calendar that displays
- Set time boundaries
- Set the default view

▼ To Set the Initial Calendar Displayed

You can set Calendar to display a calendar other than your own when you first start it.

1. **Choose Options from the File menu**
The **Calendar Options** dialog box is displayed.
2. **Choose Display Settings from the Category menu.**
3. **Double-click in the Initial Calendar View field and type *calendar-name@hostname* for the calendar you want to view each time you start Calendar.**
4. **Click Apply.**
5. **Click Cancel to close the Options dialog box.**

▼ To Set the Time Boundaries on Day and Week Views

Time boundaries are the earliest and latest hours you want displayed in your calendar.

1. **Choose Options from the File menu.**
2. **Choose Display Settings from the Category menu.**
3. **Move the Begin and End sliders to adjust the earliest and latest hours you want displayed on your calendar.**
4. **Select 12 Hour or 24 Hour time display.**
5. **Click Apply.**
6. **Click Cancel to close the Options dialog box.**

▼ To Set the Default Calendar View

Calendar displays the default Calendar view each time you start it. The initial default view is by month. You may want to set the default to the view you use most often, such as Week view.

1. **Choose Options from the File menu.**
2. **Choose Display Settings from the Category menu.**
3. **Select Day, Week, Month, or Year from the Default View options.**
4. **Click Apply.**
5. **Click Cancel to close the Options dialog box.**

Changing Access and Permissions

You can set access to your calendar, controlling what others can do in your calendar. To determine whether you have access to other calendars, see “To Determine Whether You Have Access to Other Calendars” on page 361.

▼ To Grant Access to Your Calendar

1. **Choose Options from the File menu.**
2. **Choose Access List and Permissions from the Category menu.**

The Access List and Permissions dialog box is displayed.

Note – Depending on the version of your calendar, your Access List and Permissions dialog box may look different than the one pictured in Figure 13–1. If so, go to Figure 13–2 and follow the instructions after that figure.

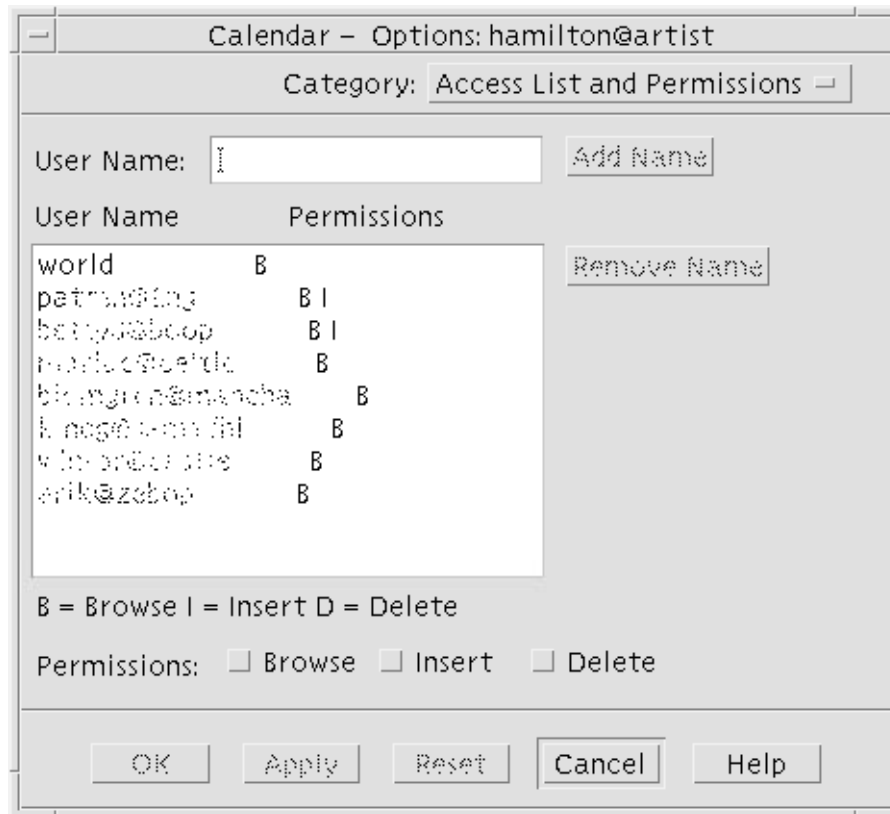


FIGURE 13-1 Access List and Permissions dialog box – Version 1

3. **In the User Name field, type *username@hostname* for the user to whom you want to grant access. To grant access to everyone, type *world* in the User Name field.**
The default permission is for browse access only.
4. **Select Browse, Insert, and/or Delete permissions.**

Browse	The default – enables others to see information in your calendar
Insert	Others can add appointments or To Do items to your calendar
Delete	Others can delete appointments or To Do items from your calendar

5. Click **Add Name** to add *username* or *world* to the **Access list** with the permissions you've chosen.

Note – Individual user access overrides world access; if everyone (world) has browse access only and user X has browse and insert access, user X can browse and insert entries in the current calendar.

6. To grant the selected access and close the dialog box, click **OK**.

To grant the selected access and leave the dialog box displayed, click **Apply**.

To erase your changes and leave the dialog box displayed, click **Reset**.

To erase your changes and close the dialog box, click **Cancel**.

Note – If your Access List and Permissions dialog box resembles Figure 13–2 below, follow the instructions after the figure.

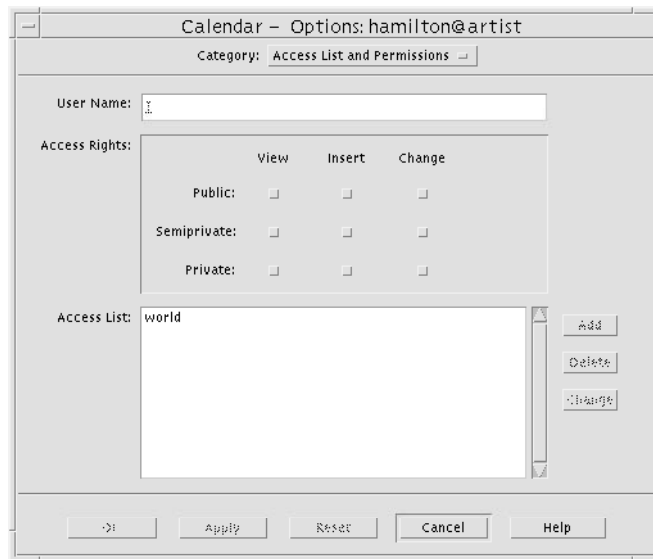


FIGURE 13–2 Access List and Permissions dialog box – Version 2

7. In the **User Name** field, type *username@hostname* for the user to whom you want to grant access. To grant access to everyone, type *world* in the **User Name** field.

The default permission is for view access to public appointments only.

8. Select View, Insert, or Change permissions and Public, Semiprivate, or Private access rights.

Permissions control whether others can perform specific operations on your calendar. You can choose more than one permission.

Access rights control the specific types of appointments others can perform operations on.'

Public	Enables another user to display the time and text of your appointments marked Others See Time and Text
Semiprivate	Enables another user to display the time and text of your appointments marked Others See Time Only
Private	Enables another user to display the time and text of your appointments marked Others See Nothing

9. Click Add to add *username* or world to the Access list with the permissions and access rights you've chosen.

Note – Individual user access overrides world access; if everyone (world) has browse access only, and user X has browse and insert access, user X can browse and insert entries in the current calendar.

10. To grant the selected access and permissions and close the dialog box, click OK.

To grant the selected access and permissions and leave the dialog box displayed, click Apply.

To erase your changes and leave the dialog box displayed, click Reset.

To erase your changes and close the dialog box, click Cancel.

▼ To Deny Access to Your Calendar

1. Choose Options from the File menu.

2. Choose Access List and Permissions from the Category menu.

3. Select the user to whom you want to deny access in the Access list.

4. Click Remove Name (Calendar data version 3, Figure 13–1) or Delete (Calendar data version 4, Figure 13–2) to remove the user from the Access list.

5. To remove access for the specified user and close the dialog box, click OK.

To remove access for the specified users and leave the dialog box displayed, click Apply.

To erase your changes and leave the dialog box displayed, click Reset.

To erase your changes and close the dialog box, click Cancel.

▼ To Change the Printer Settings for Future Print Jobs

To print a Calendar view or appointment or To Do list using the default printer settings, see “To Print Current Day, Week, Month, or Year Views” on page 359. To change the printer settings for future print jobs:

1. Choose Options from the File menu.

The Options dialog box is displayed.

2. Choose Printer Settings from the Category menu.

The Printer Settings dialog box is displayed.

3. Select Printer or File.

4. Type the name of your default printer.

5. Edit the Options field to specify print command-line options, if any.

For example, to save paper, you may want to specify `-o nobanner` to suppress header pages.

6. Edit the page dimensions or position, if necessary.

7. Edit the number of units, if desired.

For example, if you are printing Week view and you set Units to 2, you will print the current week and the next week.

8. Edit the number of copies if you want more than one.

9. Choose the desired privacy option for the information you want printed.

See Step 7 of “To Change Appointment Editor Defaults” on page 366 for privacy options.

10. To save your changes and close the dialog box, click OK.

To save your changes and leave the dialog box displayed, click Apply.

To erase your changes and leave the dialog box displayed, click Reset.

To erase your changes and close the dialog box, click Cancel.

▼ To Change the Date Format

1. **Choose Options from the File menu.**
2. **Choose Date Format from the Category menu.**
3. **Choose the desired date order option.**
4. **Choose the desired date separator.**
5. **To save your changes and close the dialog box, click OK.**
To save your changes and leave the dialog box displayed, click Apply.
To erase your changes and leave the dialog box displayed, click Reset.
To erase your changes and close the dialog box, click Cancel.

▼ To Change the Default Time Zone

You can set Calendar to view your or another calendar's appointments in a time zone other than your local one.

1. **Choose Time Zone from the View menu.**
2. **Choose the Custom Time setting.**
3. **In the Hours field, edit the number of hours before or after Greenwich Mean Time that you want your calendar set to.**
For example, to synchronize your calendar for Pacific Standard Time, choose GMT+8 hours. For Finland, choose GMT-2 hours. For Japan, choose GMT-9 hours. You may have to adjust by one hour for daylight, or summer, time.
4. **To revert to your own time zone, click the My Time setting in the Time Zone dialog box.**
5. **Click OK to apply changes and close the dialog box.**

Other Calendar Tools

Calendar includes several command-line interface tools:

- `sdtcm_admin` - Use to create and administer calendars
- `sdtcm_convert` - Use to convert data format or prune a calendar
- `dtdcm_editor` - Use to edit appointments

- `dtdcm_lookup` - Use to view calendar appointments
- `dtdcm_insert` - Use to insert calendar appointments
- `dtdcm_delete` - Use to delete calendar appointments

`sdtcm_admin`

Use `sdtcm_admin` from the command line to create and administer calendars. This tool can be used to add or remove a calendar on a local system or remotely on a host on the network. Use `sdtcm_admin` to list calendars that exist on a host, or to grant and revoke access to users to a specific calendar. Options to `sdtcm_admin` include:

<code>-l</code>	Lists calendars on your system in a single column
<code>-h</code>	Lists calendars on other hosts
<code>-a</code>	Adds a new calendar to a system (by default, <i>login@localhost</i>)
<code>-c</code>	Add a named calendar to a system
<code>-d</code>	Delete a calendar from a system (by default, removes)

See the `sdtcm_admin(1)` man page for more details and examples of the other options.

Examples

To list calendars on your system:

```
% sdtcm_admin -l
kasso
vacation
test
foobar
sleepy
```

To list calendars on another host:

```
% sdtcm_admin -l -h totoro
ytso
root
test
```

sportv4

To add a calendar with your login name to the host you are logged in to:

```
% sdtcm_admin -a
```

By default the `-a` option will create the calendar `<login>@<localhost>`. Other calendars can be created on the host by using the `-c` option.

To create the calendar `buildschedule` on the local host, `aha`:

```
% sdtcm_admin -a -c buildschedule@aha
```

To create the calendar `sleepy` on the remote host `totoro`:

```
% sdtcm_admin -a -c sleepy@totoro
```

To remove the calendar with your login name from the host you are logged in to:

```
% sdtcm_admin -d
```

By default the `-d` option will remove the calendar `<login>@<localhost>`. For example, if `kasso` is logged into `aha` and runs `sdtcm_admin -d` with no other options, the following response will be displayed:

```
Delete the calendar kasso@aha [y/n]?
```

Respond `y` or `n`.

To remove the calendar `old` on the host `aha`:

```
% sdtcm_admin -d -c old@aha
```

You can only remove calendars for which you have Owner privileges. If you attempt to remove a calendar that you do not own, you will see an error message:

```
Delete the calendar old@aha [y/n]? y
```

```
sdtcm_admin: Could not delete calendar because: Permission denied.
```

sdtcm_convert

Uses `sdtcm_convert` to convert Calendar data format, prune a calendar, or check data integrity. Use it to convert version 3 (OpenWindows) calendar data format to version 4 (the extensible calendar data format), and vice versa.

Note – `sdtcm_convert` is automatically invoked when performing an OS upgrade to 2.6.

`sdtcm_convert` must be run by superuser or the owner of the calendar. Superuser can run `sdtcm_convert` on any calendar; a regular user can only run `sdtcm_convert` on his or her own calendar. Note that `sdtcm_convert` can be used only on calendars located on the local host.

The version 3 data format is fixed and limited. In order to take advantage of the new features supported by the calendar API, version 3 calendars should be converted to the version 4 data format.

Note – OpenWindows Calendar Manager does not support the version 4 data format. If you need to switch back to OpenWindows Calendar Manager and you have a version 4 calendar, you should convert your calendar to the version 3 data format before switching the server. Be aware, however, that data not supported in the version 3 data format (for example, all calendar attributes except the access list, entry attributes such as date of creation or date of last update, and so on) will be lost.

Options for `sdtcm_convert` are listed and described below.

- Use the `-v` option to specify the data version of output.
Valid values are 3 (OpenWindows calendar data format) and 4 (the extensible data format). If this option is not specified, the output data version is the same as that of the specified calendar and no data conversion is done.

Note – The data version of a calendar is displayed in the About Calendar dialog box of Calendar, accessible from the Help menu.

- Use the `-s` option to specify the date to prune the calendar.
Appointments starting before the specified date are pruned. One-time appointments with a start date on or after the specified date are included. Repeating appointments are truncated such that the first appointment in the sequence will happen on or after the specified date and those sequences that end before the specified date are removed. If this option is not specified, no appointments are pruned.
- Use the `-c` option to specify the value for the character set attribute.
The value should be a valid Sun-specific locale name (C or de, for example). The CDE platform-independent equivalent of the locale name is stored in the calendar. If this option is not specified, the CDE platform-independent name of the current locale associated with the process is used. This option is used when converting version 3 data to version 4 data and is ignored otherwise.

- Use the `-d` option to specify the directory in which to save the original calendar file which is saved in a file called `calorig.calendar`.

If this option is not specified, the backup file is placed in the `/var/spool/calendar` directory.

See the `sdtcm_convert(1)` man page for more details and examples of usage.

Examples

To convert the calendar `user1` to version 4 data format and also prune the calendar:

```
% sdtcm_convert -v 4 -s 1/1/94 user1
```

To check data integrity of the calendar `user1`:

```
% sdtcm_convert user1
```

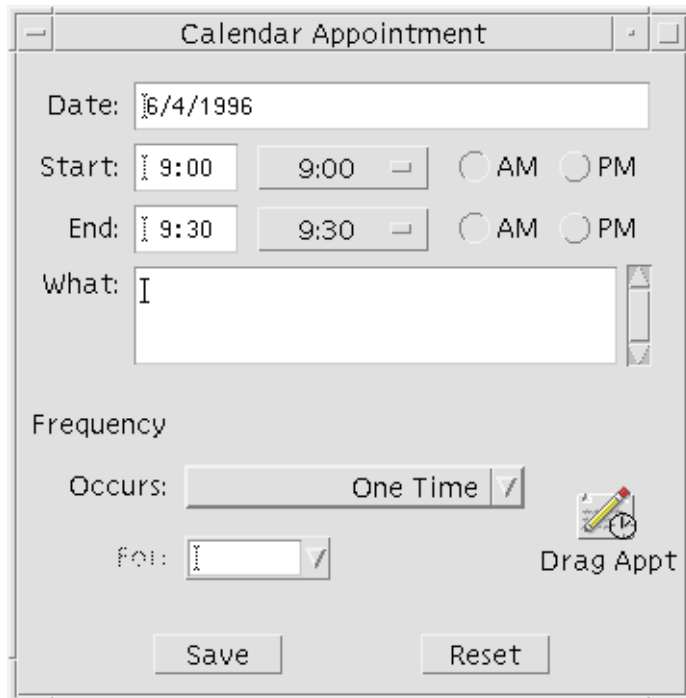
If no option is specified, `sdtcm_convert` will check the calendar file for data integrity.

`dtdcm_editor`

Use the standalone Appointment Editor to create a Calendar-formatted appointment and save it in a file.

1. **Type `dtdcm_editor filename` at the command line.**

The standalone Appointment Editor is displayed.



2. **Type a date in the Date field.**
Remember to use the date format set in the Date Format dialog box.
3. **Choose the Start and End times for the appointment.**
4. **Type a description of the appointment in the What field.**
5. **Choose a frequency for the appointment from the Occurs menu.**
6. **Click Save to write the appointment contents to the file you specified on the command line.**

dtdcm_lookup

Use `dtdcm_lookup` to view appointments on your calendar.

1. **Type `dtdcm_lookup` at the command line to view appointments for the default view.**

For example, if Day view is the default, to view appointments for the current day:

```
system% dtdcm_lookup
```

Appointments for Monday October 31, 1994:

- 1) Halloween
- 2) 2:30pm-3:30pm Staff meeting
- 3) 6:00pm Trick-or-treating
- 4) 7:15pm-10:00pm Choir practice

2. To choose the calendar, date, or range of time for which to look up appointments, use the following syntax:

```
dtcm_lookup [-c calendar] [-d date] [-v view]
```

For example:

```
system% dtcm_lookup -c hamilton@artist -d 10/28/1994 -v day
```

Appointments for Friday October 28, 1994:

- 1) 9:00am-10:00am Project meeting
- 2) 1:30pm-2:00pm Testing

dtcm_insert

Use `dtcm_insert` from the command line to insert appointments on your calendar.

For example:

```
system% dtcm_insert -d 11/1/1994 -s 11:30am -e 12:30pm -w workout
```

Appointments for Tuesday November 1, 1994:

- 1) 10:00am-11:00am one-on-one
- 2) 11:30am-12:30pm workout
- 3) 12:30pm-1:00pm eat lunch

Calendar automatically prints the appointments scheduled so you can see that the new appointment was inserted.

dtcm_delete

Use `dtcm_delete` from the command line to delete appointments from your calendar. For example:

```
system% dtcm_delete -d 11/1/1994
```

Appointments for Tuesday November 1, 1994:

- 1) 10:00am-11:00am one-on-one
- 2) 11:30am-12:30pm workout
- 3) 12:30:pm-1:00pm eat lunch

Item to delete (number)? 3

Appointments for Tuesday November 1, 1994:

- 1) 10:00am-11:00am one-on-one
- 2) 11:30am-12:30pm workout

When you don't want to delete any more items, press Return.

Using Federated Naming with Calendar

If your site uses Federated Naming Service (FNS), calendar naming can be *location independent*: you can name a calendar without including its host machine. For example, to name the calendar of user `jsmith` without FNS, you need to enter `jsmith@hostmachine`; with FNS you can enter `jsmith` alone.

The default behavior of Calendar is unchanged; you can name calendars using the form `username@hostname`. To use the new way of naming calendars, you need to set the resource `useFNS`. You can turn this resource on either manually by editing your `.desksetdefaults` file or through the Display Settings dialog box. (Choose Options from the File menu and Display Settings from the Category options menu in the Options dialog box. Click the Calendar Names: Use Federated Naming checkbox and then click OK.)

Calendar Naming

When the `useFNS` feature is on, you can use both the old and new ways of naming calendars. When you choose Show Other Calendar from the Browse menu, you can enter simply `rosanna` to browse user `rosanna`'s calendar. Or you could enter `rosanna@alto` to name the calendar directly. The new names can be entered wherever a calendar name is expected (Show Other Calendar, Initial Calendar View in Display Settings Options, Browse list editor, Browse short list, and so on).

For location-independent naming to work, there must be a name space that holds registered information about where the calendars are.

Calendar Registration

When you run Calendar with `useFNS` set on, Calendar will automatically attempt to register your calendar into the name space. Once it has been registered, someone can use just your username to browse your calendar. If you subsequently move your calendar, change the User Calendar Location in the Display Settings dialog box and the registered calendar address in the name space will automatically be updated the next time you restart Calendar. You can also update the information in the name space outside Calendar using the FNS command, `fnbind`.

In an NIS environment, auto-registration is not supported because NIS does not support dynamic updates of arbitrary data. In addition, `fnbind` only succeeds when run by `root` on the NIS master.

Naming Service Dependencies

In Solaris 2.5 Operating Environment or compatible versions, FNS works with NIS+ only.

Build Dependencies

For CDE developers that build `dtcm`, you need to have the appropriate FNS package installed on the build machine. For a Solaris 2.5 or earlier target, you need to have the Solaris 2.5 `SUNWfns` package. These packages can be picked up from the OSNet gates (`/ws/on297-gate/packages`, for example) or from the packages directory of a specific Solaris release.

Runtime Dependencies

If `dtcm` cannot locate the appropriate `SUNWfns` package at runtime, it will simply not use FNS. Calendar can always run on a system without the `SUNWfns` package.

Using Terminal

A terminal emulator displays a window that enables you to enter operating system commands, use UNIX commands, and copy and paste text.

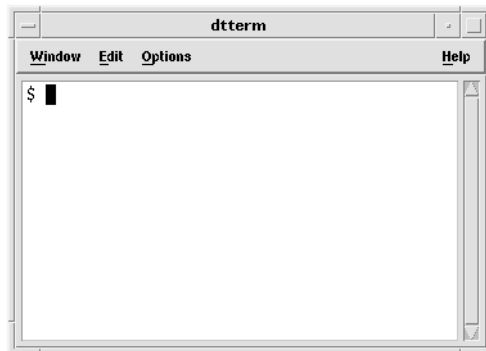
- “Default Desktop Terminal Emulator” on page 383
- “Using a Terminal Window” on page 388
- “Running dtterm on Another System” on page 389
- “Customizing dtterm” on page 391
- “dtterm Global Options” on page 393
- “dtterm Terminal Options” on page 398
- “Terminal Control Characters” on page 402
- “Changing the Default Terminal Emulator” on page 403

Note – Illustrations shown in this chapter were taken from the default CDE screens. Your screens may be different from the illustrations if you or your system administrator have customized them.

Default Desktop Terminal Emulator

The default terminal emulator on the desktop is `dtterm`. The `dtterm` terminal emulator emulates that portion of the VT220 terminal that is consistent with ANSI and ISO standards.

The `dtterm` command-line prompt is a special character that is displayed in the left margin of your terminal emulator. It can be a “%”, “<”, “\$”, or another special character. A small box or bar, called a *cursor*, shows where characters will appear in the window when you type something on the keyboard.



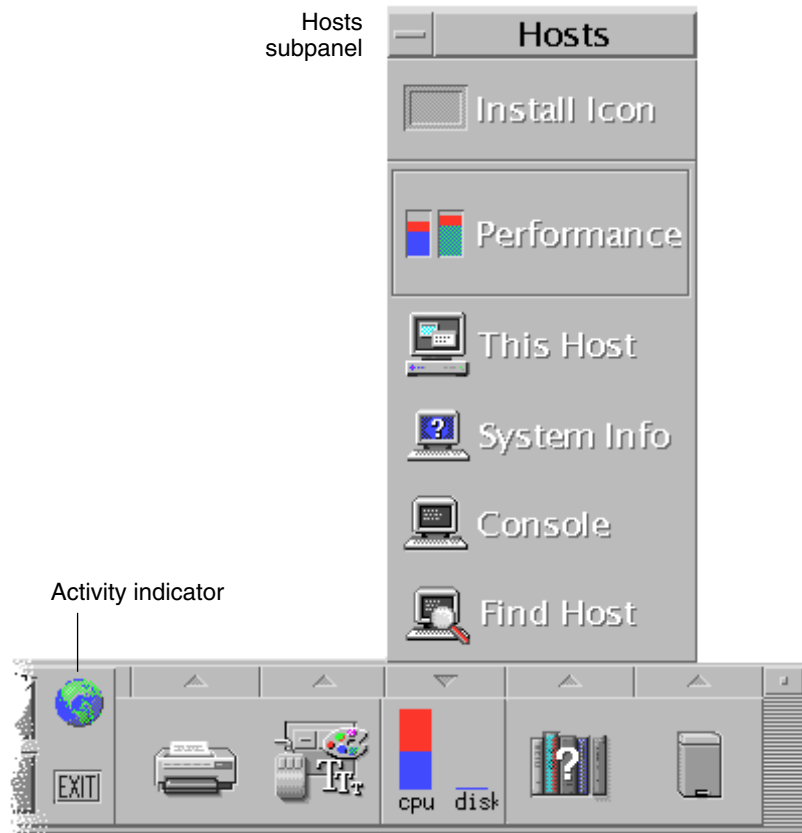
Starting a Terminal Window

There are several ways you can start a Terminal window:

- From the Front Panel
- From Application Manager
- From File Manager
- From the Window Menu of Another Terminal
- From Address Manager with a host selected

▼ To Start a Terminal Window from the Front Panel

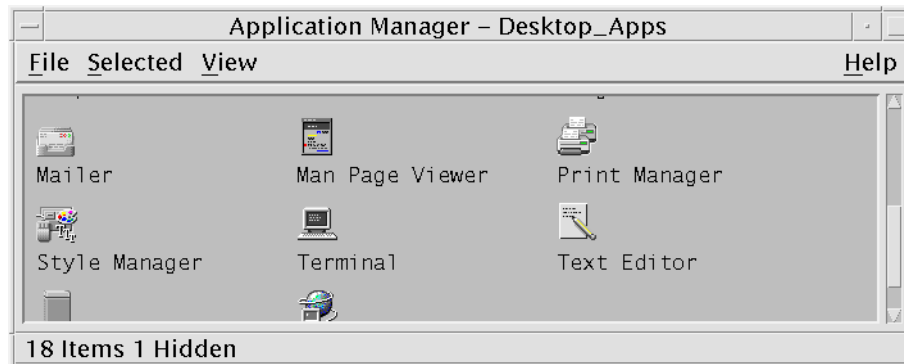
- Select the **This Host** control on the **Hosts** subpanel.



1. Or, click the activity indicator (globe) control on the workspace switch. The Go dialog box is displayed.
2. Type an IP address such as 129.156.120.179 or the @ symbol followed by a hostname (for example, @jupiter) for the host on which you want to run the terminal session.
3. Click OK.

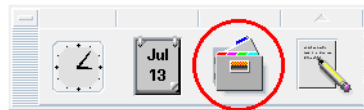
▼ To Start a Terminal Window from Application Manager

1. Click the Desktop_Apps control on the Front Panel.
2. Double-click the Terminal icon (you may have to scroll down to see it).



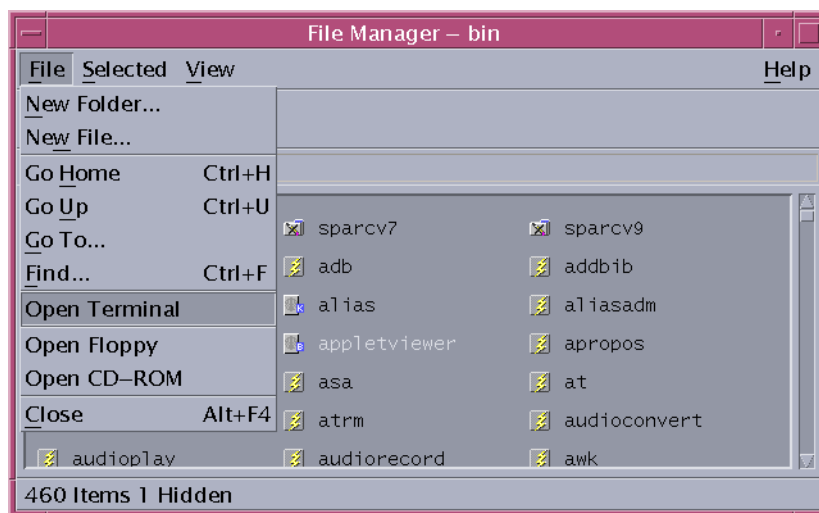
▼ To Start a Terminal Window from File Manager

1. Click the File Manager control on the Front Panel.



The File Manager window appears.

2. Choose Open Terminal from the File Manager File menu.



▼ To Start a Terminal Window from the Window Menu of Another Terminal

- Choose **New** from the Window menu of an existing Terminal window.

An exact replica of the Terminal window appears.

▼ To Start a Terminal Window from Address Manager with a host selected

- With the IP address of the required host displayed in the scrolling pane of Address Manager, choose **Terminal** from the Actions menu.

▼ To Close a Terminal Window

1. Type `exit` at the command line and press **Return**.
2. *Or*, choose **Exit** from the Terminal Window menu.
3. *Or*, choose **Close** from the Window menu (displayed through the button at the upper left of the window frame).

Note – Typing `exit` at the command line is the preferred method of closing a Terminal window. The other two methods don't terminate any background processes you may have started, which can sometimes cause problems.

If you started the Terminal window from a command line, you can stop it by pressing Control+C in the window from which you started it.

Using a Terminal Window

The Terminal window provides a means to start other applications, enter UNIX commands, and copy and paste text between and within windows.

▼ To Start Applications in a Terminal Window

- **Type the command to start the application at the command-line prompt.**

The general syntax for starting an application is:

application [*options*] &

application—the application name

options—a list of optional information to be passed to the application

&—indicates that the application runs in the background; that is, you can continue to use the Terminal window while the application is also running

Refer to the man page or other documentation for each application to find the command and options to use for that application.

For example, to start a digital clock from the command line, type:

```
xclock -digital &
```

▼ To Enter a Command

- **Type the command and press Return.**

For example, to obtain a list of the files in the current directory, type:

```
ls
```

To obtain a list of the files in the current directory and print it on the default printer, type:

```
ls | lp
```

▼ To Copy and Paste Text

1. **Use mouse button 1 and drag over the text you want to move.**

The text appears highlighted.

2. **Release mouse button 1 after all the text you want is highlighted.**

The highlighted text is copied to an internal clipboard. The text is not removed from your original source.

3. **Click mouse button 2 where you want to insert the text.**

A copy of the contents of the clipboard is pasted at the location you indicated. You can make additional copies by repeating the above steps.

▼ To Resize the Window Contents

When you change the size of a Terminal window, applications running in the window may not know about the resizing. Use this procedure to resize the application's output.

- **To resize the window contents, type the following at the command-line prompt:**

```
eval `resize`
```

Note that `resize` is enclosed within a set of single close quotation marks rather than double quotation marks.

Running dtterm on Another System

You can run `dtterm` on another system through various commands:

- The `-display` option
- The `rlogin` command
- The `remsh` command

- The Terminal menu item in Address Manager (when the remote host is displayed)

Using the `-display` Option

`-display host:display[.screen]`

where

host—the name of a valid system on the network.

display—the number of the display on the host.

screen—*Optional*. The screen within the display. The default is 0.

You can find these values by typing `env`, and examining the `DISPLAY` line. The terminal emulator is running on your system, but the window shows on another system.

For example, the following command starts a `dtterm` window on the host computer named `hpcvxdm`:

```
dtterm -display hpcvxdm:0 &
```

Using `rlogin`

You can use `rlogin` in an existing Terminal window to log in to a remote host. Once the window is acting as a terminal to the remote host, you can run applications there, redirecting the display back to your system if you desire.

For example, the following command logs onto a system named `there`, runs the client `xload`, and redirects the display back to your original system. Assume your system is named `here`.

```
rlogin there
xload -display here:0
```

Using `remsh`

The `remsh` command starts a shell on a remote host, performs some client activity (often starting a terminal emulator on that host), and redirects the display back to your original system if desired.

It has the syntax:

```
remsh remote -n client -display system:display[.screen]
```

where:

remote—the remote host name

client—the program you want to run on the remote host

system:display[.screen]—the host and display on which the results are to be displayed

The `remsh` command is often used when customizing a menu to access other hosts.

For example, the following command runs `xload` on the remote host named `there`, and directs output back to your system, `here`.

```
remsh there -n /usr/bin/X11/xload -display here:0.0 &
```

Using the Terminal menu item in Address Manager

Address Manager (see Chapter 18) displays details of selected hosts when the Hosts is selected on the Search menu.

When the details of a remote host are displayed in the scrolling pane, the Terminal menu item is displayed on the Actions menu. Choosing this menu item runs a terminal session on the remote host from your local display (see “Performing Actions on Host Cards” on page 489).

Customizing dtterm

There are several ways in which you can customize `dtterm`:

- Run it with special options, such as the menu bar and scroll bar
- Run the terminal emulator on another system
- Change global options such as cursor style and background color
- Change terminal options such as keyboard and screen control

Displaying the Menu Bar

By default, `dtterm` appears with a menu bar. You can remove it if you wish.

▼ To Remove the Menu Bar

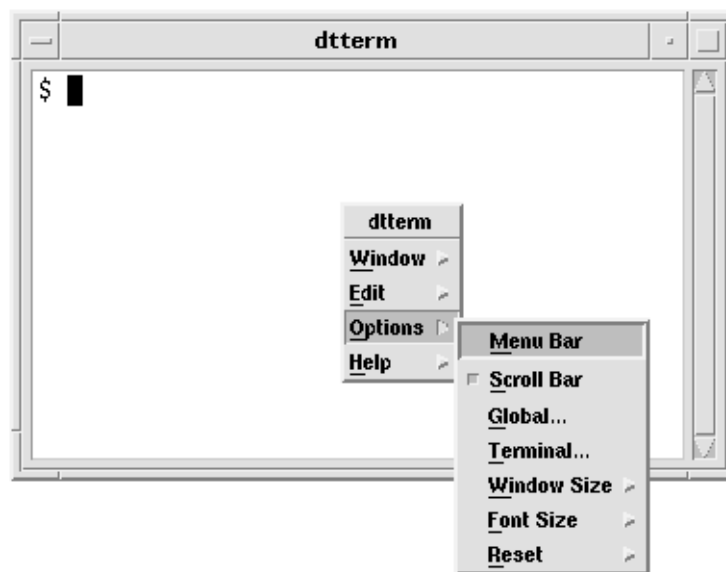
- **Choose Menu Bar from the Options menu.**

The menu bar disappears from the `dtterm` window.

▼ To Restore the Menu Bar

1. **Click mouse button 3 anywhere within the `dtterm` window.**

A pop-up menu appears containing items identical to those of the menu bar.



2. **Choose Menu Bar from the Options menu.**

The menu bar appears at the top of the `dtterm` window.

Displaying the Scroll Bar

By default, `dtterm` appears without a scroll bar.

▼ To Display the Scroll Bar

- **Choose Scroll Bar from the Options menu.**

The scroll bar appears in the `dtterm` window.

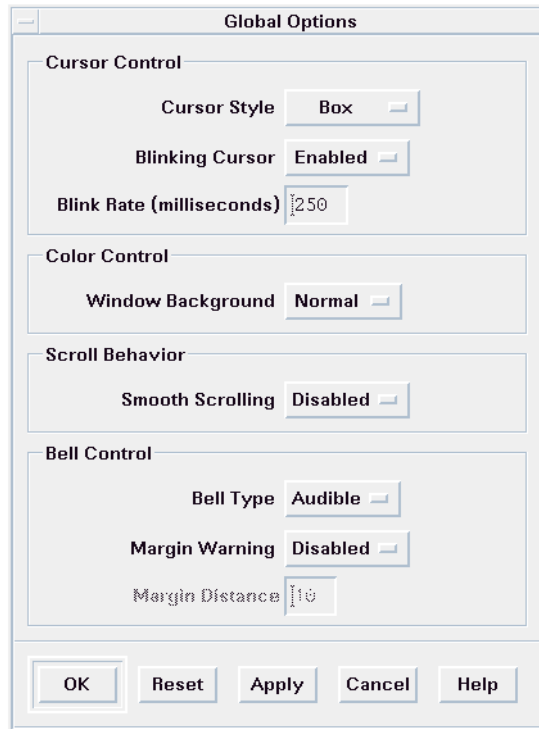
To remove the scroll bar from the window, choose Scroll Bar from the Options menu again.

dtterm Global Options

There are four areas that you can control from the Global Options dialog box:

- Cursor control
- Color control
- Scroll behavior
- Bell control

- To display the Global Options dialog box, choose Global from the Options menu.



Cursor Control

You can control three aspects of the `dtterm` cursor: the cursor style, whether the cursor blinks, and the blink rate.

▼ To Determine Cursor Style

1. If the Global Options dialog box is not displayed, choose Global from the Options menu.
2. Click the Cursor Style button and choose the cursor style option you want:
 - Box (the default)
 - Underline
 - None (the cursor is invisible)

3. **Click OK at the bottom of the Global Options dialog box or press Return to save your selection and exit the window.**

To save your selection and retain the window, click Apply.

The changes you make will be visible on existing `dtterm` windows; you don't have to start a new one.

▼ To Determine Cursor Blinking

The `dtterm` cursor blinks by default. You can turn off the blinking or change the blink rate (see "To Set the Cursor Blink Rate" on page 395).

1. **If the Global Options dialog box is not displayed, choose Global from the Options menu.**
2. **Click the Blinking Cursor button in the Cursor Control section and choose to either have the cursor blink (Enabled) or not blink (Disabled).**
3. **Click OK at the bottom of the Global Options dialog box or press Return to save your selection and exit the window.**

To save your selection and retain the window, click Apply.

Note that when this option is set to Disabled, the Blink Rate option and text field are both inactive.

▼ To Set the Cursor Blink Rate

The blink rate determines how often the `dtterm` window's cursor blinks. The default blink rate is 250 milliseconds. To change the cursor blink rate:

1. **If the Global Options dialog box is not displayed, choose Global from the Options menu.**
2. **In the Blink Rate text field, type the value in milliseconds that you want.**
3. **Click OK at the bottom of the Global Options dialog box or press Return to save your selection and exit the window.**

To save your selection and retain the window, click Apply.

The changes you make will be visible on existing `dtterm` windows; you don't have to start a new one.

▼ To Switch Foreground and Background Colors (Color Control)

1. **If the Global Options dialog box is not displayed, choose Global from the Options menu.**
2. **Click the Window Background button in the Color Control section and choose the color display you want:**
 - Normal displays the foreground and background colors normally.
 - Inverse switches the foreground and background colors.
3. **Click OK at the bottom of the Global Options dialog box or press Return to save your selection and exit the window.**
To save your selection and retain the window, click Apply.

▼ To Determine Scroll Behavior

Smooth scrolling displays each line sent to the Terminal window immediately, rather than storing it in a buffer. This results in scrolling that is more pleasing to the eye, but is slower. The default is smooth scrolling disabled. To enable smooth scrolling:

1. **If the Global Options dialog box is not displayed, choose Global from the Options menu.**
2. **Click the Smooth Scrolling button and choose the type of scrolling you want:**
 - Disabled (the default) disables smooth scrolling.
 - Enabled starts smooth scrolling.
3. **Click OK at the bottom of the Global Options dialog box or press Return to save your selection and exit the window.**
To save your selection and retain the window, click Apply.

Bell Control

There are three types of Bell Control options in `dtterm`:

- Bell type
- Margin warning
- Margin distance

▼ To Set the Bell Type

1. **If the Global Options dialog box is not displayed, choose Global from the Options menu.**
2. **Click the Bell Type button in the Bell Control section and choose the type of bell you want:**
 - Audible (the default) causes the bell to make a sound.
 - Visible causes the bell to blink the background color.
3. **Click OK at the bottom of the Global Options dialog box or press Return to save your selection and exit the window.**

To save your selection and retain the window, click Apply.

▼ To Set the Margin Warning

The Margin Warning option is used in conjunction with the Margin Distance option to warn the user either visually or aurally that the cursor is within a specified distance from the right margin. To set the margin warning:

1. **If the Global Options dialog box is not displayed, choose Global from the Options menu.**
2. **Click the Margin Warning button in the Bell Control section.**
3. **Choose Enabled or Disabled.**
4. **Click OK at the bottom of the Global Options dialog box or press Return to save your selection and exit the window.**

To save your selection and retain the window, click Apply.

Note that the Margin Distance option (see “To Set the Margin Distance” on page 397) is inactive when Margin Warning is disabled.

▼ To Set the Margin Distance

The Margin Distance option is only active when the Margin Warning option is set to Enabled. You set the distance from the right margin of the `dtterm` window at which you want the bell to ring (or appear, if Bell Type is set to Visible). The default value is 10 characters.

To change the distance:

1. **If the Global Options dialog box is not displayed, choose Global from the Options menu.**

2. Click inside the Margin Distance text field in the Bell Control area and type the number of characters from the right margin of the window at which you want the margin warning to be issued.
3. Click OK at the bottom of the Global Options dialog box or press Return to save your selection and exit the window.

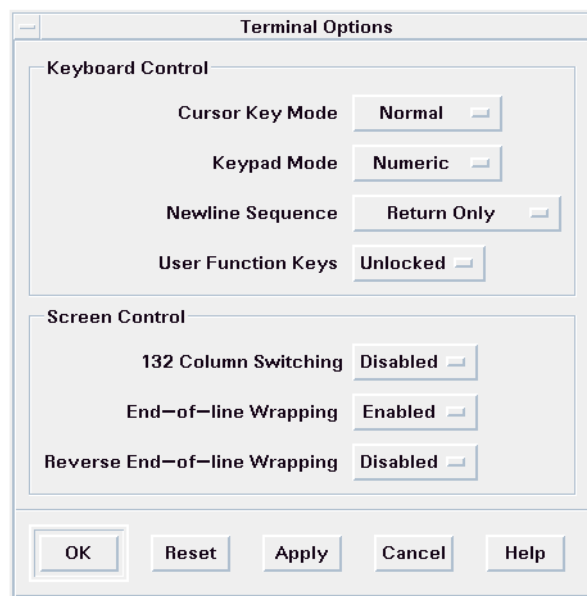
To save your selection and retain the window, click Apply.

The changes you make will be visible on existing `dtterm` windows; you don't have to start a new one.

dtterm Terminal Options

There are two areas that you can control from the Terminal Options dialog box:

- Keyboard control
 - Screen control
- To display the Terminal Options dialog box, choose Terminal from the Options menu.



Changes you make through the Terminal Options dialog box are effective on existing `dtterm` windows; you don't have to start a new one.

Keyboard Control

You can control four aspects of your keyboard through the Terminal Options dialog box:

- Cursor key mode
- Keypad mode
- Newline sequence
- User function keys

▼ To Set the Cursor Key Mode

1. **If the Terminal Options dialog box is not displayed, choose Terminal from the Options menu.**
2. **Click the Cursor Key Mode button in the Keyboard Control section and choose the mode you want:**
 - In Normal mode (the default), the cursor keys move the cursor in the specified direction.
 - In Application mode, the cursor keys generate escape sequences that the application uses for its own purpose.
3. **Click OK at the bottom of the Terminal Options dialog box or press Return to save your selection and exit the window.**

To save your selection and retain the window, click Apply.

▼ To Set the Keypad Mode

The keypad mode determines the behavior of keys on the numeric keypad.

1. **If the Terminal Options dialog box is not displayed, choose Terminal from the Options menu.**
2. **Click the Keypad Mode button in the Keyboard Control section and choose the mode you want:**
 - In Numeric mode, when keys on the numeric keypad are pressed, the corresponding numeral is displayed in the `dtterm` window.
 - In Application mode, keys pressed on the numeric keypad generate escape sequences that the application uses for its own purpose.
3. **Click OK at the bottom of the Terminal Options dialog box or press Return to save your selection and exit the window.**

To save your selection and retain the window, click Apply.

▼ To Determine the Newline Sequence

The Newline Sequence option determines how carriage returns at the ends of lines are treated.

1. **If the Terminal Options dialog box is not displayed, choose Terminal from the Options menu.**
2. **Click the Newline Sequence button in the Keyboard Control section and choose the mode you want:**
 - Return Only (the default) generates only a carriage return.
 - Return/Line Feed generates both a carriage return and a line feed.
3. **Click OK at the bottom of the Terminal Options dialog box or press Return to save your selection and exit the window.**

To save your selection and retain the window, click Apply.

▼ To Set the User Function Keys

The User Function Keys option either locks or unlocks (the default) the user function keys.

1. **If the Terminal Options dialog box is not displayed, choose Terminal from the Options menu.**
2. **Click the User Function Keys button in the Keyboard Control section and choose Locked or Unlocked (the default).**
3. **Click OK at the bottom of the Terminal Options dialog box or press Return to save your selection and exit the window.**

To save your selection and retain the window, click Apply.

Screen Control

There are three aspects of screen control in a `dtterm` window:

- 132 column switching
- End-of-line wrapping
- Reverse end-of-line-wrapping

▼ To Set 132-Column Switching

This option corresponds to the following `dtterm` command-line options and resources:

- `-132`
- `+132`
- `c132`

1. **If the Terminal Options dialog box is not displayed, choose Terminal from the Options menu.**
2. **Click the 132 Column Switching button in the Keyboard Control section and choose the mode you want:**
 - Disabled (the default) does not change the display when an application switches to 132 columns.
 - Enabled automatically enlarges the `dtterm` window to display 132 columns when the application switches to 132 columns.

3. **Click OK at the bottom of the Terminal Options dialog box or press Return to save your selection and exit the window.**

To save your selection and retain the window, click Apply.

▼ To Set End-of-Line Wrapping

This option determines whether text wraps at the end of a line. It corresponds to the following `dtterm` command-line options and resources:

- `-aw`
- `-+aw`
- `autoWrap`

1. **If the Terminal Options dialog box is not displayed, choose Terminal from the Options menu.**
2. **Click the End-of-Line Wrapping button in the Keyboard Control section and choose the mode you want:**
 - Enabled means characters automatically wrap to the next line when the end-of-line is reached.
 - Disabled means text does not wrap.

3. **Click OK at the bottom of the Terminal Options dialog box or press Return to save your selection and exit the window.**

To save your selection and retain the window, click Apply.

▼ To Set Reverse End-of-Line Wrapping

This option determines the behavior of backspacing at the end of a line. It corresponds to the following `dtterm` command-line options and resources:

- `-rw`
- `-+rw`
- `reverseWrap`

1. If the Terminal Options dialog box is not displayed, choose Terminal from the Options menu.
2. Click the Reverse End-of-Line Wrapping button in the Keyboard Control section and choose the mode you want:
 - Enabled means backspace characters automatically wrap to the next higher line when the end-of-line is reached.
 - Disabled (the default) means no wrapping occurs.
3. Click OK at the bottom of the Terminal Options dialog box or press Return to save your selection and exit the window.

To save your selection and retain the window, click Apply.

Terminal Control Characters

Because `dtterm` only emulates a terminal, your control characters might not be what you are used to on a physical terminal. The `ttyModes` resource enables you to set control characters for your terminal emulator.

By default, Login Manager sets the control characters listed in Table 14-1.

TABLE 14-1 Terminal Control Characters

Control Name	Character	Definition
erase	Control+H	Backspace erases characters
intr	Control+C	Interrupt: Cancel the current operation and redisplay the command-line prompt.
kill	Control+U	Stop an operation or application.
start	Control+Q	Accept keyboard input: Used to continue an application that has been paused.

TABLE 14-1 Terminal Control Characters *(Continued)*

Control Name	Character	Definition
stop	Control+S	Do not accept keyboard input: Used to pause an application.
swtch	Control+@	Switch between layers in a shell.

For example, to interrupt an operation in progress, you press Control+C.

The syntax for the `ttyModes` resource is:

```
ttyModes: Control+C name
```

where *name* is the control, and C is the character. (^ is another way of expressing Control.) For example, the default value of `ttyModes` describing the preceding list is:

```
ttyModes: erase ^H intr ^C kill ^U start ^Q stop ^S swtch ^@
```

▼ To Set Terminal Control Characters

1. Use the **EditResources** action to update the `ttyModes` resource.
2. Choose **Restart Workspace Manager** from the **Workspace** menu.

Changing the Default Terminal Emulator

There are several other terminal emulators you can use in addition to `dtterm`. You can start most of them from an existing terminal emulator command line; however, if you want to consistently use a terminal emulator other than `dtterm`, you should change the default assignment. See *Solaris Common Desktop Environment: Advanced User's and System Administrator's Guide* for more information.

Using Icon Editor

Icon Editor is a tool for creating both bitmap and pixmap image files for use as icons or backdrops.

- “Basic Drawing Tasks” on page 407
- “Saving Icon Files” on page 411
- “Color Usage” on page 412
- “Advanced Drawing Tasks” on page 413

Introducing Icon Editor

Icon Editor enables you to create and edit images in two formats, described in Table 15-1.

TABLE 15-1 Icon Formats

Format	Description	File Name
X pixmap (XPM)	Multicolor images that include static and dynamic colors	* .pm
X bitmap (XBM)	Two-color images limited to a foreground and background color (used for black and white icons)	* .bm

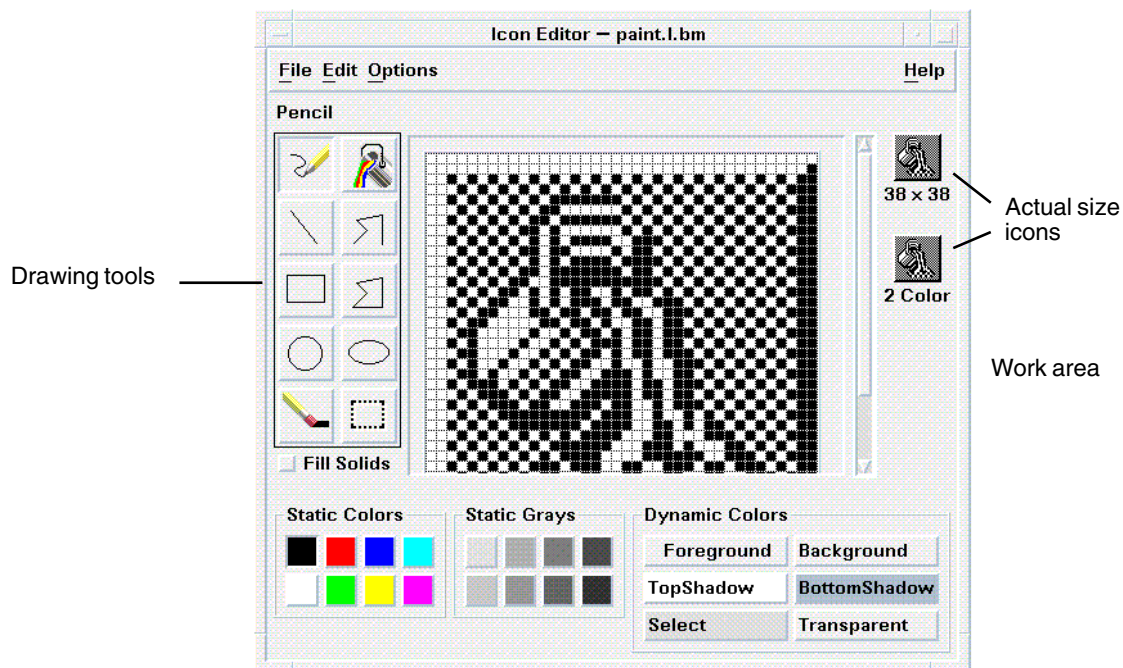


FIGURE 15-1 Icon Editor main window

You create images by selecting drawing tools and colors, and using them in the work area. As you draw, Icon Editor displays an actual-size copy of your icon in both formats. You need to consider the two-color version of the icon even if you are drawing an image for use on color systems, because icons may revert to two colors if there are not enough free colors available on the workspace.

For information on designing icons, read the Visual Design chapter in *Common Desktop Environment: Style Guide and Certification Checklist*.

Startup

To start Icon Editor:

1. Open Application Manager and display the Desktop_Apps folder therein.



2. Double-click Icon Editor.

Icon Editor starts with an empty drawing work area.

You can also start Icon Editor and have it load an icon into the work area in one of the following ways:

- In a File Manager view, locate the icon file and double-click it to open it. (The default action for pixmap and bitmap files runs Icon Editor and loads the file.)
- Type the following command in a Terminal window:

```
dticon -f filename &
```

Note – If the path `/usr/dt/bin` has not been set in your `.cshrc` file, then type `/usr/dt/bin/dticon` to run Icon Editor from the command line.

Basic Drawing Tasks

This section describes how to create and edit an icon and how to use the Icon Editor drawing tools.

▼ To Open an Existing Icon

1. Choose Open from the File menu.

If you have unsaved changes, Icon Editor warns you that your changes will be lost by loading another icon. Click Cancel to cancel the Open command. Click OK if you don't want to save your changes.

2. **Type the name of the file you want to load in the Enter file name field, or select the icon file you want to load from the Files section of the Open File dialog box.**
3. **Click Save.**

Note – When you load a file, the Output Format (in the Options menu) is automatically set to the format of the file you load.

You can also open an existing icon by double-clicking the icon file in File Manager.

▼ To Start a New Icon

- **Choose New from the File menu.**

If you have unsaved changes, Icon Editor warns you that your changes will be lost by starting a new icon. Click Cancel to cancel the New command or click OK if you don't want to save your changes.

Icon Editor clears the work area and resizes it to the default size (32x32).

If you have an icon already loaded, you can choose Clear Icon from the Edit menu to start a new icon with the same size and name as the previously loaded icon.

▼ To Clear an Icon

1. **Save your current icon, if necessary.**
2. **Choose Clear Icon from the Edit menu.**
The entire icon drawing work area is cleared.

▼ To Draw an Image

1. **Select one of the drawing tools (listed in Table 15–2).**
2. **Select a color (static color, static gray, or a dynamic color).**
3. **Begin drawing with the tool you've selected.**
More details on drawing with each tool are provided below.

Drawing Tools

The drawing tools area of Icon Editor is shown in Figure 15-2.

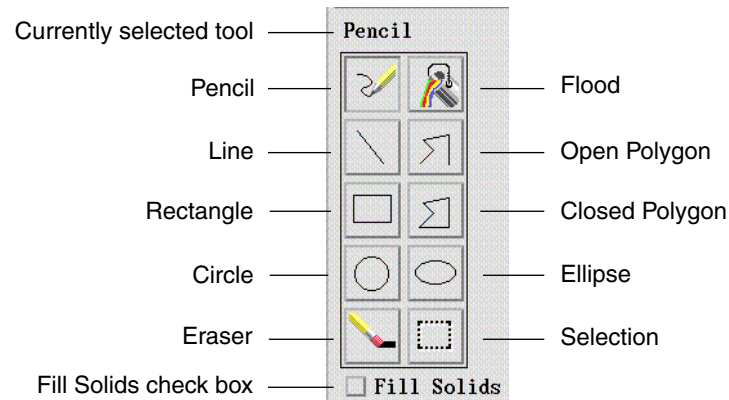


FIGURE 15-2 Icon Editor drawing tools

TABLE 15-2 Using the Drawing Tools

Tool	Purpose	Action
Pencil	For drawing freehand lines and individual pixels.	Press and hold to draw freehand lines.
Line	For drawing straight lines.	Press and hold to stretch the line. Release to draw the line.
Rectangle	For drawing solid or outlined rectangles.	Press and hold to stretch the outline of the rectangle. Release to draw the rectangle.
Circle	For drawing solid or outlined circles.	Point to where you want the center of the circle, press and hold, drag to the desired size, and release.
Eraser	For erasing large areas of the image.	Press and hold; then drag over the area to erase. To erase individual pixels, select the Pencil tool and the Transparent color.

TABLE 15-2 Using the Drawing Tools (Continued)

Tool	Purpose	Action
Flood	For flooding a region of one color with the selected color.	Click any pixel within the region to be flooded. The selected pixel and all adjacent pixels of the same color are recolored with the selected color. The filled region extends in all directions, bounded only by pixels of a different color.
Open Polygon	For drawing connected straight lines.	Click the starting point; then click for each segment. Double-click to end the last segment.
Closed Polygon	For drawing connected straight lines, where the first line and last line are connected to form a closed polygon.	Click the starting point; then click for each segment. Double-click to end the last segment.
Ellipse	For drawing solid or outlined ovals.	Press and hold, drag to the desired size and shape, and release.
Selection	For selecting an area to work on. Several commands in the Edit menu require an area to be selected.	Point to the corner pixel of the region to be selected, press and hold, drag to the desired region, and release.
Fill Solids	For changing the rectangle, circle, ellipse, and closed polygon tools to draw filled-in shapes instead of outlines.	Select the check box to automatically draw filled-in shapes. Deselect the check box to return the tools to drawing outlines.

▼ To Undo a Drawing Operation

- **Choose Undo from the Edit menu.**

Only the single, most recent change can be undone.

Saving Icon Files

When saving icon files, you must use the appropriate file-name suffix. There are two suffixes appended to the base name of the icon, one for size and one for format. Many icon names are in these general forms:

basename.size.format

basename.format

The *basename* is the image name used to reference the image.

size is a single letter indicating the standard size of the icon: *l* for large (48x48 pixels), *m* for medium (32x32), *s* for small (24x24), or *t* for tiny (16x16). (“Icon Size Conventions” on page 411) If your icon is not a standard size, you can omit this letter.

format is *pm* for X pixmaps (the color icon format) or *bm* for X bitmaps (the monochrome icon format).

If you save an icon in XBM format that has transparent color in it, an icon mask file is also saved. The icon mask file is named *basename.size_m.format*. If you move the icon you saved to another folder, you must also move the mask file.

For example, suppose you specify an icon named *mail* for a file type you’ve written. If you have a color display and have set the File Manager preferences to use tiny icons, the assumed icon name is *mail.t.pm*. If it had transparent color and you saved it in XBM format, two files would be created: *mail.t.bm* and *mail.t_m.bm*.

Icon Size Conventions

Table 15–3 lists the recommended sizes—in pixels, width x height—for creating new icons for use in CDE. Icons can be up to 256x256.

TABLE 15–3 Icon Size Recommendations

Usage	High	Medium	Low
File Manager (Large)	32x32	32x32	32x32
File Manager (Small)	16x16	16x16	16x16
Application Manager (Large)	32x32	32x32	32x32
Application Manager (Small)	16x16	16x16	16x16
Front Panel	48x48	48x48	32x32

TABLE 15-3 Icon Size Recommendations (Continued)

Usage	High	Medium	Low
Front Panel subpanels	32x32	32x32	16x16
Minimized windows	48x48	48x48	32x32
Workspace	32x32	32x32	32x32

▼ To Save the Icon

1. **Choose an output format from the Options menu:**

- XBM for two-color X bitmap format
- XPM for multicolor X pixmap format (the default)

2. **Choose Save from the File menu.**

If the icon is unnamed or you choose Save As, Icon Editor prompts you for a file name. Type the name and then click Save.

Note – If you save an icon in XBM format that has transparent color in it, an icon mask file is also saved. The icon mask file is named *basename.size_m.format*. If you move the icon you saved to another folder, you must also move the mask file.

▼ To Save the Icon with a New Name

1. **Choose Save As from the File menu.**

2. **Type (or select) the file name under which you want to save the icon file.**

3. **Click Save.**

If the file already exists, you will need to click OK in the warning dialog box to overwrite the existing file.

Color Usage

Icons in the desktop use a palette of 22 colors:

- Eight static grays
- Eight static colors: red, blue, green, cyan, magenta, yellow, black, and white

- Five dynamic colors: Foreground, Background, TopShadow, BottomShadow, and Select
- A transparent “color” that allows the background to show through

These colors are the default colors in Icon Editor. This set of colors provides a reasonable palette with which to create icons. This limited palette was chosen to maximize the attractiveness and readability of icons without using an unnecessary number of colors.

The dynamic colors represent the colors used to display the application on which your icon will appear. If your icon appears in File Manager, File Manager determines what the background color is. Dynamic colors are useful for icons that you want to change color as different color palettes are selected in Style Manager. Dynamic colors are also useful if the icon will be used in more than one place and you want it to use the colors of the application where it appears.

TopShadow and BottomShadow can be used for drawing a shadow under your icon. You can use these colors to make the icon appear to be etched into the surface. This is only recommended for Front Panel style icons.

The transparent color is useful for creating icons that have the illusion of being nonrectangular, since it allows the color behind the icon to show through. If your icon does not fill the entire bounding box, you should fill the unused area with the transparent color.

Advanced Drawing Tasks

After you become familiar with the basic drawing facilities in Icon Editor, you may want to try some more advanced operations. Many of these operations require you to first *select* an area of the icon. This is done using the Selection tool (next to the eraser).

When an area of the icon is selected, you can:

- Cut, copy or move it
- Resize (scale) it
- Flip it (horizontally or vertically)
- Rotate it (right or left)

▼ To Select an Area of the Icon

1. **Click the Selection tool (next to the eraser).**

2. **Drag a box around the area you want to select.**

When an area is selected, a box flashes around the selected area.

▼ To Cut a Region of the Icon

1. **Select the area of the icon you want to cut using the Selection tool.**
2. **Choose Cut from the Edit menu.**

When you cut a portion of an icon, the exposed area becomes *transparent* (that is, filled in with the Transparent color).

Note that after cutting a region, you can paste it back into the icon by choosing Paste from the Edit menu.

▼ To Copy a Region of the Icon

1. **Select the area of the icon you want to copy using the Selection tool.**
2. **Choose Copy from the Edit menu.**
3. **Choose Paste from the Edit menu.**
4. **Position the outline where you want to paste the copy, and then click.**

You may repeat steps 3 and 4 as many times as you like to paste multiple copies of the region you copied.

▼ To Move a Region of the Icon

1. **Select the area of the icon you want to move using the Selection tool.**
2. **Choose Cut from the Edit menu.**
3. **Choose Paste from the Edit menu.**
4. **Position the outline where you want to paste the area, and then click.**

You may repeat steps 3 and 4 as many times as you like to paste multiple copies of the region you cut.

▼ To Rotate Part of the Icon

1. Select the area of the icon you want to rotate using the Selection tool.
2. Choose Rotate then Left or Rotate then Right from the Edit menu.
3. Position the outline where you want to paste the rotated area, and then click.

▼ To Flip (Mirror) Part of the Icon

Flipping an area creates a pixel-for-pixel mirror image of the selected area.

1. Select the area of the icon you want to flip using the Selection tool.
2. Choose Flip then Vertical or Flip then Horizontal from the Edit menu.

Resizing Icons

You can resize the entire icon or a region of the icon.

▼ To Resize the Current Icon

1. Choose **Resize Icon** from the Edit menu.
Icon Editor displays a dialog box that prompts for the new size.
2. Edit the current width and height to specify the new size.
3. Click **OK**.

Note – If you make the icon smaller, the right and bottom edges are clipped off. If you make the icon larger, the existing image remains in the upper left of the icon.

▼ To Resize (Scale) a Region of the Icon

1. Select the area of the icon you want to resize using the Selection tool.
2. Choose **Scale** from the Edit menu.
3. Drag a box that defines the size and shape that you want the scaled image to be.
The size of the box is shown in the upper right area. This determines how the selected portion of the image will be scaled; it does *not* determine where to place the results.

4. **Position the outline where you want to paste the scaled copy, and then click.**

Hotspots

Bitmap images (XBM format) can be used as special mouse pointer shapes. A hotspot marks a single pixel within the image that is the true *point* of the mouse pointer.

▼ To Add a Hotspot

You can only have one hotspot in an icon.

1. **Choose Add Hotspot from the Edit menu.**
2. **Click the pixel where you want the hotspot.**

▼ To Delete a Hotspot

- **Choose Delete Hotspot from the Edit menu.**

Screen Captures

You can copy any area from any part of the screen into the Icon Editor. You can copy (“grab”) a text or graphic that is displayed and load it into the Icon Editor work area.

▼ To Capture (Grab) a Region of the Display

1. **Save your current icon, if necessary.**
2. **Choose Grab Screen Image from the Edit menu.**
3. **Drag a box around the portion of the workspace you want to capture (press mouse button 1, drag, and release).**

Note – Capturing a region of the display could cause the icon to use up some of the available colors on the desktop.

Modifying the View of an Icon

You can change the view of an icon in the Icon Editor work area by changing the magnification or using a grid.

▼ To Hide the Grid

- **Choose Visible Grid from the Options menu.**

This will hide the grid. Choose Visible Grid from the Options menu again to display the grid. The grid is displayed by default.

▼ To Change the Magnification of an Icon

1. **Choose Magnification from the Options menu.**
2. **Choose the Magnification level you want from the submenu.**

Using Image Viewer

Use Image Viewer to view, edit, print, and translate the file formats of monochrome and color images and multiple page documents such as PostScript files. Use the Snapshot function of Image Viewer to capture snapshots of windows, user-defined regions, or the entire desktop screen.

- “Starting and Quitting Image Viewer” on page 419
- “Viewing Images” on page 421
- “Editing Images” on page 423
- “Saving Images” on page 427
- “Viewing PostScript Files” on page 428
- “Printing” on page 432
- “Image Viewer File Formats” on page 435
- “Using Snapshot” on page 437

Starting and Quitting Image Viewer

There are several ways to start Image Viewer:

- From the Workspace Programs menu
- From Application Manager
- From the command line

▼ To Start Image Viewer from the Workspace Programs Menu

1. Place the mouse pointer anywhere on the background of the desktop (the workspace) and click mouse button 3.

The Workspace menu appears.

2. Choose **Programs**, and then choose **Image Viewer** from the **Programs** submenu.

The Image Viewer main window appears.

▼ To Start Image Viewer from Application Manager

1. Open **Application Manager** by clicking the **Applications** icon on the **Applications** subpanel of the **Front Panel**.

2. Double-click **Desktop_Apps** in the **Application Manager** window.

The **Desktop_Apps** group is displayed in **Application Manager**.

3. Double-click **Image Viewer** in the **Desktop_Apps** group.

Image Viewer opens.



FIGURE 16–1 Image Viewer icon

Install Image Viewer in the Front Panel.

▼ To Start Image Viewer from the Command Line

Image Viewer has new features which can be accessed by running the tool from the command line. To start Image Viewer and open files directly from the command line:

- Type **sdtimage** to start **Image Viewer**.

Or, type **sdtimage filename** to start Image Viewer and open a specific file.

▼ To Exit Image Viewer

- Choose Exit from the File menu.

Viewing Images

With Image Viewer, you can view, edit, print, and translate the file formats of monochrome and color images and PostScript files. See “Image Viewer File Formats” on page 435 for a list of the file formats that Image Viewer can open. See “Viewing PostScript Files” on page 428 to learn how to view PostScript files.

▼ To Open an Image File

1. **Choose Open from the File menu.**
The Open dialog box appears.
2. **To navigate among and display the contents of folders, double-click a folder in the Folders list.**
3. **Select an image file from the Files list or type its name in the Enter file name field.**
4. **Click OK to open the image file.**
The image file is displayed in the View window.

▼ To Open an Image File Using Drag and Drop

- If Image Viewer is already running, drop an image file icon on an open Image Viewer window.

If Image Viewer is not running:

1. **Drag an image file icon from File Manager and drop it on the workspace.**
2. **Click mouse button 3 over the image file icon on the workspace and choose Open from the Workspace Object menu.**
Image Viewer starts and the image file is displayed in Image Viewer’s View window.
3. **To remove the icon from the Workspace when you are finished with it, click mouse button 3 on the icon and select Remove From Workspace from the pop-up menu.**

▼ To View an Image in Gray Scale or Color

To determine whether images appear in gray scale or color:

1. **Choose Options from the File menu.**
2. **Select either Gray Scale or Color for the View Image In setting.**
3. **If you chose to display images in color, set the Color option to the number of colors you want used.**
The Color setting depends on the type of display monitor you have. For example, if only one option, such as 256, appears, that is the only option available on your monitor.
4. **Click OK to activate the settings and close the dialog box. Click Apply to activate the setting and leave the dialog box displayed.**

▼ To Move the Image within the View Window

1. **Select Palette from the Edit menu if the palette is not displayed.**
2. **Click the Pan tool in the palette.**
See "Using the Palette Tools" on page 424 for information on the palette.
3. **Move the pointer into the View window, over the image or page.**
The pointer changes to a hand shape.
4. **Drag the pointer in the direction you want to move the image or page.**
5. **Click the Pan tool to deselect it.**

▼ To Change an Image Orientation in the View Window

To rotate the displayed image in 90-degree increments (mimics landscape or portrait orientation):

1. **Choose Page Viewing Controls from the View menu.**
2. **Select a percentage by which you want the image rotated (90 degrees, 180 degrees, or 270 degrees).**
3. **Select whether you want the image rotated Right or Left.**

4. Click OK to rotate the image and close the dialog box, or Apply to rotate the image and leave the dialog box displayed.

▼ To Display Information about an Image

- Choose Image Info from the View menu.

The Image Information dialog box appears.

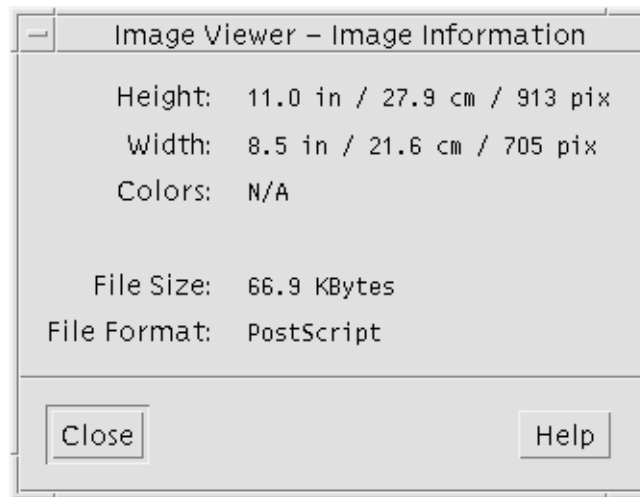


FIGURE 16-2 Image Information dialog box

The dialog box displays the following information about the image:

- Height of the page in inches, centimeters, and pixels
- Width of the page in inches, centimeters, and pixels
- Number of colors used in the file
- Size of the file in Kbytes
- Format of the file

Editing Images

You can use Image Viewer to manipulate images in many ways:

- Select a region to save

- Rotate, flip, or scale the image

Using the Palette Tools

The Palette dialog box provides tools that enable you to manipulate images.

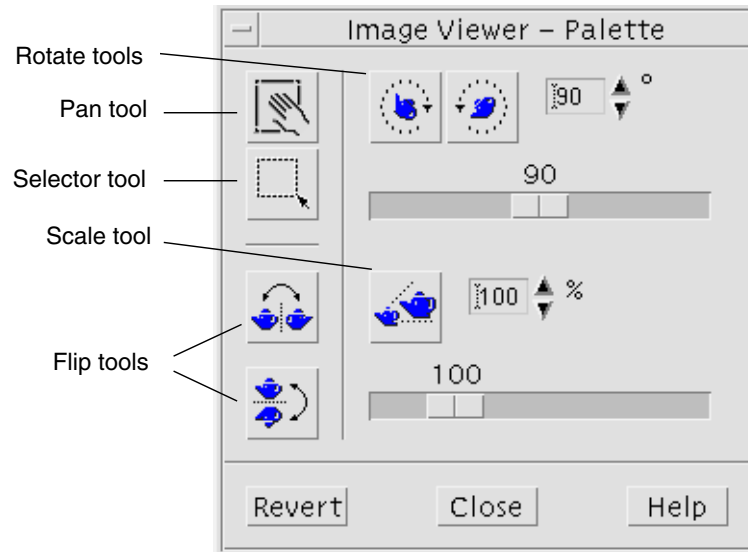


FIGURE 16-3 Palette dialog box

- Pan tool – Use to move the contents of the View window
- Selector tool – Use to select a region to be saved as a new image
- Rotate tools – Use to rotate the contents of the View window to the right or left
- Flip tool – Use to flip the image horizontally or vertically
- Scale tool – Use to size the image

▼ To Display the Palette Automatically

You normally display the Image Viewer Palette by choosing Palette from the Edit menu. However, you can also automatically display the palette whenever you open a document:

1. **Choose Options from the File menu.**
2. **Select Display Palette On Opening Document.**

3. Click OK or Apply.

▼ To Select a Region to Save as a New File

You can cut out a region of an image or page and save that region as a new file.

1. Select **Palette** from the **Edit** menu if the palette is not displayed.
2. Click the **Selector** tool in the palette.
3. Move the pointer into the **View** window.
4. Place the target pointer over a corner of the region you want to save as a new image and drag mouse button 1 to the opposite corner.

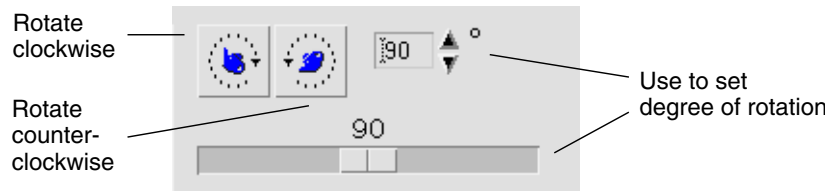


Image Viewer draws a border around the region you define.

5. Choose **Save Selection As** from the **File** menu.
The **Save Selection As** dialog box appears.
6. Select the file format in which you want your file written.
For a list of the formats, see “Image Viewer File Formats” on page 435.
7. (Optional) Choose a compression method from the **Compression** menu button.
The default is **None** (no compression); compressed files require less disk space.
8. (Optional) Choose the number of colors to save for your file from the **Colors** menu button.
The choices depend on the type of monitor you have.
9. Click **OK**.

▼ To Rotate an Image

1. Select **Palette** from the **Edit** menu if the palette is not displayed.



2. Specify the number of degrees you want the image or page rotated.

The default value is 90 degrees; change the value in one of the following ways:

- Double-click in the Rotate Degrees field and type the number
- Click the arrow buttons
- Drag the slider

3. Click one of the rotate tools to rotate the image or page left or right.

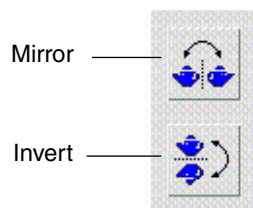
Image Viewer rotates the image or page according to the value in the Rotate Degrees field.

4. To restore the image to its last-saved orientation, click **Revert**.

▼ To Flip an Image

1. Select **Palette** from the **Edit** menu if the palette is not displayed.

2. Click one of the flip tools to invert or create a mirror image of the currently displayed image or page.

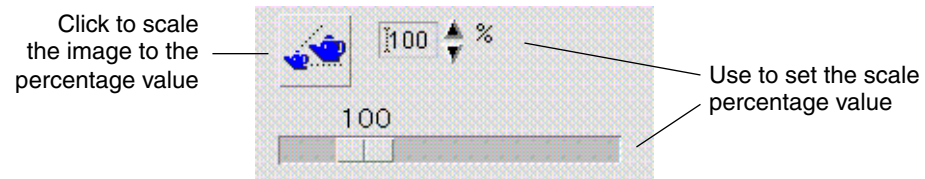


3. To restore the image to its last-saved orientation, click **Revert**.

▼ To Scale an Image

To enlarge or reduce an image proportionally:

1. **Select Palette from the Edit menu if the palette is not displayed.**



2. **Specify the scale percentage.**

The default value is 100%; change the value in one of the following ways:

- Double-click in the Scale Percentage field and type the number
- Click the arrow buttons
- Drag the slider

3. **Click the Scale tool.**

Image Viewer scales the image according to the value in the Scale Percentage field.

4. **To restore the image to its last-saved size, click Revert.**

▼ To Undo an Edit Operation

Image Viewer provides two methods for cancelling an unsaved edit operation:

- Choose Undo from the Edit menu to cancel the last unsaved edit made to an image or page.
- *Or*, click the Revert button on the palette to cancel all unsaved changes and display the last saved version of the image or page.

Saving Images

You can save changes you make to an image or page in the same file you opened, or to a new file. Saving to a new file enables you to save to a different format or name.

▼ To Save an Edited Image in the Same File

1. **Choose Save from the File menu.**

The Save dialog box appears.

2. **Click OK.**

A dialog box is displayed, asking you if you want to overwrite the existing file.

3. **Click Overwrite Existing File to save the changes in the existing file.**

Click Cancel if you do not want to overwrite the existing file. Change the file name or change folders in the Save dialog box to save the changes to a new file.

▼ To Save an Image as a New File

To save a file and specify its format, folder, and name:

1. **Choose Save As from the File menu.**

2. **Double-click a folder name in the Folder list to open it.**

3. **Type the name of the file in the Enter file name field.**

4. **Select the file format in which you want your file written.**

For a list of the formats, see “Image Viewer File Formats” on page 435.

5. **Choose a compression method from the Compression menu button.**

The default is None (no compression); compressed files require less disk space.

6. **Choose the number of colors to save for your file from the Colors menu button.**

The choices depend on the type of monitor you have.

7. **Click OK.**

Image Viewer saves your file in the specified format.

Viewing PostScript Files

With Image Viewer you can view and manipulate PostScript files as well as image files. (See “Viewing Images” on page 421 to learn how to view image files.)

▼ To Open a PostScript File from the File Menu

1. Choose **Open** from the **File** menu.
2. To navigate among and display the contents of folders, choose a folder from the **Folders** list.
3. Choose a **PostScript** file from the **Files** list or type the **PostScript** file name in the **Enter file name** field.
4. Click **OK** to open the **PostScript** file.

The **PostScript** file is displayed in **Image Viewer**'s **View** window.

▼ To Open a PostScript File Using Drag and Drop

- If **Image Viewer** is already running, drop a **PostScript** file icon on an open **Image Viewer** window.

If **Image Viewer** is not running:

1. Drag a **PostScript** file icon from **File Manager** and drop it on the **Workspace**.
2. Press or click mouse button 3 over the **PostScript** file icon on the workspace and choose **Open** from the **Workspace Object** menu.

Image Viewer is started up and the **PostScript** file is displayed in **Image Viewer**'s **View** window.

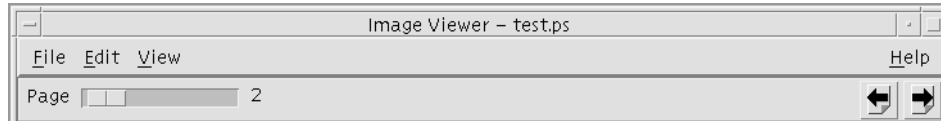
3. To remove the icon from the **Workspace** when you are finished with it, click mouse button 3 on the icon and select **Remove From Workspace** from the popup menu.

▼ To View a PostScript File in Black and White or Color

1. Choose **Options** from the **File** menu.
2. Select either **Black & White** or **Color** for the **Display PostScript** setting.
3. Click **OK** or **Apply**.

▼ To Page through a PostScript File

- Use the Page slider or the arrow buttons.



Using your keyboard, you can view:

- The first page by pressing Home
- The next page by pressing PgDn or Return
- The previous page by pressing PgUp, Back Space, or Del[ete]
- The last page by pressing End

▼ To View a Specific Page of a PostScript File

1. **Choose Page Overview from the View menu.**

The Page Overview window uses thumbnail page buttons to show simple renderings of the pages in a document. Up to 16 thumbnail page buttons are displayed in a set. Clicking the scroll bar displays up to 12 new thumbnail page buttons.



Note – If the Page Overview menu item is unavailable, Image Viewer is loading the information for the Page Overview dialog box. For a long document, this may take a while.

2. Determine the page you want to view.

- Double-click the thumbnail page button.
- *Or*, type the page number in the text field and click Display Page.

▼ To Reverse Page Order

The page order of a document is often reversed when the file is prepared for printing; this is a convenient way to collate a document on printers that produce pages printed side up. To reverse the page order of a document you are viewing:

1. Choose Page Viewing Controls from the View menu.

The Page Viewing Controls dialog box appears.

2. Select the order in which you want the pages of the current document displayed (First Page First or Last Page First).

3. Click OK to apply your choices and close the dialog box.

▼ To Change the Size of the Displayed Page

The page description language used to create some documents may not include page size information. This can cause page boundaries to display incorrectly. To change the displayed page size:

1. Choose Page Viewing Controls from the View menu.

The Page Viewing Controls dialog box appears.

2. Select the size of the page you want for displaying the current document.

3. Click OK to apply your choices and close the dialog box.

See “Print Dialog Box” on page 432 for information on changing the size of the printed page.

▼ To Save a PostScript Page as a Bitmap Image

1. **Choose Save Page As Image from the File menu.**

The Save Page As Image dialog box appears.

2. **Select the file you want to save.**

If you do not specify a file, Image Viewer saves the page currently displayed in the View window.

You can filter the Files list by typing a file-name condition in the Filter field and clicking Update. For example, typing `*.ps` will list only the files ending in `.ps` in the Files list.

3. **Select the format in which you want to save the page from the File Format list.**

See Table 16–2 for a list of file formats in which Image Viewer can save an image.

4. **(Optional) Set a compression type through the Compression button menu.**

5. **(Optional) Choose the number of colors for the image from the Colors button menu.**

The default is 256.

6. **Type the name under which you want to save the file in the Enter file name field.**

7. **Click OK.**

Printing

You can print an image or PostScript file in Image Viewer and set parameters for image position, orientation, and size, plus the more standard print settings such as page size and number of copies.

Print Dialog Box

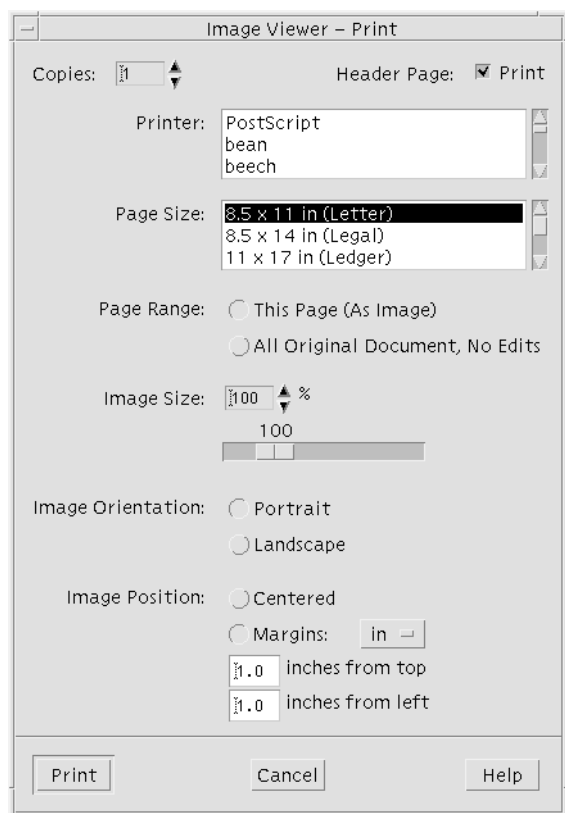


FIGURE 16-4 Print dialog box

TABLE 16-1 Print Dialog Box Options

Option	Usage
Copies	Increase or decrease the number of copies to print.
Header Page	Choose whether to print a header page.
Printer	Select the printer on which to print your image from a list of printers.
Page Size	Select from a list of standard page sizes. This value should correspond with the size of the paper in your printer.
Page Range	Choose whether to print the entire document or one page.
Image Size	If Page Range is This Page (As Image), you can choose whether to scale the image.

TABLE 16-1 Print Dialog Box Options (Continued)

Option	Usage
Image Orientation	Choose between Portrait, which prints an image vertically on the page, and Landscape, which prints it horizontally.
Image Position	Choose between Centered (default), which prints the image in the center of the page, and Margins, which uses the entered values for the top and left margins. The button labeled "in" or "cm" controls whether margin values are in inches or centimeters.

▼ To Print (With Options)

- 1. Choose Print from the File menu.**
The Print dialog box appears.
- 2. Specify the details of the print job your print parameters.**
See Table 16-1.
- 3. Click Print.**

▼ To Preview a File to Be Printed

To see how the contents of the View window will appear when printed with the current Print dialog box settings:

- 1. Choose Print Preview from the File menu.**
The Print Preview dialog box appears.
If the image is too big to fit on a single page, lines in the Print Preview window show you the boundaries of the printed page.
- 2. To control which area of the image or page is printed, move the pointer into the window (it changes to a hand shape) and use mouse button 1 to drag the image into position.**
- 3. To print the image, click Print, and then click Print in the Print dialog box that is displayed.**
See "Print Dialog Box" on page 432 for information about print settings.
- 4. Click Close to close the Print Preview dialog box.**

▼ To Print a Document

To print a single copy of the image or multiple-page document you are viewing:

- **Choose Print One from the File menu.**

Image Viewer prints one copy of the file, using the current Print dialog box settings.

See “Print Dialog Box” on page 432 for information about Print settings.

▼ To Print a Page from a Document

1. **Display the required page in Image Viewer.**

2. **Choose Print Page from the File menu.**

Image Viewer prints one copy of the current page on the current printer.

▼ To Print an Image File

1. **Display the required image in Image Viewer.**

2. **Choose Print Image from the File menu.**

Image Viewer prints one copy of the current image file on the current printer.

Image Viewer File Formats

You may want to identify the specific format, or file type, of the file you want to open. Image Viewer can open files in the formats listed in Table 16–2, which you can specify by choosing Open As from the File menu.

TABLE 16–2 Image Viewer Open File Formats

Andrew Toolkit	Kodak Photo CD (Base/4)
Atari Compressed Spectrum*	Lisp Machine Bit-Array
Atari Degas 1*	MGR
Atari Degas 3*	MTV/PRT Ray-Tracer
Atari Uncompressed Spectrum*	MacPaint

TABLE 16-2 Image Viewer Open File Formats *(Continued)*

AutoCAD Slide	PBM
Benet Yee Face File	PC PaintBrush
CMU Window Manager	PGM
Encapsulated PostScript (EPSF)	PICT
FITS	PPM
GEM	PostScript
GIF	QRT Ray-Tracer
Gould Scanner	Sun Icon
Group 3 FAX	Sun Raster
HIPS	TIFF
HP PaintJet	TrueVision Targa
IFF ILBM	Usenix FaceSaver
Img-Whatnot	X Bitmap
JFIF (JPEG)	X11 Window Dump (XWD)
Kodak Photo CD (4Base)	XPM
Kodak Photo CD (Base)	Xerox Doodle Brush
Kodak Photo CD (Base/16)	Xim

*SPARC only.

Image Viewer can save files in the formats listed below:

Encapsulated PostScript (EPSF)	GIF
JFIF (JPEG)	PostScript
Sun Raster	TIFF
XPM	

Using Snapshot

Snapshot takes a “snapshot” of a window, of a region of the desktop, or of the entire desktop screen. You can then view, save, or edit the snapshot in Image Viewer.

▼ To Start Image Viewer Snapshot

- **Choose Snapshot from the Image Viewer File menu**

Or, start Image Viewer with the `-snapshot` option:

```
sdt image -snapshot
```

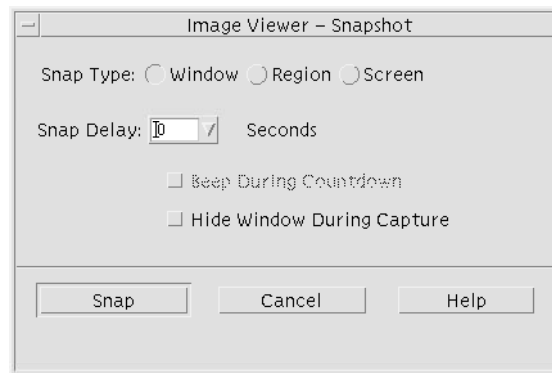


FIGURE 16-5 Snapshot window

▼ To Take a Snapshot of a Window

1. **If Snapshot is not running, choose Snapshot from the Image Viewer File menu.**
2. **Select Window as the Snap Type.**
3. **Click the Snap button.**
The mouse pointer becomes a plus sign.
4. **Move the mouse pointer to the window to be snapped and click mouse button 1.**
The message at the bottom of the Snapshot dialog box reads “Snap succeeded” once the window is snapped.

▼ To Take a Snapshot of a Region

1. **If Snapshot is not running, choose Snapshot from the Image Viewer File menu.**
2. **Select Region as the Snap Type.**
3. **Click the Snap button.**

The mouse pointer becomes a plus sign.
4. **Move the mouse pointer to a corner of the region to be snapped, press and hold mouse button 1, drag the mouse diagonally to encompass the region to be snapped, and release mouse button 1.**

The message at the bottom of the window reads “Snap succeeded” once the region is snapped.

▼ To Take a Snapshot of the Screen

1. **If Snapshot is not running, choose Snapshot from the Image Viewer File menu.**
2. **Select Screen as the Snap Type.**
3. **Click the Snap button.**

The message at the bottom of the window reads “Snap succeeded” once the screen is snapped.

▼ To Take a Delayed Snapshot

When taking a snapshot of a menu or some other pop-up or pull-down element, you can delay the time between clicking Snap and the snapshot being taken.

1. **If Snapshot is not running, choose Snapshot from the Image Viewer File menu.**
2. **Determine the number of seconds to delay by using the down arrow button and selecting a value or by typing in the text field.**

The next time you click Snap, the snapshot will be delayed by the specified number of seconds.
3. **(Optional) If you want to hear the seconds counted off before the snapshot is taken, select Beep During Countdown.**
4. **Select a Snap Type and click Snap.**

If Snap Type is Region, drag mouse button 1 to select the region to be snapped.

5. Make any necessary adjustments to the image during the snap delay time.

You can display a menu, for instance, by clicking on an item in a menu bar.

After the specified number of seconds, the window, region, or screen is snapped and “Snap succeeded” is displayed in the message area at the bottom of the window.

▼ To Hide the Snapshot Dialog Box While Taking a Snapshot

If you want a snapshot of the entire screen and do not want the Snapshot dialog box to be included in the image, you can hide the Snapshot dialog box while you take a snapshot.

1. If Snapshot is not running, choose Snapshot from the Image Viewer File menu.

2. Select the Hide Window During Capture check box.

The Snap Delay changes to 8 seconds and the message area at the bottom of the Snapshot dialog box displays “Timer adjusted to guarantee correct operation.”

3. Click Snap to take the snapshot.

All Image Viewer windows disappear and do not reappear until after the snapshot has been taken.

▼ To Save a Snapshot

See “To Save an Image as a New File” on page 428 for instructions for saving a captured snapshot image.

Using Video and Audio

Video is the Java Media Player application used for viewing or saving video data in several formats. The Java Media Player is automatically launched once you select the *Audio/Video* menu option from the *Applications* menu. This is the default unless you select the Audio option to customize your environment.

Audio is a CDE Motif application for playing, recording, or saving audio data in AU (Sun), WAV (PC), or AIFF (Macintosh) format.

- Video Overview
- Starting and Quitting Audio
- Audio Main Window
- Voice Notes
- Displaying the Waveform Window
- Opening and Playing Audio Files
- Recording with Audio
- Audio Control
- Menus
- Using the Tabs
- Controlling Master Recordings
- Controlling Master and Application Output
- Recording Using the Master Application Input
- Using the Status Dialog

Video

Overview

Use the Java Media Player for viewing multimedia files. The Java Media Framework (JMF) is an application programming interface (API) for incorporating media data types into Java applications and applets. It is specifically designed to take advantage of Java platform features.

Java Media Player Main Window

All video functions start with the main window.



You can open a video file by choosing Open file from the File menu. Once you open a file, the main window alters to display the file and a control panel at the bottom of the screen.



The control panel consists of the following icons and their respective functions:



Click this button to begin playing a file.



Click this button to pause a file.



This button indicates how far a file has played.



Click this button to alternatively turn on or turn off the sound.



Click this button to increase or decrease the volume.



Click this button to view information on a file.

Supported Media Formats

The Java Media Player supports the following formats:

Aiff (.aiff)

- 8 bits mono/stereo linear
- 16 bits mono/stereo linear
- G.711 mono
- IMA4 ADPCM

AVI (.avi)

Audio:

- 8 bits mono/stereo linear
- 16 bits mono/stereo linear
- G.711 mono
- GSM mono

Video

- Cinepak
- Indeo (iv31 and iv32)
- JPEG (411, 422, 111)

GSM (.gsm)

- GSM mono audio

MIDI (.midi)

- Type 1 & 2 MIDI audio files

MPEG-1 (.mpg)

This format is not available on Solaris x86.

- Video: MPEG-1
- Audio: MPEG-1, Layer 1 and 2

MPEG audio (.mp2)

This format is not available on Solaris x86.

- MPEG layer 1 or 2 audio

Quicktime (.mov)

Audio:

- 8 bits mono/stereo linear
- 16 bits mono/stereo linear
- G.711 mono
- GSM mono
- IMA4 ADPCM
- u-law

Video:

- Cinepak
- H.261
- H.263
- Indeo (iv31 and iv32)
- JPEG (411, 422, 111)
- Raw
- RLE
- SMC

RMF (.rmf)

Headspaces Rich Media Format audio files.

RTP

Audio:

- 4 bits mono DVI 8 kHz
- 4 bits mono DVI 11.05 kHz
- 4 bits mono DVI 22.05 kHz
- 4 bits mono DVI 44.1 kHz
- G.711 mono
- GSM mono
- G.723 mono

Video:

- JPEG (411, 422, 111)
- H.261
- H.263

Sun Audio (.au)

- 8 bits mono/stereo linear
- 16 bits mono/stereo linear
- G.711 mono

Vivo (.viv)

Video: H.263

Wave (.wav)

- 8 bits mono/stereo linear
- 16 bits mono/stereo linear
- G.711 mono
- GSM mono
- DVI ADPCM (not MSADPCM)

Using the Java Media Player

The following tasks can be performed on multimedia files using JMF.

To Open a New Java Media Player

- From the File menu, select New player.

To Exit the Java Media Player

- From the File menu, select Exit.
The Java Media Player server shuts down 15 seconds after the last player exits.

To Open a File

- From the File menu, select Open file.

To Close a File

- From the File menu, select Close player.
This will close the file but will not exit the Java Media Player.

To Open a URL

- From the File menu, select Open URL.

▼ To Play a File

1. From the File menu, select Open file.
2. Enter the path or folder name in the text field.
3. From the Files window, double click the file that you want to open.

To Stop or Pause a File

- Click on the triangle at the bottom left of the screen.

To Rewind a File

- Click and drag the slider to your left.
The file will begin playing from the point you placed the slider.

To Forward a File

- Click and drag the slider to your right.

The file will begin playing from the point you placed the slider.

To Adjust the Volume

You can either adjust or mute the volume for a file. To adjust the volume of a file:

- Click on the triangles at the bottom right of the screen.
A progress bar will indicate the change in volume.

To select mute for a file:

- Click on the speaker icon at the bottom right of the screen.
The icon will change to indicate that the file is in mute mode.

▼ To Set the Play Rate for a File

1. Place the cursor over the triangle on the lower left of the screen.
2. Right-click the mouse button.
3. From the pull-down menu select one of the options.
 - 1/10 speed - 1/10th the original rate
 - Half speed - 1/2 the original rate
 - Normal speed - the original rate
 - Double speed - twice the original rate
 - Triple speed - three times the original rate
 - Quadruple speed - four times the original rate

▼ To Alter the Screen Size

1. Place the cursor over the screen.
2. Right-click the mouse button.
3. From the pull-down menu select a zoom option:
 - Half Size - Shrinks the screen to half its original size
 - Normal - Alters the screen to accommodate the picture
 - Double Size - Expands the screen to twice its original size
 - Quadruple Size - Adjusts the screen to 4 times its original size

To Display Information on a Video File

- Click on the “i” icon on the bottom right of the screen.
A pop-up window displays details on the file you are viewing.

Starting and Quitting Audio

There are several ways to start Audio:

- From the Front Panel
- From the command line
- From the Workspace Programs menu

▼ To Start Audio From the Front Panel

1. **Click the Voice Note control on the Applications subpanel to start the application.**
Audio runs in note mode, and automatically starts recording.
2. **Click the Stop button to stop recording.**



▼ To Start Audio From the Command Line

You can start Audio and open files directly from the command line.

- **Type `sdtaudio` to start Audio.**
- Or:*
- **Type `sdtaudio filename` to start Audio and open a specific file.**

▼ To Start Audio From the Workspace Programs Menu

1. Place the mouse pointer anywhere on the background of the desktop (the workspace) and click mouse button 3.
The Workspace menu appears.
2. Choose **Programs**, and then choose **Audio** from the Programs submenu.
The Audio main window is displayed.

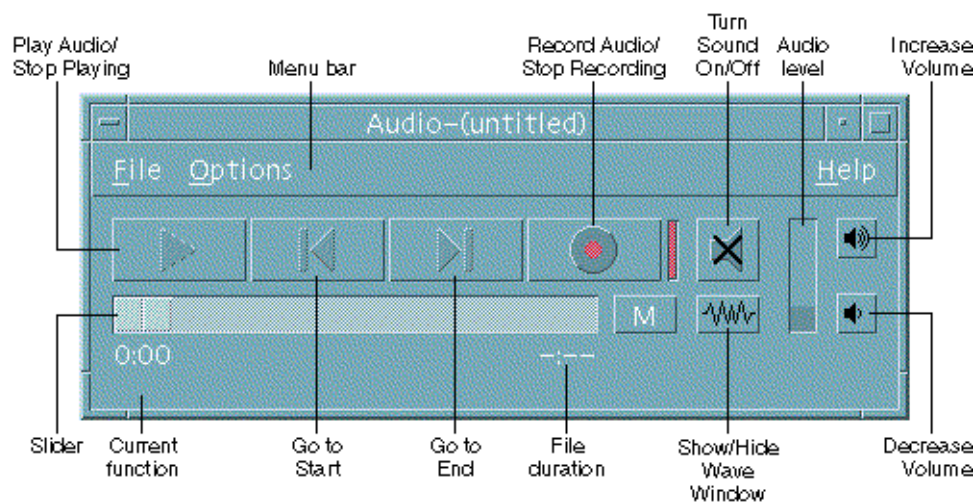


▼ To Exit Audio

- Choose **Exit** from the File menu or **Close** from the Window menu, or hold down the Alt key and press the F4 key with the mouse cursor over the Audio main window to exit Audio.

Audio Main Window

All Audio functions start with the main window. Open an audio file by choosing Open from the File menu; record by choosing New from the File menu and clicking the Record Audio button; set startup, recording, or playing options by choosing the appropriate item from the Options menu.



Voice Notes

In the same way as Text Note allows you to rapidly create small text files and display them on the desktop, Voice Note allows you to record an audio message and save it on the desktop for playing later. For example, you might want to record the pronunciation of a foreign name, or a useful quotation which you don't want to type.

The Voice Note control is located on the Applications subpanel of the Front Panel. When you click the Voice Note control it runs the Audio application, which immediately starts recording from your host's microphone. To stop recording, you click the Stop button or exit the Audio application.

The sound file that is created is displayed on your desktop when you exit the Audio application. You can remove it by choosing Remove From Workspace from the right-mouse button popup menu. You can remove it from your file system by deleting it from your home directory.



Caution – If you click the Voice Note control and neglect to stop Audio, it can record and save a huge file that may eventually use up all your disk space.

Displaying the Waveform Window

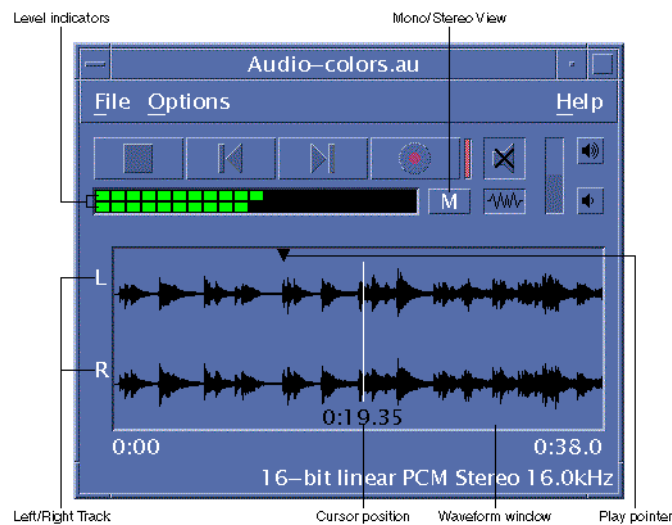
An audio file can be displayed with or without a waveform displayed. The waveform is a graphic depiction of the sound levels of an audio file.

▼ To Display the Waveform Window

1. To show the waveform window, click the **Show Wave Window** button.
2. To hide the waveform window, click the button again.

The button is a toggle, changing from Show Wave Window to Hide Wave Window and back again to Show Wave Window as it is clicked.

If stereo viewing is enabled, the window depicts levels and volume individually for left and right channels.



▼ To Start Audio With the Waveform Displayed

1. Choose **Startup** from the **Options** menu.

The Options dialog box is displayed, with Startup selected as the Category. If the Options dialog box is already displayed, choose Startup from the Category menu.

2. **Click Waveform View Enabled or Stereo View Enabled.**

3. **Click OK.**

The Options dialog box closes. The next time you start Audio the monaural or stereo waveform will be displayed. The Stereo View Enabled button is inactive if the current audio file is in monaural format.

Opening and Playing Audio Files

You can open an audio file from the Audio File menu or by dragging and dropping it from File Manager onto Audio. Once you have opened an audio file or recorded something, you can play it from the beginning or from any point in the file. You can specify whether an audio file will be played automatically when it is opened.

▼ To Open an Audio File

1. **Choose Open from the File menu or hold down the Control key and press “o” with the mouse cursor over the Audio main window.**

The Audio-Open File dialog box is displayed.

2. **Navigate to the folder where the audio file is located.**

Navigate by selecting a folder in the Folders list or by entering a folder name in the Enter path or folder name text field.

3. ***Optional.* Type an audio-file suffix (au, wav, aiff) after the asterisk (*) in the Filter field.**

Only files with the specified suffix will be listed in the Files field.

4. **Press Return or click Update to update the change in the folder location or filter field.**

5. **Select a file from the Files list.**

6. **Double-click the file in the Files list or select it and click OK.**

The selected file is opened. If Automatically play audio file on Open is selected in the Options-Play dialog box, the audio file starts playing.

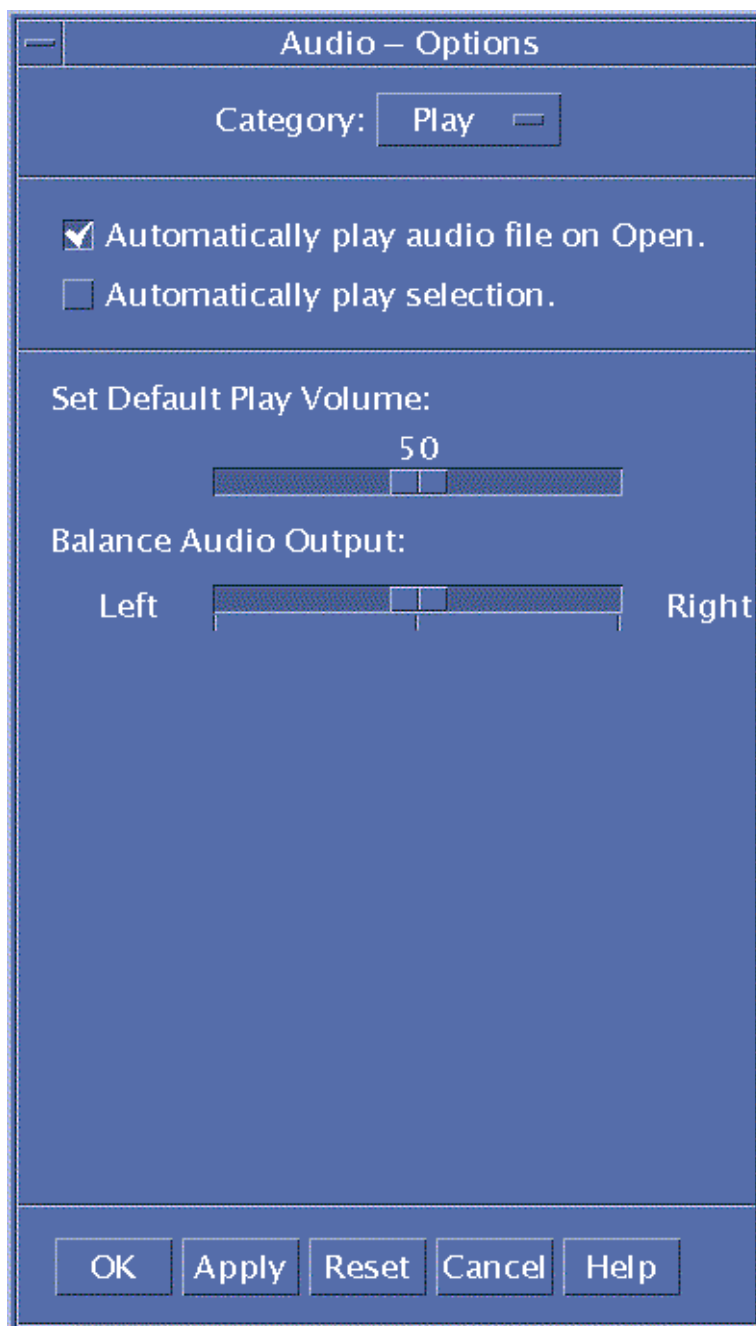
Audio automatically detects the type of device accessed. If Audio is started with a play-only device, only playback options and output sources are available. If audio is started with a record-only device, such as a microphone, only record options and input sources are available.

▼ To Open an Audio File With Drag and Drop

1. **Open File Manager and navigate to the folder where the audio file is located.**
2. **Drag the audio file icon from File Manager and drop it on the Audio main window.**
The Selected file is opened. If Automatically play audio file on Open is selected in the Options-Play dialog box, the audio file starts playing.

▼ To Specify Play Options

1. **Choose Play from the Options menu.**
The Options dialog box is displayed, with Play selected as the Category. If the Options dialog box is already displayed, choose Play from the Category menu.



2. Determine whether files should automatically play when they are opened.

- Click Automatically play audio file on Open to automatically play files when they are opened.
 - Deselect Automatically play audio file on Open if you do not want files to automatically start playing when opened.
3. **Move the Set Default Play Volume and Balance Audio Output sliders to desired positions.**
Position the mouse pointer over the slider and press mouse button 1 as you move the mouse to change slider positions.
 4. **Click OK to apply the specified values and close the Options dialog box.**

▼ To Play an Audio File

Once you have recorded something or opened an audio file, you can play it, as follows. You can play AU, WAV, or AIFF files.

1. **Click the Play Audio button.**
When you click Play Audio, play begins at the play pointer position. The file is played from the beginning if it has just been opened or if you have just created the recording. If you click the Stop Playing button during play and then click Play Audio, play begins at the previous stop point.
Note that the Play Audio button is a toggle: before play, it is Play Audio; during play, it is Stop Playing.
2. *Optional.* **Move the play pointer to a new start play position.**
To move the play pointer to the beginning of the file, click the Go to Start button.
To move the play pointer to the end of the file, click the Go to End button.
To move the play pointer to a position within the file:
 - If the waveform is not displayed, drag the slider with mouse button 1.
 - If the waveform is displayed, click anywhere in the waveform window.
3. *Optional.* **Adjust the output volume by clicking on the Increase Volume or Decrease Volume buttons.**
To mute the output, click the Turn Sound Off button.
4. **To stop playing the file, click the Stop Playing button.**

Note – The Play buttons are inactive when no file has been loaded or recorded.

Recording With Audio

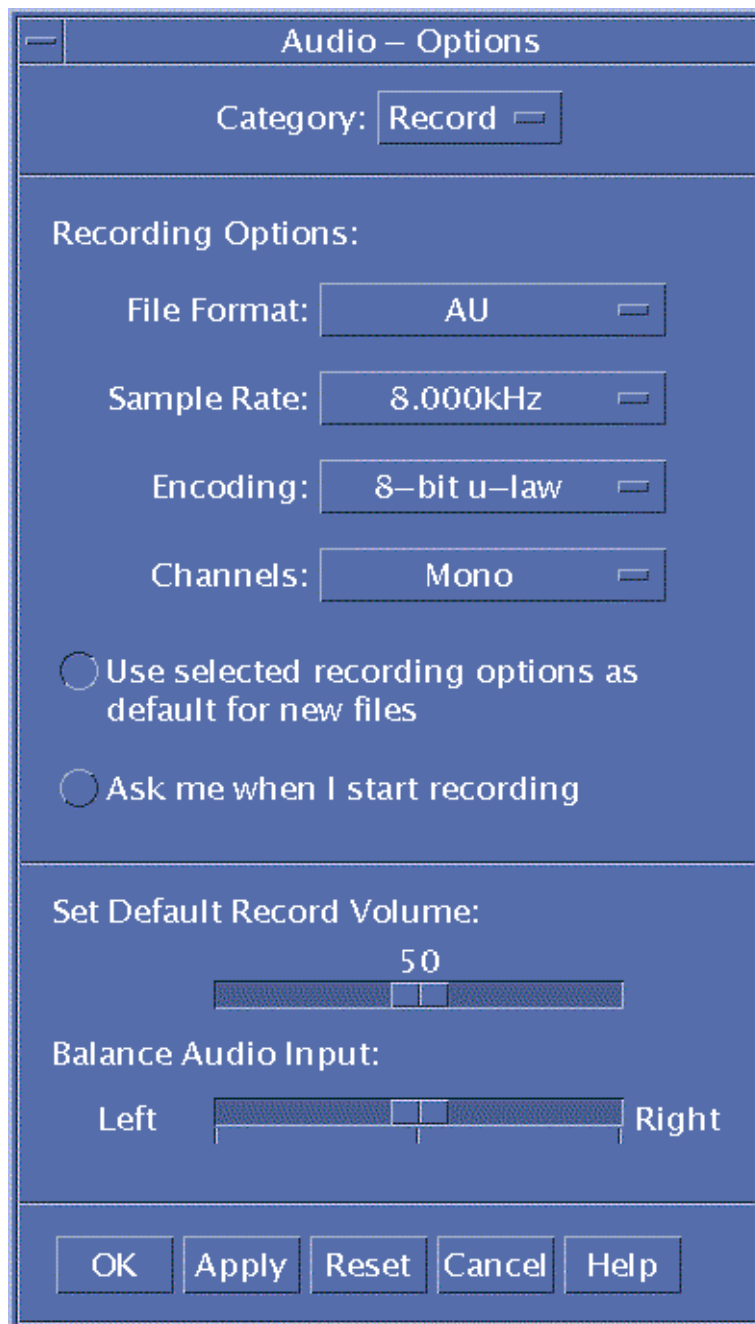
You can record and save audio files in three formats.

▼ To Specify Record Options

You can specify audio format, sample rate, encoding method, channels, record volume, and input balance in the Options dialog box. You can also specify whether you will specify the values when you start recording, or if the set values will be used automatically when recording or if you will specify the values when you start recording.

1. Choose Record from the Options menu.

The Options dialog box is displayed, with Record selected as the Category. If the Options dialog box is already displayed, choose Record from the Category menu.



2. Choose AU, WAV, or AIFF from the Audio Format menu.

AU, which is the default, is Sun audio format. WAV is Microsoft PC format. AIFF is Macintosh audio format.

- 3. Choose samples per second from the Sample Rate menu.**
8.000kHz is the default. Other rates fall in a range between 5.510kHz and 48.000kHz.
- 4. Choose an encoding method from the Encoding menu.**
Encoding method options include u-law, A-law, and linear PCM.
- 5. Choose Mono or Stereo from the Channels menu.**
Choose Mono, the default, for single-track recording, or Stereo for multiple channels.
- 6. Determine whether to use the selected recording options as the default for new files.**
 - To use the selected recording options as the default, click Use selected recording options as default for new files.
 - To specify recording options when you click Record Audio, click Ask me when I start recording.
- 7. Set default record volume and balance the audio input.**
Position the mouse pointer over the slider and press mouse button 1 as you move the mouse to set the Default Record Volume and Balance Audio Input sliders to desired positions.
- 8. Click OK to apply the specified values and close the Options dialog box.**

▼ To Create a Recording

You can record Audio files from a microphone, line-in, or CD source.

- 1. Specify recording options.**
- 2. Choose New from the File menu or hold down the Control key and press “n” with the mouse cursor over the Audio main window.**
If a previous recording has not been saved, you are asked if you want to save it.
- 3. Prepare to record.**
Be sure that the selected input device is connected to your computer and ready for transmission, and that the microphone or other input device is on.
- 4. Click Record Audio button and start recording.**
Speak, sing, or play into the microphone or start transmission of audio from a line-in or CD source. Recording starts as soon as you click Record Audio unless you have specified Ask me when I start recording in the Options-Record dialog box.

5. When recording is complete, click the **Stop Recording** button.
6. Click **Play Audio** button to play what you have just recorded.

Note – The Record Audio button, which becomes the Stop Recording button during recording, is inactive if a file is open; the button’s function is not displayed in the current function area when it is inactive. Similarly, the Play and Go to buttons are inactive when no audio file has been opened or recorded.

▼ To Save an Audio File or a Recording

You can save an existing audio file or a new recording in AU, AIFF, or WAV format.

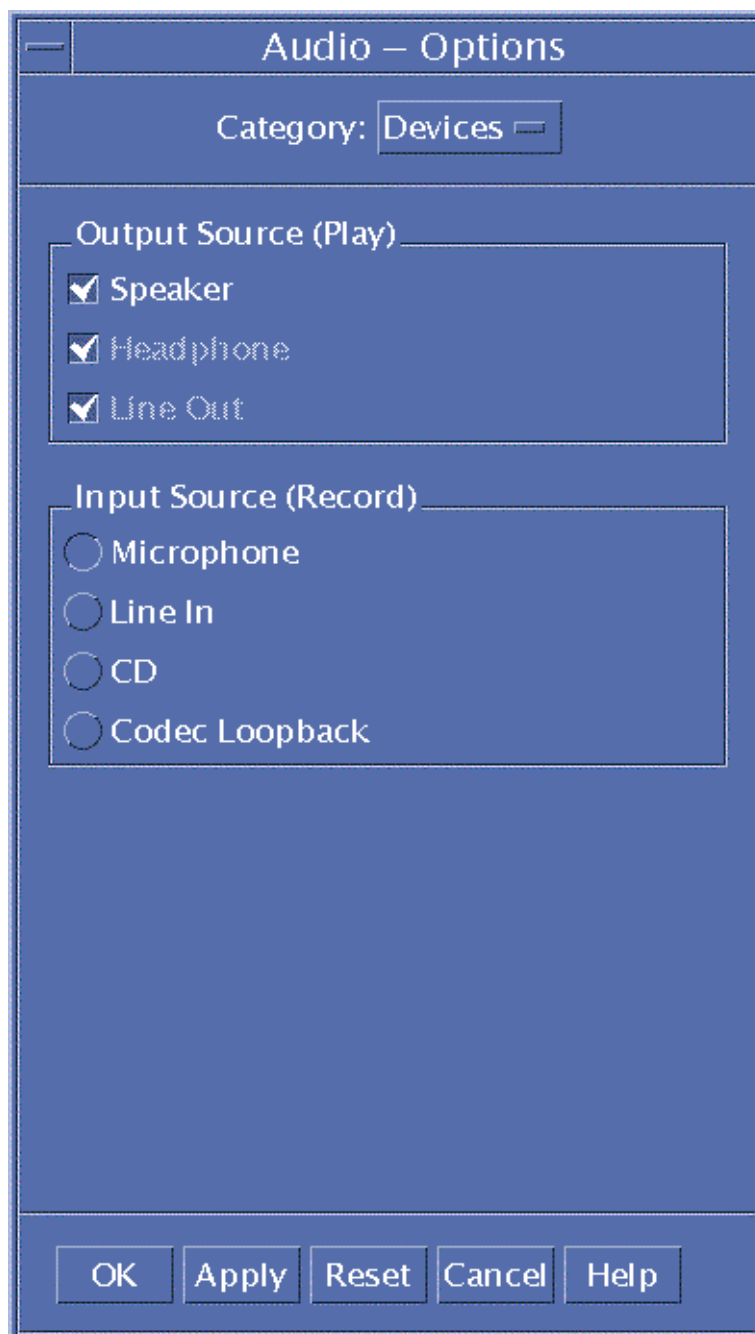
1. **Choose Save As from the File menu or hold down the Control key and press “a” with the mouse cursor over the Audio main window.**
The Audio - Save As dialog box will be displayed.
2. **Specify the folder in which you want to save the file.**
Change to a different folder, if you wish. Press Return or click Update to update the folder location.
3. **Choose a format (AU, WAV, or AIFF) from the Audio Format menu.**
AU, which is the default, is Sun audio format. WAV is Microsoft PC format. AIFF is Macintosh audio format.
4. **Type a name in the Enter file name field.**
Audio files are usually named with .au, .wav, or .aiff suffixes for easy identification. To overwrite an existing file, select the file in the Files list.
5. **Click OK to save the audio file or recording.**

▼ To Specify Input and Output Device Options

You can specify output (play) and input (record) devices for playing and recording. Audio automatically detects the type of device accessed. If Audio is started with a play-only device, only playback options and output sources are available. If Audio is started with a record-only device, such as a microphone, only record options and input sources are available.

1. Choose Devices from the Options menu.

The Options dialog box is displayed, with Devices selected as the Category. If the Options dialog box is already displayed, choose Devices from the Category menu.



2. Select Speaker, Headphone, or Line Out as Output Sources.

Note that you can select more than one output source. Only devices that are installed on your computer are active.

3. Select Microphone, Line In, CD, or Codec Loopback as the Input Source.

Only devices that are installed on your computer are active.

4. Click OK to apply the specified values and close the Options dialog box.

▼ **To Display Information About an Audio File**

- **To view file information, choose Get Info from the File menu.**

The File Information dialog box is displayed.

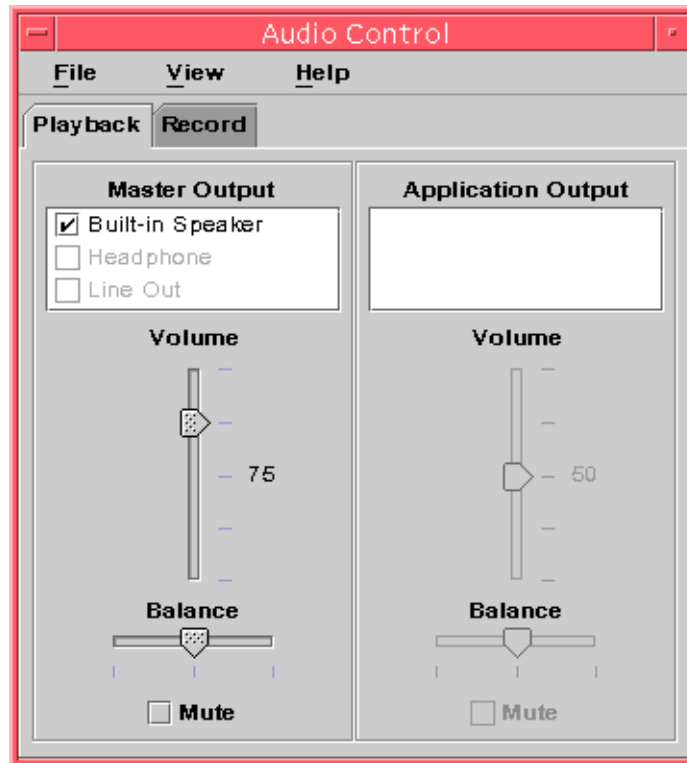


Audio provides the following information about the current file:

- File name
- File size in kilobytes
- File length in seconds
- Number of channels
- Sample rate (in kilohertz)
- Encoding (how many bits, what standard, etc.)

Audio Control

Audio Control enables you to control the volume and balance levels for playback and recording. Please refer to the following illustration for an example of the Audio Control window.

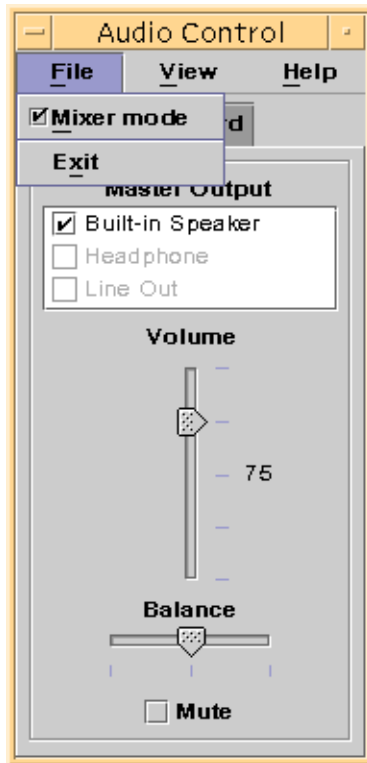


Menus

There are three menu items available:

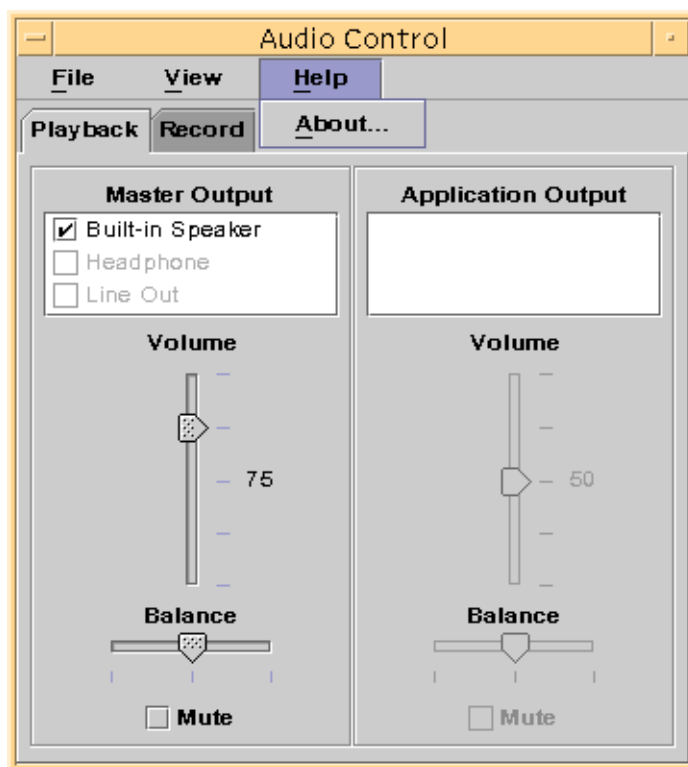
- File — controls whether or not you want Mixer Mode enabled (the default is enabled). Mixer mode enables you to listen to two audio sessions at once. For example, while listening to a Sun Microsystems broadcast you will also be able to

hear the tone alerting you that you have new mail. Refer to the following illustration for an example of the Mixer mode enabled.



File is also where you will find the Exit command when you are ready to quit Audio Control.

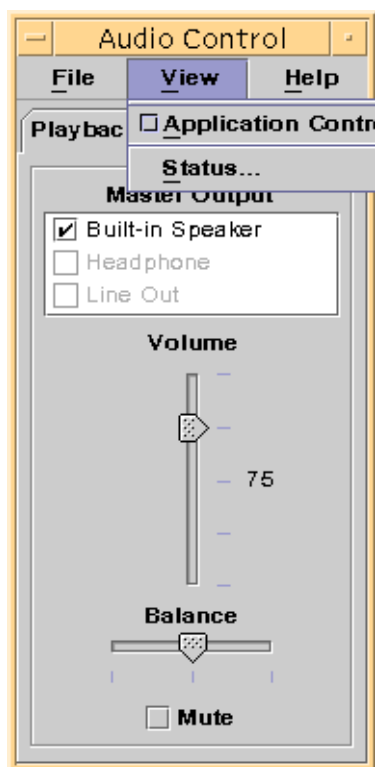
- View — controls your audio input and output. Toggling the Applications Control shows/hides (toggles) all Master and all Application processes.
- Help — provides you with assistance in all areas of Audio Control. Refer to the following illustration for an example showing the Help pull-down menu.



Using the Tabs

There are two tabs, Playback and Record. Audio Control detects the type of device being used and displays the appropriate tab. The Playback window appears if used with a play-only device, such as speakers. The Record tab appears when used with a record-only device, such as a microphone.

If your device supports both play and record, you can switch between adjusting Playback (Output) and Record (Input) by selecting the corresponding tab (toggles). If you have the Playback tab selected when you check the Application Controls box, the Application control box also displays. Refer to the following illustration for an example of this.



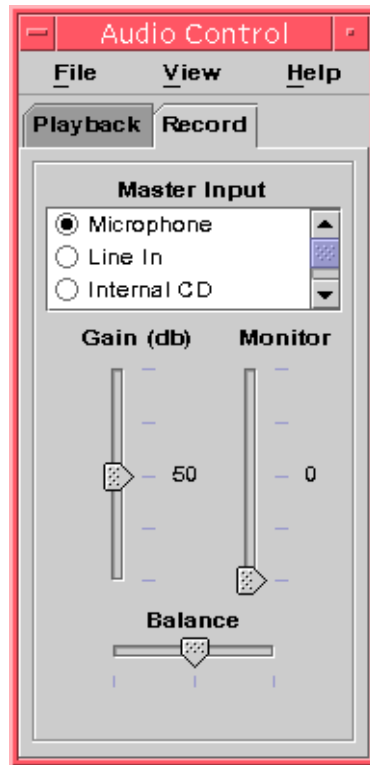
Master Output

The following controls are provided on the Master Output window:

- Output Source — contains a list of available output sources. You check and uncheck sources to turn them on and off. Your choices are Built-in Speaker, Headphone, and Line Out. This list can grow to accommodate additional output devices. Volume and balance levels apply to all sources simultaneously, not to individual sources to turn them on and off.
- Volume slider —for setting the master volume for all sources. The absolute level is displayed in a text label next to the control (the value is 50 in the figure above.) The displayed value changes as the slider is moved up and down.
- Balance slider — for setting the balance for all sources.
- Mute — for simultaneously muting all output sources.

Controlling Master Recordings

You can control master recording parameters on the Master Recording window. Access it by selecting the Record tab at the top of the window. Please refer to the following illustration for an example of this.



The controls provided are:

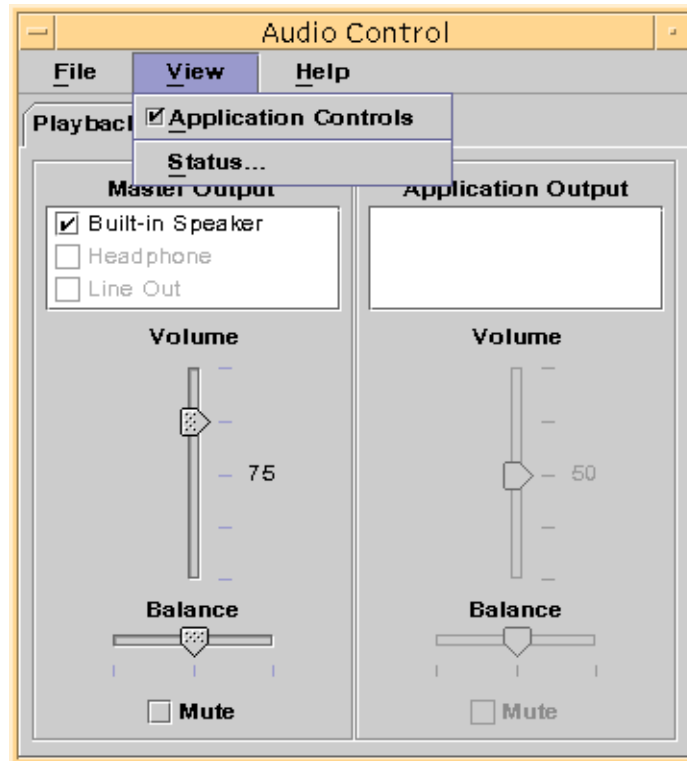
- Master Input — contains a list of the available input sources. You can choose only one input source at a time. The default choices are Microphone, CD ROM, and Line In. This list can grow to accommodate additional input device.
- Gain (db) slider — for setting the master gain (recording volume). The level is displayed next to the control (the value is 50 in the previous figure.) The displayed value changes as the slider is moved up and down.
- Monitor slider — for adjusting the volume of the incoming audio that is sent to the output device(s). It allows you to monitor the audio as it is being recorded.

- Balance slider — for setting the recording balance for the selected source.

Controlling the Master and Application Output

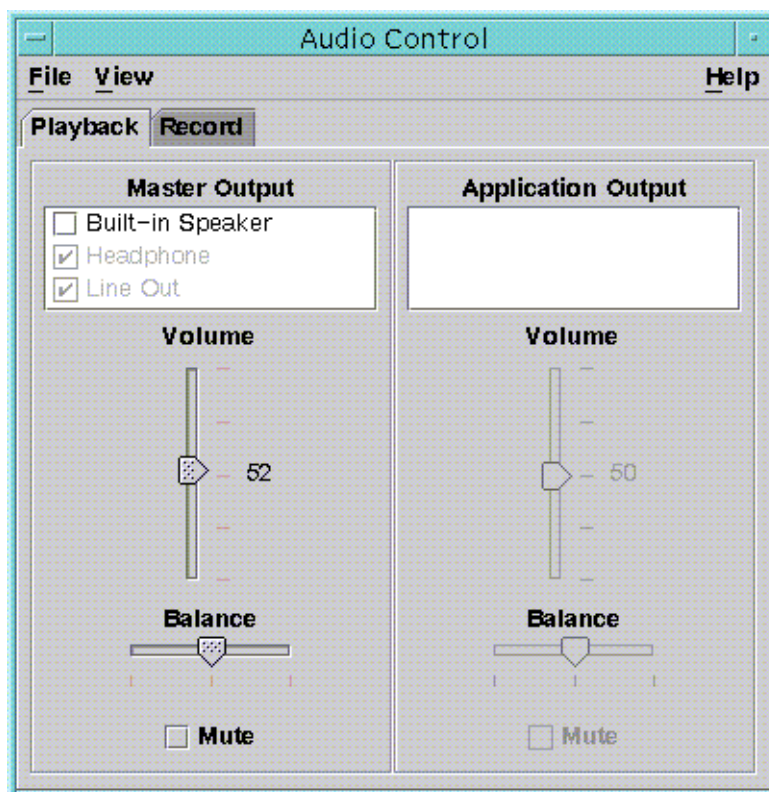
The Playback tab lets you control individual process audio output parameters. You can access it by selecting the Application Controls option from the View menu when the Playback tab is active. The new controls provided are exactly the same as those provided for the Master Output, with the exception that they are provided for one process at a time, rather than for an entire output device. Processes that are currently using audio are displayed in the list box at the top of the panel. By selecting a process,

you can individually control the volume, balance, and muting of that process. If you have multiple audio channels, you can customize the individual volume and balance of each channel.



Recording Using the Master and Application Input

You can control individual process' audio input parameters using the Master and Application Input screen. You access it by selecting the Application Controls option from the View menu when the Record tab is active. Refer to the following illustration for an example of this.

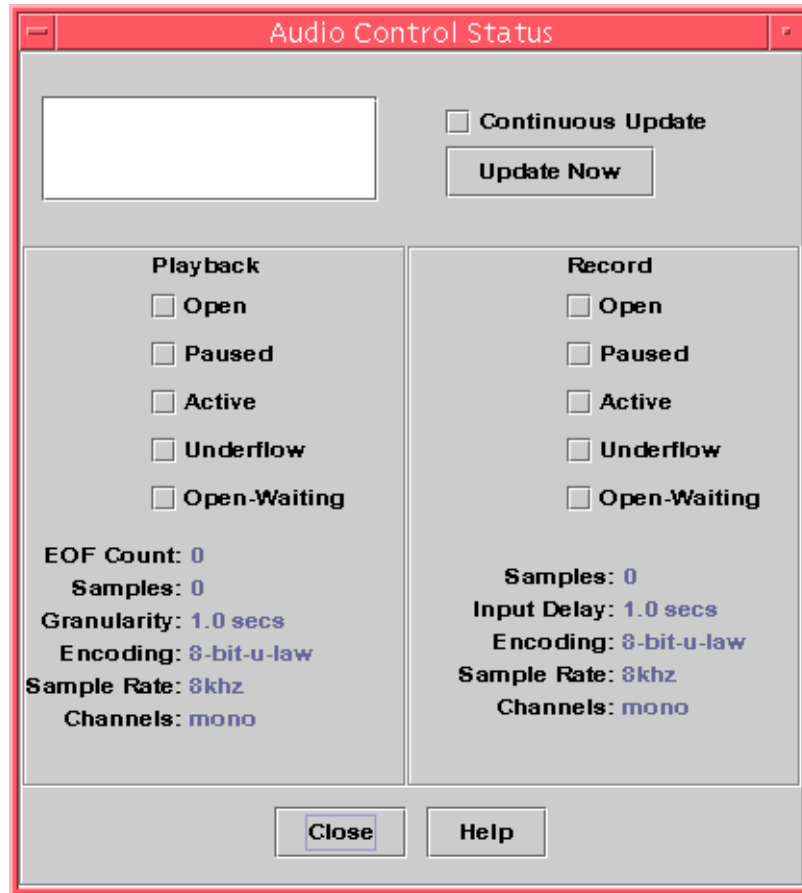


The controls provided behave exactly the same as those provided for the Master Output, with the exception that they are provided for one process at a time, rather than for an entire output device. Processes that are currently using audio are displayed in the list box at the top of the panel. By selecting a process, you can individually control the gain, and balance of that process. The Monitor volume is controllable only at the master level, so there is no Monitor Volume Slider on the Application Input panel.

Using the Status Dialog

This dialog allows you to view playback and recording status at the master level for each process. You can access it by selecting Status from the View menu. Audio Control

detects the type of device in use. If the device supports playback, the Playback Status appears, if the device supports recording, the Record Status appears. Please refer to the following illustration.



The controls provided are:

- Process List Box — this is a list of the items available for status monitoring. You can choose to view Master status or to see status for each of the running processes that are using dev/audio. You can choose only one process (or Master) to monitor at a time. As you select items in the list, the Playback and Record panes in the lower portion of the dialog update to reflect the status for the selected item being monitored.
- Continuous Update Checkbox — status is displayed at the time the dialog was invoked, unless you check Continuous Update. If Continuous Update is checked, the status for the selected process is continuously monitored and updated.

- Update Now Button — if Continuous Update is not turned on, you can update the display by clicking Update Now. If Continuous Update is turned on, the Update Now button is disabled (grayed out.)

The status of each of the following parameters being monitored and is represented by either an LED icon in the on or off state, or a text string with the details of the status item being displayed.

Playback and Record

- Open — The device is open by a process. The device may be opened read only, write only, or read and write. Which is why there is an open for play and one for record. These will be used only when mixing is disabled.
- Paused — The applications has commanded the device to pause playing or recording. Just like Open, you can have one direction paused while the other is active. Also, this will be used only when mixing is disabled.
- Active — Sound is being played or recorded. In mixer mode this means at least one stream is playing or recording. It is possible that other streams will be paused. When the mixer is off then there can be only a single play and record stream, so this means that single stream is active.
- Underflow — When playing there wasn't enough audio available so the device underflowed and there is silence. With the mixer this means that the stream didn't have enough sound to mix into the audio stream that is being played, so that one stream will have silence.
- Open-Waiting — When the mixer is turned of this means a process is trying to open the audio device and can't because another process already has the device open. When the mixer is enabled it means a process is either trying to open the audio device a second time for the same direction, or the mixer is out of resources and is waiting for another process to close the audio device and free up a resource for use.
- EOF Count — When playing it is possible to mark the audio stream so that you know when a segment has been played. This is done by doing a zero sized write and accepting signal. Each time this marker is encountered while playing the EOF Count will be incremented by one and a signal will be sent to the application.
- Samples — The number of sample frames that has been played or recorded. A sample frame is all samples to play one sample time. For example, playing a mono audio stream means that one sample frame has one sample, but playing a stereo stream means that one sample frame has two samples. One for the left channel and one for the right channel.
- Encoding — This combines two audio format properties, precision and encoding. Precision is the number of bits each sample uses. We support 16 bits and 8 bits. The encoding method determines any processing of the audio sample. This is usually done to compress the size of the audio stream so not as much data needs to be sent over the network or stored on disk. We support "linear" which is linear pulse code modulation, AKA linear PCM. We also support u-Law (u is for the Greek letter mu,

which can't be reproduced in simple text like this, but it can in postscript), and A-Law. When combined together with precision we support 16-bit Linear PCM, 8-bit Linear PCM, 8-bit u-Law, and 8-bit A-Law. Also, linear PCM may be signed or unsigned, we support only signed.

- **Sample Rate** — The number of times a second the audio stream is sampled and thus converted from an analog signal to a digital number for recording. Or converted from a digital number to an analog signal when playing. The higher the number the greater the accuracy of the digital signal. But a higher number also means more disk space is needed for storage or network bandwidth is needed to transfer the data.
- **Channels** — The number of samples in a sample frame. Currently we support 1 (mono) or 2 (stereo).
- **Close Button** — Dismisses the Status dialog.

Using Address Manager

Unless you already know the addresses and command-line options for remote operations, you'll find that Address Manager is the fastest way to carry out remote operations and find information about the systems and users on your network.

Address Manager can help you increase your productivity by providing information about users, email aliases and systems on your network. It can also speed up common tasks such as sending an email, remote login, setting an appointment on another user's calendar, and so on.

- "Cards" on page 477
- "To Open Address Manager" on page 483
- "Searching" on page 484
- "Performing Actions on Cards" on page 487
- "Working With Cards" on page 491

Cards

To make best use of Address Manager, you should understand the difference between address cards, host cards, and alias cards, and recognize the icons that represent them in Address Manager. You can add and edit some cards but others are created and owned by the system. Depending on its type, each card has a number of fields of information such as phone number, IP address, email alias, and so on.

Items on the Search Menu

The Search menu in Address Manager enables you to specify the types of card to search for, as listed in the following table.

TABLE 18-1 Card Types in Address Manager







Item on Search Menu	Created By	Card Type	Icon in Address Manager
System Cards	System	Address card (Conforms to vCard™ standard)	
Personal Cards	User	Editable address card (Conforms to vCard™ standard)	
System Aliases	System	Alias card (an email alias)	
Personal Aliases	User	Editable alias card (an email alias)	
Users	System (one card per username)	Address card (Conforms to vCard™ standard)	

TABLE 18-1 Card Types in Address Manager (Continued)

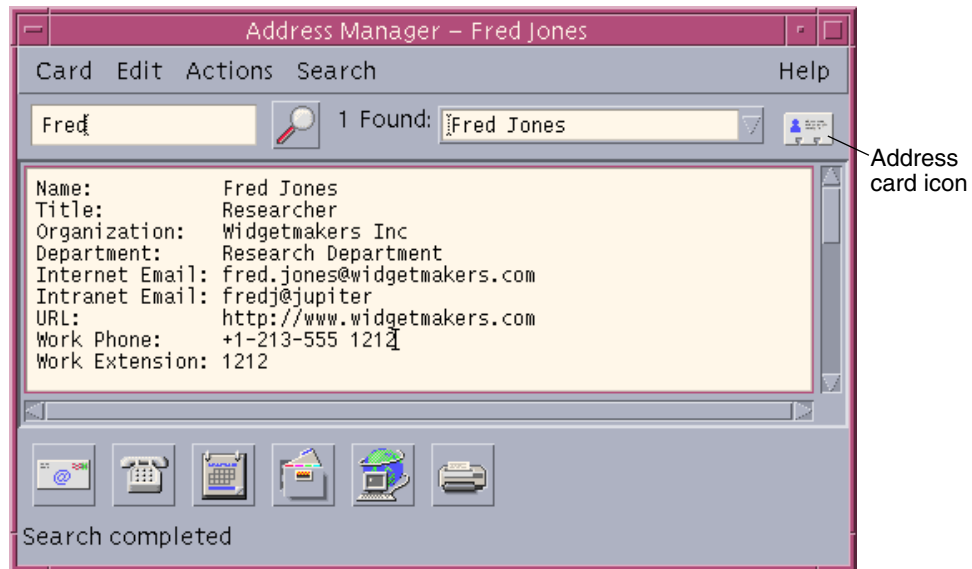
Item on Search Menu	Created By	Card Type	Icon in Address Manager
Hosts	System (one card per host)	Host card (an IP address)	

Address Cards



Address cards are similar to Rolodex™ cards in that they contain pre defined lines containing names, addresses, contact information, and so on. The name of an address

card is usually derived from a person's name, such as "FredJones" or "Fred-Jones". When searching, Address Manager searches all entries on the card to match the search text.



Address cards are based on the virtual card (vCard™) standard. This standard is supported on other operating environments and enables easier interchange of information by email. For further information, contact the Internet Mail Consortium (<http://www.imc.org>).

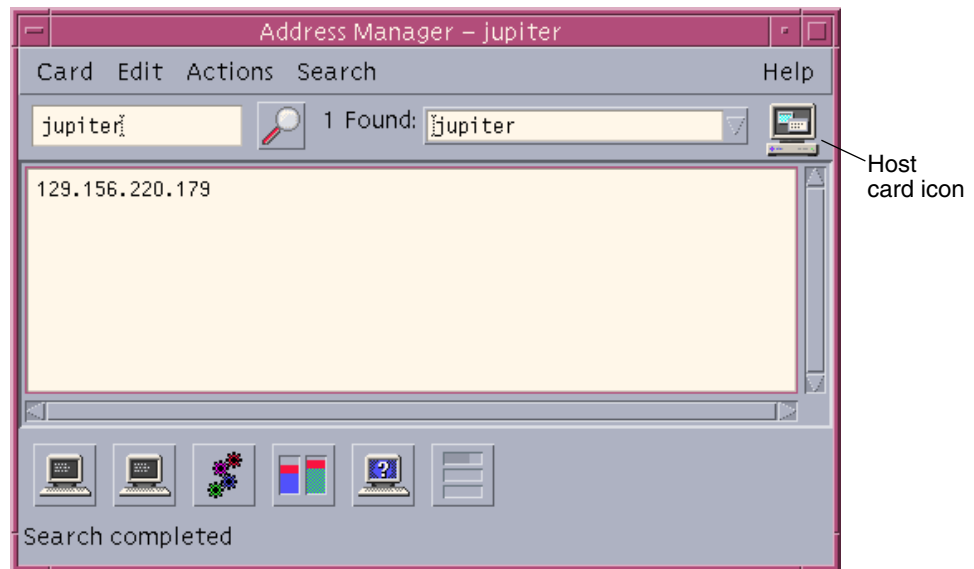
Address Manager maintains a directory on your system called the *personal cards folder* (\$HOME/.dt/Addresses) where it stores any personal address cards you create.

Note – You may have useful information on Rolo or XRolo cards: These do not follow any particular format and therefore are not automatically converted to vCards. To use the information in your XRolo cards in Address Manager, convert them to the vCard format and copy them to the Personal Cards folder.

Host Cards



Each workstation and server on your network has a host name and an associated IP address (Internet Protocol address) that uniquely identifies the workstation. A host card contains only the IP address. For example, the host card for our fictional user Fred Jones' workstation (`jupiter`) might contain the IP address `129.156.220.93`.



Host cards are created and maintained by the system and cannot be edited. They contain only host information.

Alias Cards



An alias is a pseudonym for one or more user names or user addresses used by CDE's email application, Mailer. Alias cards contain either:

- An email alias (such as `fredj@jupiter`) created by your system
- A personal email alias available from the Aliases menu in Mailer:

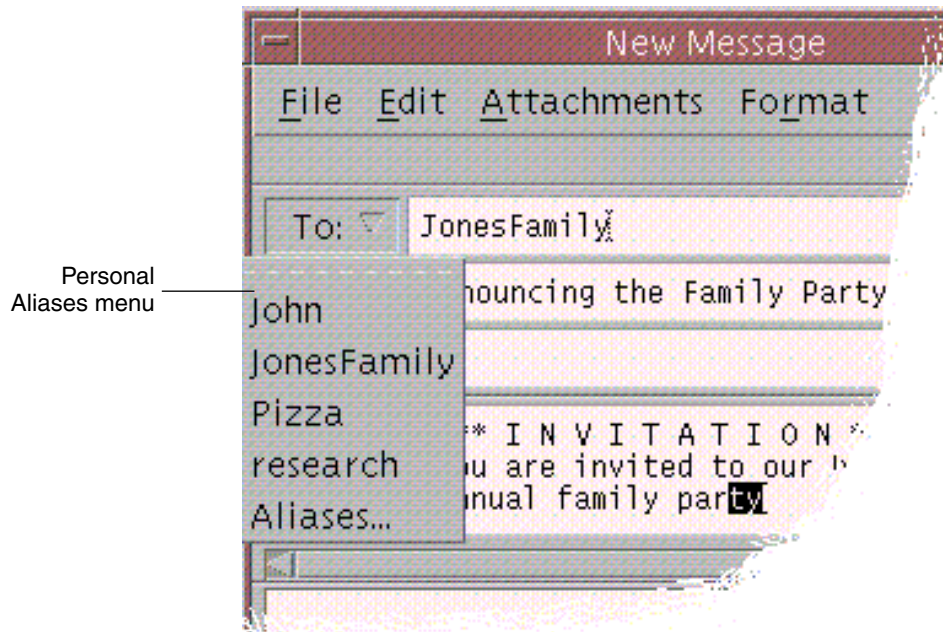
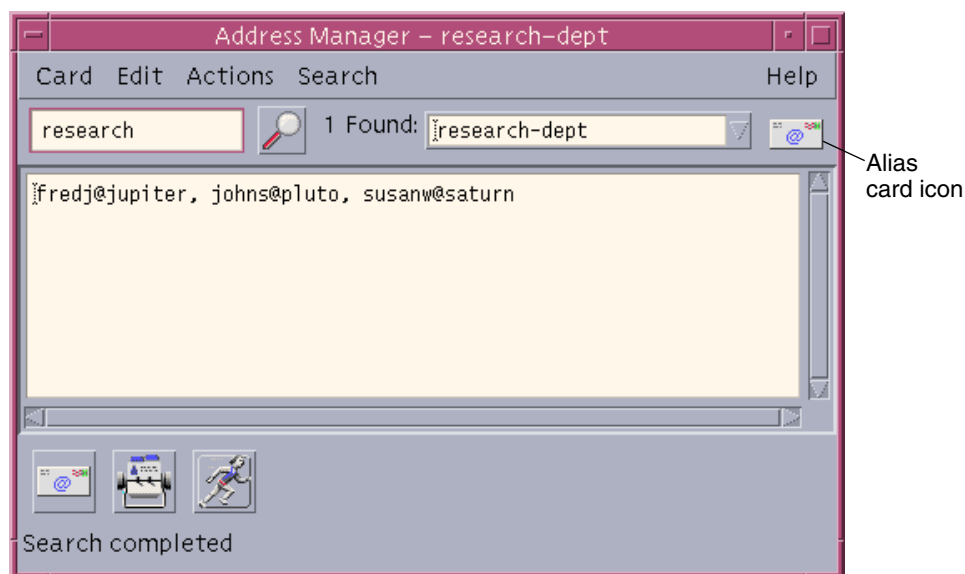


FIGURE 18-1 Alias Menu in the New Message Window in Mailer

Sending email to an alias will send the message to all the addresses listed on the alias card. For example, the alias `research` might contain the following addresses of people in the Research Department at the fictional company Widget Makers Inc.:

```
fredj@jupiter, johns@pluto, susanw@saturn
```



Alias cards contain only email addresses.

To Open Address Manager

- **Click the Find Card control in the Cards subpanel of the Front Panel.**
Address Manager opens. (Personal Cards, Personal Aliases, and System Cards are automatically selected in the Search menu.)
- **Or, click the Find Host control in the Tools subpanel of the Front Panel.**
Address Manager opens. (Hosts is automatically selected in the Search menu.)

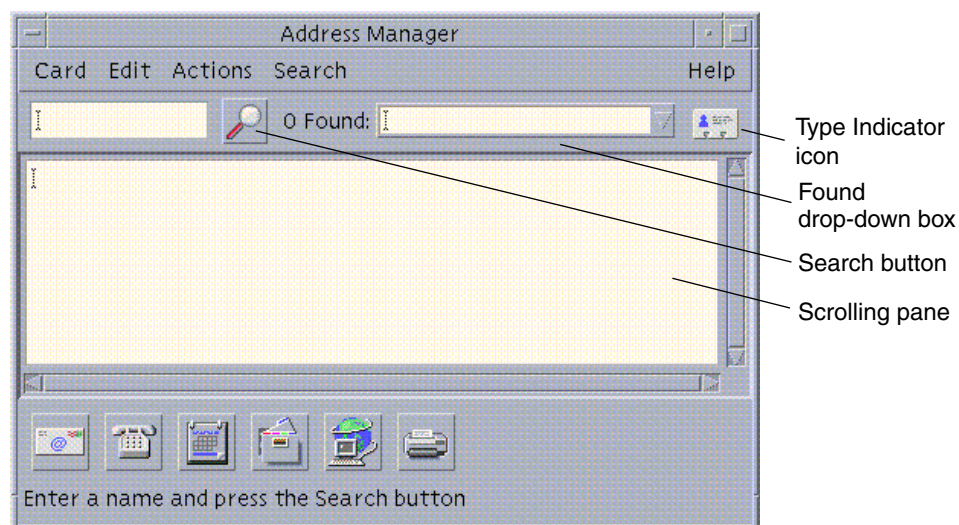


FIGURE 18-2 Address Manager Application Window.

Searching

To make the best use of Address Manager, you will need to know how to enter your search text, and how to select the types of cards to search for.

The Search menu allows you to select up to six types of card to search. When you type your search text and click the search button, Address Manager searches each card of the selected types for the search text. If it finds that text anywhere in the card, it lists the card in the Found drop-down box.

When the search is completed, indicated by the activity (spinning globe) icon reverting to a search (magnifying glass) icon:

- The first card found is listed in the scrolling pane
- The number of cards found is listed to the left of the Found drop-down box
- Any cards found are listed in the Found drop-down box
- The icon to the right of the drop-down box indicates a card's type

Tip – If your search returns no cards, check that the relevant card types are selected in the Search menu.

▼ To Find an Address Card

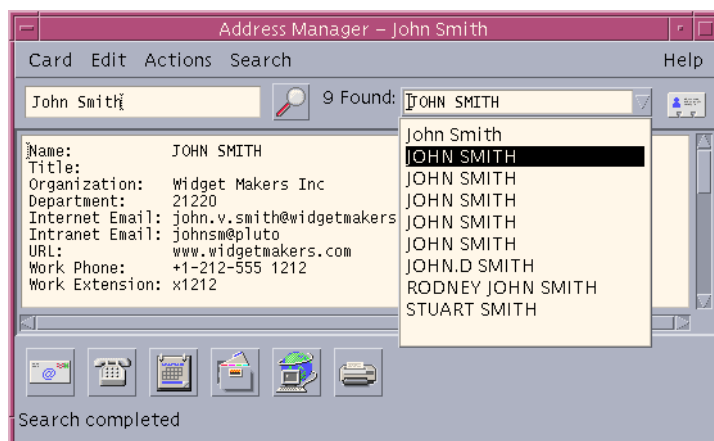
1. **Open Address Manager.**
2. **Open the Search menu and ensure that the following menu items are selected:**
 - Personal Cards
 - System Cards
3. **Type your search text in the box provided.**

Your search text should be a string of characters such as John Smith or John that you expect to find somewhere in the cards you are searching for.
4. **When you are satisfied with the search text you have entered and the types of card you are searching for, click the search (magnifying glass) icon.**

Address Manager searches in the relevant card folders for all occurrences of the specified text. Each time it finds a card matching the search criteria, it lists it in the Found drop-down box.

Tip – If no matching cards are found, refine the search text or the card types you are searching for.

5. **Use the Found drop-down box to browse the cards found and identify the required card.**



The Actions menu will list the available actions for each card type selected.

▼ To Find a Host Card

1. **Open Address Manager.**
2. **Open the Search menu and ensure that only the Hosts menu item is selected.**
3. **Type your search text in the box provided.**
Your search text should be a full or partial system name such as `jupiter`, or a full or partial IP address such as `129.150.220.93`.
4. **When you are satisfied with the search text you have entered, click the search (magnifying glass) icon.**
Address Manager searches in the relevant card folders for all occurrences of the specified text. Each time it finds a card matching the search criteria, it lists it in the Found drop-down box.

Tip – If no matching cards are found, refine the search text.

5. **Use the Found drop-down box to browse through the cards found to identify the required hosts.**
The Actions menu will list the available actions. See also “Performing Actions on Cards” on page 487.

▼ To Find an Alias Card

1. **Open Address Manager.**
2. **Open the Search menu and ensure that the following menu items are selected:**
 - Personal Aliases
 - System Aliases
3. **Type your search text in the box provided.**

Your search text should be a full or partial email alias such as fredj@jupiter or fredj.
4. **When you are satisfied with the search text you have entered and the types of cards you are searching for, click the search (magnifying glass) icon**

Address Manager searches in the specified card folders for all occurrences of the specified text. Each time it finds a card matching the search criteria, it lists it in the Found drop-down box.

Tip – If no matching cards are found, refine the search text or the card types you are searching for and try again.

5. **Use the Found drop-down box to browse through any cards found to identify the required email aliases.**

The Actions menu will list the available actions for each card type selected.

Performing Actions on Cards

When a card of a particular type is displayed in the scrolling pane, the Actions menu is updated to reflect the available actions (remote login, sending an email, and so on) for that card type.

Performing Actions on Address Cards

An address card provides contact information and location information for a particular user. When you display an address card in Address Manager's scrolling pane, the Actions menu is updated to contain the following menu items:

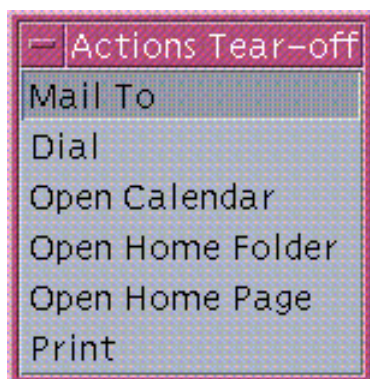


FIGURE 18-3 Actions Menu for an Address Card

TABLE 18-2 Actions for an Address Card

Action	Description
Mail To	Enables you to send mail to the listed email addresses
Dial	Enables you to dial the listed phone numbers
Open Calendar	Attempts to open the person's calendar
Open Home Folder	Attempts to open the person's home folder
Open URL	Attempts to open a URL listed on the card
Print	Prints the information from the card

Performing Actions on Alias Cards

An alias card contains one or more email addresses. When you display an alias card in Address Manager's scrolling pane, the Actions menu is updated to contain the following menu items:

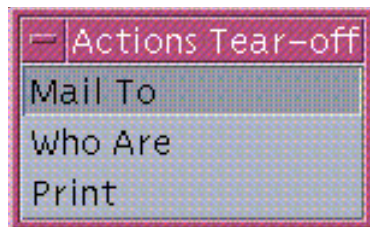


FIGURE 18-4 Actions Menu for an Alias Card

TABLE 18-3 Actions for an Alias Card

Action	Description
Mail To	Enables you to send mail to the listed email addresses
Who Are	Attempts to resolve the alias into a global address
Print	Prints the information from the card

Performing Actions on Host Cards

A host card contains a host name and an IP address. When you display a host card in Address Manager's scrolling pane, the Actions menu is updated to contain the following menu items:



FIGURE 18-5 Actions Menu for a Host Card

TABLE 18-4 Actions For a Host Card

Action	Description
Terminal	Displays a remote terminal (dtspcd) for the host
Terminal Rlogin	Performs a remote login (rlogin) on the host
Process Manager	Opens Process Manager for the host
Performance Meter	Opens Performance Meter for the host
Workstation Info	Opens Workstation Information for the Host
Disk Usage	Displays disk usage statistics for the host
Print Manager	Opens Print Manager for the host
Suspend System	Issues a Suspend action on the host
Reboot	Issues a Reboot action on the host
Halt	Issues a Halt action on the host
Admintool	Opens the Admintool application for the host

TABLE 18-4 Actions For a Host Card (Continued)

Action	Description
Admintool Super-user	Requests that you enter the host's root password, and opens Admintool (super-user mode) on the host

Working With Cards

Each address card, alias card, and host card is actually a file known to your workstation. When searching for them, Address Manager searches the locations indicated in the following table.

TABLE 18-5 Locations of Card Types

Cards	Stored
System Cards	A site-specific database searched by <code>sdtname</code> (1)
Personal Cards	The file <code>\$HOME/.dt/Addresses</code> (Editable in Address Manager)
System Aliases	The file <code>/etc/aliases</code> and the <code>Mail.Aliases</code> NIS map
Personal Aliases	The file <code>\$HOME/.mailrc</code>
Users	The file <code>/etc/passwd</code> and the <code>Passwd.Byname</code> NIS map
Hosts	The file <code>/etc/hosts</code> and the <code>Hosts.Byname</code> NIS map

▼ To Create a Personal Address Card

1. Choose New from the Card menu.

Address Manager displays a template for a new card in the scrolling pane. Each line in the template card represents a field specified in the vCard specification. All fields are optional, although you should fill in at least the Name field.

2. Type the relevant information for the new address card in the scrolling pane.

If you are unsure as to the appropriate format of information such as phone numbers, and the like, print out an existing card and use it as a guide.

3. When you are satisfied with the details you have entered, choose Save As from the Card menu.

Address Manager displays the Save As dialog box.

4. Type a name for the new card file and click Save.

The file name should contain the name of the person to which the card relates. Address Manager saves the file under the file name that you specified in the Addresses folder.

Tip – For address cards (which conform to the vCard standard), some operating environments such as Windows recognize the `.vcf` file extension. If you intend mailing your address cards to users of such systems, you may want to use this file-naming convention.

5. (Optional) Verify your new personal address card by searching for it with Personal Cards selected in the Search menu.

Address Manager finds and displays the personal address card you created.

▼ To Create a Personal Alias Card

Creating a personal alias card has the same effect as adding an alias to Mailer's list of Aliases.

1. Choose New from the Card menu.

Address Manager displays a template for a new card in the scrolling pane.

2. Delete all text in the template.

3. Type one or more email addresses such as fredj@jupiter in the blank scrolling pane.

Separate the addresses using commas.

4. Choose Save as Mailer Alias from the Card menu.

Address Manager displays the Save As dialog box.

5. Type a name for the new card file and click Save.

Any UNIX file name will suffice but it should contain the name of the person to whom the card relates. Address Manager saves the file under the file name specified in the Addresses folder.

6. (Optional) To verify your new personal alias, restart Mailer and choose Aliases from the Options menu.

Mailer displays the Mail Options dialog box, which contains your personal alias.

You can also search for the alias in Address Manager with Personal Cards selected in the Search menu.



Caution – After saving a personal mail alias, restart Mailer. If you make any changes to options in Mailer before restarting Mailer, your mail alias will be lost.

▼ To Edit a Personal Address Card

1. **Display the card you want to edit by searching for it and then selecting it in the Found drop-down box.**
2. **Edit the text in the scrolling pane.**
3. **When you are satisfied with the changes you have made, choose Save from the Card menu.**



Address Manager saves the changes to the card, which resides in the personal cards folder.

▼ To Put a Card on the Workspace

If you find yourself using Address Manager to find the same card a few times a day, you can put this card in the current workspace for quick access. For example, if you phone John Smith a few times a day and want to be able to look up his phone number with one click of the mouse, put his address card in the workspace.

1. **Display the card in Address Manager.**
 2. **Choose Put In Workspace from the Card menu.**
- Address Manager displays an icon for the card in the current workspace.
3. **(Optional) Click the card icon to invoke its default action.**

Default actions are listed in the following table.

	Displays the card in Address Manager
	Opens a Mail To dialog box for the alias

Opens a terminal session on the host



Printing Cards

Each card contains one or more lines of text. You can print this information as displayed in the scrolling pane by choosing **Print** from the **Card** menu.

Browsing Your Card Folders

The personal cards folder `$HOME/.dt/Addresses` contains your personal address cards. You can edit any of the cards in this folder by choosing **Open** from the **Card** menu and specifying the card file to be edited.

You can save the changes you make by choosing **Save** from the **Card** menu.

Using Process Manager

Use Process Manager to display the processes that are running on your workstation, and to perform actions on them. You can do this without knowing the syntax for `ps(1)`, `truss(1)`, `kill(1)`, and other character-based commands. Where relevant, the equivalent UNIX commands are given for each Process Manager action.

- “About Processes” on page 495
- “Sampling, Displaying, and Saving Process Information” on page 496
- “Performing Actions on a Selected Process” on page 501

About Processes

UNIX works with processes. Your login shell, application programs, the edit session you run, and even the `ls` program that lists your files are all processes under control of the operating environment.

In UNIX you can perform operations on these processes. For example, you can look at all the programs you’re running at any time, stop and restart programs as you choose, and investigate and debug errant processes.

Tips for Finding Errant Processes

An errant process is a process that is not doing the job you expect it to do. For example, a process might be consuming a large percentage of your available resources due to a bug, or it might be interfering with another process. Use Process Manager to detect errant processes when you experience the following:

- Workstation performance or response seems to have slowed.

- A program will not respond to user input.
- A standard service such as printing, file transfer or remote login does not respond.

When displaying all processes, Process Manager typically displays thirty to fifty processes, so finding the errant processes can be daunting to the untrained eye. The following tips may help (otherwise contact your System Administrator):

- Use Performance Meter to see if performance parameters such as CPU usage or disk usage are exceptionally high. If so, you can use Process Manager to identify the errant process.
- Use Process Manager to identify:
 - Processes using a large percentage of the available CPU or RAM when they shouldn't
 - Orphaned processes whose parent process has reverted to 1, that is `init` (but not processes such as `sched`, `dtlogin`, or `cron` whose parent process ID should be 1)
 - Processes that were started a long time ago and weren't terminated when they should have been
 - Large processes owned by another user that are degrading performance

Sampling, Displaying, and Saving Process Information

Process Manager displays and provides access to processes that are running on your workstation.

The screenshot shows the Process Manager window with the following data:

ID	Name	Owner	CPU%	RAM	Swap	Started	Parent	Command
24526	sdtaudio	ruairib	1.8	946	7568	11:21:20	24524	sdtaudio -r /home/ruairib/NotedThu_11:21:20
24524	sh	ruairib	0.2	126	1008	11:21:20	24523	sh -c fname="Noted"date +\%%a_%%T:%%M:%%S\%%; file=\$
24476	sdtaudio	ruairib	0.0	946	7568	11:19:25	24474	sdtaudio -r /home/ruairib/NotedThu_11:19:25
24474	sh	ruairib	0.0	126	1008	11:19:25	24473	sh -c fname="Noted"date +\%%a_%%T:%%M:%%S\%%; file=\$

FIGURE 19-1 Process Manager showing process entries containing the string “audio”.

Each process entry in the list gives you useful information, as explained in the following table:

Column Heading	Meaning
ID	Process ID
Name	Process Name
Owner	Name of Owner
CPU%	Ratio of CPU time used recently to time available in the same period, expressed as a percentage
RAM	Amount of RAM currently occupied by this process
Swap	Total size in virtual memory
Started	Actual start time (or date if other than current)
Parent	Process ID of parent process, or PPID
Command	Actual UNIX command (truncated) being executed

You can perform the following actions without affecting any processes on the selected workstation:

- Display all processes, or only those containing a specified character string
- Find processes containing a specified character string
- Display processes sorted by any of the columns in the scrolling pane
- Change the sampling interval, and copy and save the sample information

▼ To Open Process Manager

- **Click the Find Process control on the Tools subpanel of the Front Panel.**

The Process Manager main window is displayed. It immediately samples the workstation and displays a sample of all current processes.

▼ To Display Subsets of the Processes

1. **Type your filter text into the Filter field of the Process Manager window.**

Your filter text should be a string of characters that is common to the process entries of the subset or group of processes you want to display. For example, in Figure 19-1 the user is displaying all processes relating to Audio Tool.

2. **Press Return.**

Process Manager updates the processes in the scrolling pane to include only those process entries that contain an exact match of the filter text.

3. To revert to displaying all processes, clear the Filter field and press Return.

▼ To Find a Process

1. **Type your search text into the Find drop-down box, or select a previously used search text from the Find drop-down list.**
Your search text should be a string of characters that is common to the process entries of all of the processes you want to display.
2. **Press Return to highlight the first occurrence of the search text below the current cursor position.**
The text can be in any of the fields in the process entry.
3. **Press Return to highlight the next occurrence, and so on.**
4. **When you have found the required process entry, clear the Find field.**

Note – When you reach the end of the scrolling pane, search does not revert to the top of the list. Therefore, to ensure you search all processes, select the first process entry in the list before typing your search text in the Find box.

▼ To Change the Sort Order of the Display

By default, Process Manager lists the process entries in order of decreasing CPU usage. You can tell this because the column heading over the CPU usage column (CPU%) is depressed, while the other column headings are not.

1. **To select the column on which the list of process entries is to be sorted, click the relevant column heading or choose the column name from the View menu.**
Process Manager sorts the list of process entries and displays them in the new order. The default ordering for each column is indicated in the following table.

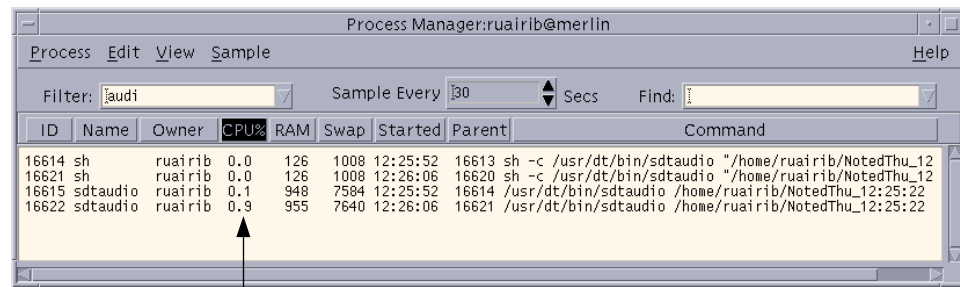
TABLE 19-1 Default Display Order for Process Entries

Selected Column Heading	Method
ID	Sorts numerically by process ID in increasing order
Name	Sorts alphabetically by process name
Owner	Sorts alphabetically by owner name
CPU%	Sorts numerically by CPU usage in decreasing order

TABLE 19-1 Default Display Order for Process Entries (Continued)

Selected Column Heading	Method
RAM	Sorts numerically by RAM usage in decreasing order
Swap	Sorts numerically by swap space usage in decreasing order
Started	Sorts chronologically by actual start time in decreasing order
Parent	Sorts numerically by process ID number of parent process in decreasing order
Command	Sorts alphanumerically by full path name in decreasing order (characters such as / have a lower sort value than letters)

- (Optional)** To reverse the sort order for any one of these columns (for example, to sort by RAM usage in *increasing* order), click the depressed column heading button. The column heading area will turn black and sort the display in the reverse order.



Now sorted in order of increasing CPU usage.

▼ To Change the Sampling Interval

By default, Process Manager samples the workstation and updates the display every 30 seconds.

- **To disable/enable the continuous sampling mode, choose Stop/Start from the Sample menu.**
If continuous sampling is on, you will see a Stop menu item on the Sample menu; otherwise the menu item will read Start.
- **To change the interval between samples, type a number of seconds (up to 604800, that is, 14 days) in the Sample Every box.**
Press Return to make the new sampling frequency come into effect.

- **To sample immediately, choose Now from the Sample menu.**
Process Manager samples and then updates the display.

Copying and Saving

You can select and copy one or more of the process entries in the display, and paste the text into other applications.

You also have the following options for saving the sample data to files:

- Creating a new file containing only the current sample
- Setting up a log file to which each new sample is appended

▼ To Create a File Containing the Current Sample

1. **Choose Save As from the Sample Menu.**

Process Manager displays the Save As dialog box.

2. **Specify the name and location of a new file and click OK.**

Process Manager creates the text file containing the process entries from the current display.

▼ To Set Up a Log File

1. **Choose Log File from the Sample menu.**

Process Manager displays the Log File dialog box.

2. **Specify the name and location of a new file and click OK.**

Process Manager creates the text file and appends each new sample (with header information) to the file.



Caution – Process Manager will continue to append to this file until you terminate the Process Manager application, or until you choose Stop Logging from the Sample menu.

Performing Actions on a Selected Process

When you have identified and selected a process entry in the list, you can perform these actions on the process:

- Send a kill signal to terminate the process or invoke a response
- Search for more information about the owner in Address Manager
- Trace system calls, display child processes, or run a debugger
- Show its stack or its ancestors



Caution – Consult your system administrator if you do not understand the implications of carrying out any of these procedures.

Sending Kill Signals to a Process

The kill command in UNIX enables the user to send a signal to a process. A *signal* is a message sent to a process to interrupt it and cause a response. If the process has been designed to respond to signals of the type sent it does so; otherwise, it terminates. The following table lists some commonly used signal numbers/names and their meanings.

Signal No.	Signal Name	Meaning
1	HUP	Hangup (often used before logging out)
2	INT	Interrupt (same as pressing Control+C in a terminal session)

Signal No.	Signal Name	Meaning
9	KILL	Kill (terminates without cleanup) Only works if issued by process owner or super user (root) The program cannot respond to this signal; it must terminate
15	TERM	Kill (terminates gracefully after cleanup) Only works if issued by process owner or super user (root)

The Kill menu item enables you to kill a process quickly by sending it a kill (9) signal. The Signal menu item gives you more control of the signal sent by the `kill(1)` command. For example you could send an `INT` signal or a `HUP` signal, and so on.



Caution – You should only send a signal to a process if you understand the implications of doing so. For example, if you select the login shell and send a kill signal, you will suddenly log out. For further information on processes and job control, contact your system administrator or see the *Solaris Advanced User's Guide* (Sun Microsystems).

▼ To Kill A Process (Quick Kill)

1. **Select a process entry in the Process Manager scrolling pane.**
2. **Choose Kill from the Process menu.**

Process Manager kills the process (and its child processes) provided that you have permission to do so; otherwise an error is displayed. Sometimes it takes several seconds for the process to terminate. You can tell that a process has been killed if it is not listed the next time Process Manager updates its display.

Tip – The equivalent UNIX command is:

`kill -9 PID` where *PID* is the process ID of the selected process.

You can redefine the command performed by the Kill menu item to a different command by redefining the action labelled 'Kill' in the file:

```
/usr/dt/appconfig/types/C/sdtprocess.dt
```

▼ To Send a Signal to a Process

1. **Select a process entry in the Process Manager scrolling pane.**

2. **Choose Signal from the Process menu.**

Process Manager displays a dialog box requesting you to specify the signals. You must supply at least one of the 42 signals defined in the `signal(5)` man page.

3. **Type the relevant signal number or name and click OK.**

Process Manager issues the signal command and closes the dialog box. No success message is issued. Killing a process typically kills its children.

Tip – The equivalent UNIX command is: `kill -signal_name PID`

where *-signal_name* is the signal number or name, and *PID* is the process ID of the selected process.

▼ To Look Up the Owner of a Process

1. **Select a process entry in the Process Manager scrolling pane.**

2. **Choose Look Up Owner from the Process menu.**

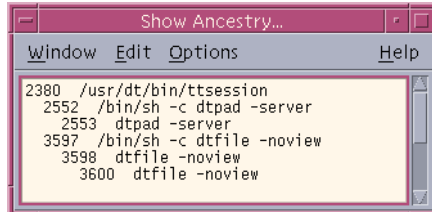
Process Manager opens Address Manager and requests it to search the System Cards for the system user name of the selected process. For further details on Address Manager see Chapter 18.

▼ To Show the Ancestry for a Process

1. **Select a process entry in the Process Manager scrolling pane.**

2. Choose Show Ancestry from the Process menu.

Process Manager displays a window containing the process trees for the specified process. Child processes are indented from the respective parent processes.



Tip – The equivalent UNIX command is:

```
/usr/proc/bin/ptree PID
```

where *PID* is the process ID of the selected process.

▼ To Trace Child Processes

When a UNIX process initiates one or more dependent processes, we call these *child processes*, or children. Child and parent processes have the same user ID.

1. Select a process entry in the Process Manager scrolling pane.

2. Choose Trace Children from the Process menu.

Process Manager displays a record of the creation of any new children (and their children, recursively) for the selected process.

Error returns are reported using the error code names described in the `Intro(2)` man page.

Tip – The equivalent UNIX command is:

```
truss -fa -texec, fork -s |CLD,ALRM -p PID
```

where *PID* is the process ID of the selected process.

▼ To Trace System Calls

During its execution, a process makes calls to the UNIX kernel, or system calls. You might want to trace these system calls to see the affect they are having on other processes.

1. **Select a process entry in the Process Manager scrolling pane.**

2. **Choose Trace System Calls from the Process menu.**

Process Manager displays a dialog box requesting you to enter optional arguments.

3. **Click OK.**

Each line of the trace output reports either the fault or signal name or the system call name with its arguments and return values. For further information, see the `truss(1)` man page.

Tip – The equivalent UNIX command is:

```
truss -p PID
```

where *PID* is the process ID of the selected process.

▼ To Show the Stack for a Process

1. **Select a process entry in the Process Manager scrolling pane.**

2. **Choose Show Stack from the Process menu.**

Process Manager displays a window containing hexadecimal and symbolic stack trace for the selected process.

Tip – The equivalent UNIX command is:

`/usr/proc/bin/pstack PID`

where *PID* is the process ID of the selected process.

▼ To Debug a Process

Application developers and system administrators sometimes use a debugging application such as Sun Workshop to investigate an errant process. The Debug item on the Process menu invokes your preferred debugger on the selected process.

- **Debug the process using your preferred debugger.**

Tip – The equivalent UNIX command is:

`workshop -d command`

where *workshop* is the name of the debugger program and *command* is the command needed to pass the process ID to the debugger.

Using Performance Meter

Use the Performance Meter to monitor activity and performance on a workstation. Several performance parameters such as CPU utilization, disk activity, network packets, and the like, can be displayed graphically in this customizable window.

You can monitor performance of local or remote hosts, set up color-coded activity thresholds to warn you of exceptional performance, and log the samples to a file.

Tip – Performance Meter enables you to identify errant behavior on your system. After identifying the errant behavior, you can use Process Manager (see Chapter 19) to identify and kill the errant processes.

- To Open Performance Meter
- Choosing the Host and Parameters Display
- Choosing How the Parameters are Displayed
- Working With Colors and Thresholds
- Logging Samples and Choosing the Sample Interface

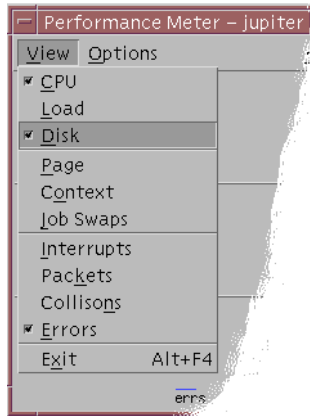
To Open Performance Meter

- **Click the Performance Meter control on the Font Panel.**
Performance Meter opens and displays the default charts (CPU and disk activity).

Tip – To make Performance Meter’s Front Panel icon inactive, use Process Manager to kill the `sdtperfmeter` process.

Choosing the Host and Parameters to Display

You can monitor performance on your workstation (local) or on another workstation (remote). The View menu lists several performance parameters that you can display for the host you are monitoring.



The parameters you choose to monitor may depend on:

- The type of applications you run
- Your network
- Your level of understanding of UNIX processes and system loading

Users unfamiliar with system parameters will typically choose to display CPU and disk usage. The typical setup for a more aware user is to display the CPU usage, disk usage, system load, and packets. Here are some hints and tips for choosing what to monitor:

- If you are worried about network traffic congestion, display the number of network packets per second and monitor this performance while you are running network-intensive activities such as Internet browsing or remote operations.

- If Performance Meter indicates high CPU usage, use Process Manager to identify and kill errant or CPU-intensive processes.
- If you log out while running a CPU intensive application, and log back in, Performance Meter's CPU display may show you that there is a lot of CPU activity. On recognizing this, you can use Process Manager to kill any errant processes.

For further information, see *Managing System Performance* in *System Administration Guide: Advanced Administration*.

▼ To Specify the Host to Be Monitored

1. **Choose Setup from the Options menu.**
Performance Meter displays the Setup dialog box.
2. **Select the Remote radio button to indicate that you are about to type the name of a remote host.**
3. **Type the system name (for example, `jupiter`) or the IP address (for example, `129.156.220.133`) of the remote host.**

Tip – To find a host, use Address Manager with Hosts selected on the Find menu.

4. **Click Apply to make your changes take effect.**
Performance Meter accesses the remote host and displays its performance. The system name on the title bar of the Performance Meter main window changes to the name of the remote host.

▼ To Change the Parameters Displayed

1. **Open the View menu to display the list of available parameters.**
Each parameter has a checkbox to indicate whether it is currently selected for display.
2. **Select or deselect the relevant menu item to display or remove any of the parameters.**
You can display any combination of parameters.

Choosing How the Parameters Are Displayed

You can arrange the Performance Meter window in different ways, depending on the number of parameters you have chosen to display, the space available on your desktop, and whether you want to display historical values.

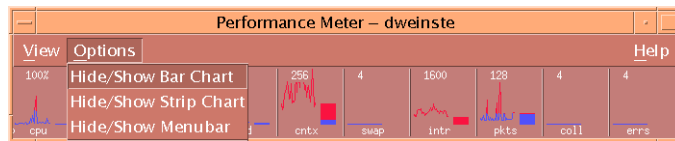


FIGURE 20-1 Performance Meter Displaying All Parameters

▼ To Show/Hide the Menu Bar

- **Choose Hide/Show Menubar from the Options menu.**

Performance Meter hides the menu bar.

You can re-display the menu bar at any time by clicking once on the display area of the Performance Meter main window.

▼ To Show/Hide the Line Chart or Area Chart

- **Choose Hide/Show Strip Chart from the Options menu.**

Performance Meter hides the line/area charts for all displayed parameters if they were displayed, or displays the line/area charts if they were hidden.

For each parameter you choose to display, Performance Meter displays:

- An activity bar to show the instantaneous level for each parameter
- (Optional) A line chart or an area chart to show the performance for each parameter over time

▼ To Change the Orientation of the Charts

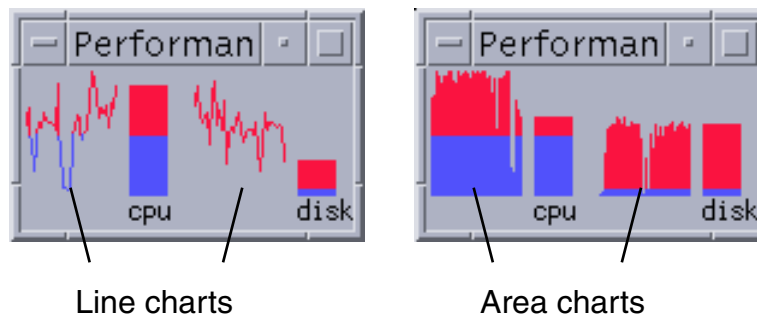
By default, Performance Meter displays the performance charts horizontally (side-by-side). Depending on the number of parameters you monitor and the available space on your desktop, you may want to display them vertically.

1. **Choose Setup from the Options menu.**
Performance Meter displays the Setup dialog box.
2. **Select Vertical or Horizontal to specify the type of chart required.**
3. **(Optional) Select the Show Limit Line checkbox if you want your charts to indicate the threshold value using a line.**
4. **Click Apply when you are satisfied with the changes you have made.**
Performance Meter displays the performance information in the specified orientation.

▼ To Choose Line Charts or Area Charts

The optional chart displayed for each parameter can be one of the following types:

- A line chart (the default), which represents activity using a continuous line
- An area chart, which is the same as a line chart but with the area between the line and the horizontal axis filled



1. **Choose Setup from the Options menu.**
Performance Meter displays the Setup dialog box.
2. **Select the Solid choice button for area charts or the Line choice button for line charts.**

3. (Optional) Select the **Show Limit Line** checkbox if you want your charts to indicate the threshold value using a line.
4. Click **Apply** when you are satisfied with the changes you have made.
Performance Meter displays the information using the specified charts.

Working With Colors and Thresholds

Performance Meter uses colors and thresholds to help you differentiate between activity that you consider normal and activity that you consider exceptional. If a parameter exceeds a threshold value, the exceptional value is displayed using a different color. By default, values less than the default thresholds are displayed in blue and values exceeding the default thresholds are displayed in red.

The Setup dialog box enables you to change the colors and threshold values.

Tip – Be consistent in your use of colors: if red means “warning” for one parameter, then it should mean the same for the other.

If you do not know an appropriate threshold value for a parameter, consider using the same color for both “above” and “below” so that you are only monitoring activity.

▼ To Change Chart Colors

1. **Choose Setup from the Options menu.**
Performance Meter displays the Setup dialog box. For each parameter, color selectors enable you to choose the colors for values above and values below the current threshold.
2. **Press mouse button 1 on any of the color selectors and choose a new color.**
3. **Click Apply when you are satisfied with the changes you have made.**
Performance Meter applies the new colors to the display.

▼ To Change the Threshold Value for a Parameter

1. **Choose Setup from the Options menu.**

Performance Meter displays the Setup dialog box which contains a Threshold box for each parameter.

2. **Type a new threshold value for the relevant parameter and click Apply.**

Values below the new threshold value are now displayed using the color selected for below, and values above this threshold value are now displayed in the color selected for above.

TABLE 20-1 Default Threshold Settings

Parameter	Default Threshold Value
CPU	50%
Load	2 per second
Disk	20 per second
Page	8 per second
Context	32 per second
Swap	2 per second
Interrupts	50 per second
Packets	16 per second
Collisions	2 per second
Errors	2 per second

Logging Samples and Choosing the Sample Interval

By default, Performance Meter samples the activity on the workstation every 2 seconds, and creates a log file containing details of the initial sample only. You can change this sample interval and choose to continually add the sample information to a log file.

▼ To Save Sample Information to a Log File

- 1. Choose Setup from the Options menu.**

Performance Meter displays the Setup dialog box.

- 2. Select the Log Samples In checkbox.**

- 3. Type the name of your log file in the Log Samples In text box.**

Use a descriptive name such as the default `samples`, or if you are monitoring multiple hosts from your workstation: `samples_hostname`.

The default location is your home folder, such as `/home/fredj/samples`.

- 4. Click Apply to make your changes take effect.**

Performance Meter creates the specified log file (a text file) if it doesn't exist.

Performance Meter continues to append sample details for each sample until you exit Performance Meter. The next time you run Performance Meter, the Log Samples In checkbox will be unselected.

▼ To Change the Sample Interval

- 1. Choose Setup from the Options menu.**

Performance Meter displays the Setup dialog box.

- 2. Specify a new sample interval in the Sample Every selector.**

The number you specify must be a whole number between 1 and 9 (inclusive). If you are viewing performance on-screen, a low interval such as 3 seconds may be appropriate; if you are logging samples to a log file, a higher interval is useful for restricting the size of your log file.

- 3. Click Apply to make your changes take effect.**

Performance Meter samples at the specified rate for this and all future sessions, until you change the value in the Sample Every selector again.

Using Hotkey Editor

Use the Hotkey Editor to create, modify, or delete CDE hotkeys. Hotkey is a general term used to show the association between a specific key and a specified event (target event). For example, choosing Alt+Left will move the workspace to the left. The target event could be a CDE action, an application, a document, a workspace management function, or a multiple monitor management function.

- To Start Hotkey Editor
- Creating a Hotkey
- Editing a Hotkey
- Deleting and Recovering Hotkeys

To Start Hotkey Editor

The first time the Hotkey Editor is started, the display area is populated with the currently defined hotkeys. These keys are the default keys which are presented as pre-defined keys. The Hotkey Editor application has two screens, the main Hotkey Editor window and the Edit Key dialog box. You can start Hotkey Editor from:

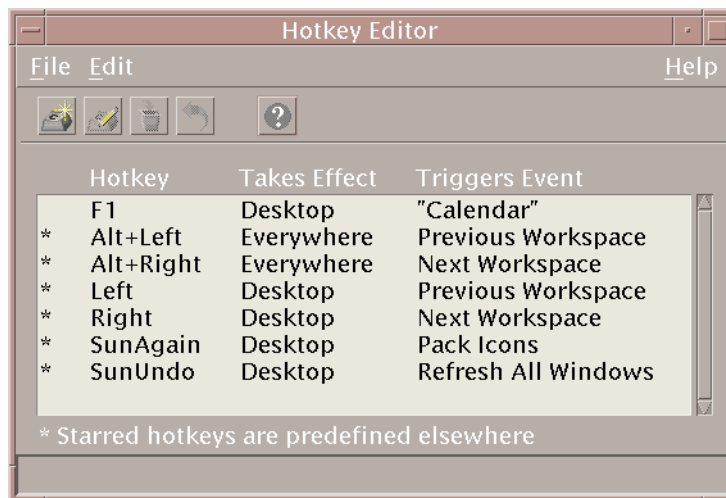
- Application Manager
- The front panel
- The command line

To start Hotkey Editor from Application Manager:

- 1. In Application Manager select Desktop_Apps.**
- 2. Double-click the Hotkey Editor icon.**



The Hotkey Editor window is displayed.



You can only bring up one instance of the Hotkey Editor. The buttons on the toolbar can be used for creating, editing, and deleting hotkeys. Alternatively, right-click the mouse button over the display area for a drop-down list of the same menu options. At the bottom of the window is an explanation of what the starred items mean, as well as an update of the most recently executed action on a hotkey.

Click on a hotkey to select it. Double-clicking a hotkey opens the Edit Key dialog box and populates it with that hotkey's current data. Use the Edit Key dialog box to create and edit hotkeys.

To start Hotkey Editor from the front panel:

1. **Open the Tools subpanel by clicking on the tab.**



2. Click the Hotkey Editor icon.

To start Hotkey Editor from the command line, type `sdthotkey`.

Creating a Hotkey

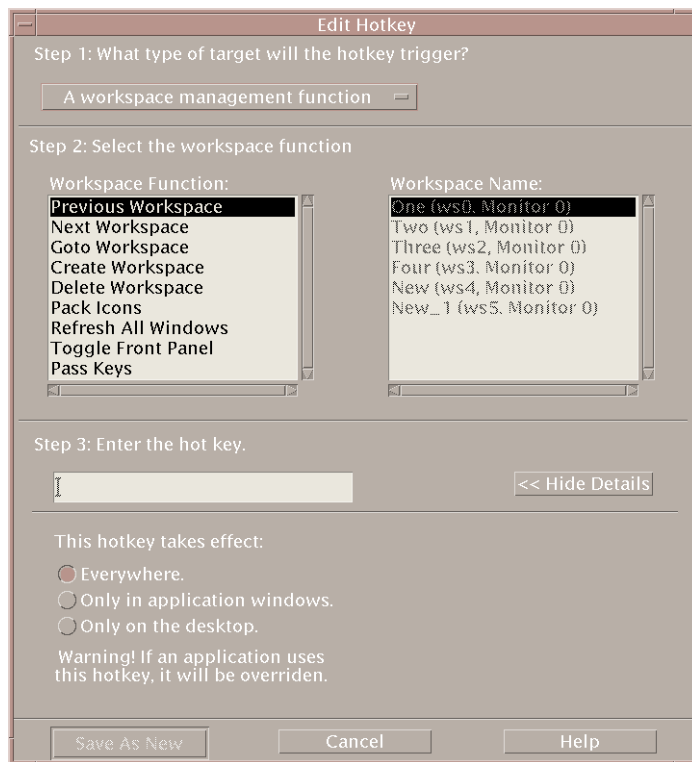
Hotkey Editor does not permit you to create duplicate hotkeys. You can create single letter hotkeys (for example “a”). However, this is not recommended due to the probability of accidentally triggering a target event. Hotkey Editor is not case-sensitive, for example, “A” is the same as “a”.

You can create or edit hotkeys to affect the following targets:

- An application, action, or document
- A workspace management function
- A multi-monitor management function

To Create a Hotkey for an Application, Action, or Document

1. From the Hotkey Editor window, click New.



2. For Step 1, from the pull-down menu, select An application, action, document.
3. In Step 2, establish the target that the hotkey will affect.
 - a. Click on either Application Manager or File Manager to display their respective icons.
 - b. Select an icon and drag and drop it into the Drop the target here field.



- 4. Under Step 3, in the text field, type the keystrokes of your choice that will act as the hotkey.**

To determine where the hotkey will be effective, click Show Details.

- 5. (Optional) Modify where the target event will be active and the path to the target event.**

Unless specified the hotkey will be effective everywhere. You can also modify the hotkey's target name or path if no drag and drop option exists for the target.

- a. Specify where the hotkey will be active.**

- Everywhere - The created hotkey takes precedence over an application assigned hotkey
- Only in application windows - The hotkey is effective only in an application window
- Only on the desktop - Hotkey is effective only on the backdrop of the monitor

- b. Type the path to the target event that the hotkey will affect.**

You may also click Browse to navigate to the target event directory.

- c. Enter the command-line argument.**

This permits you to have extra command line arguments associated with the target.

- 6. Click Save As New.**

- 7. Click Cancel to close the dialog box.**

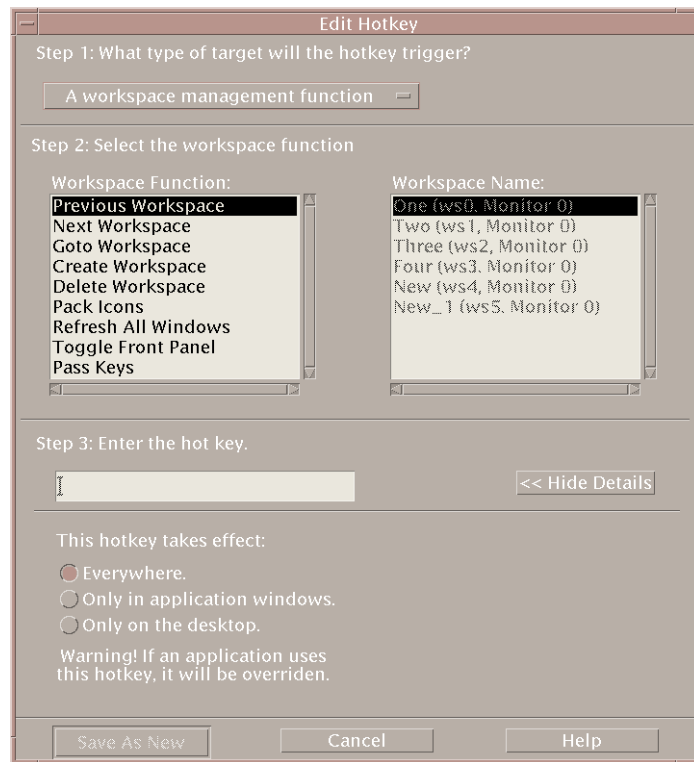
- 8. In the main Hotkey Editor window, choose Save from the File menu.**

This will activate the hotkey.

Once you have completed creating a hotkey, you can begin creating another new hotkey without exiting the current Edit Key dialog box.

To Create a Hotkey for a Workspace Management Function

1. From the Hotkey Editor window, click New.



2. For Step 1, from the pull-down menu, select A workspace management function.
3. In Step 2, select an option under Workspace Function:
 - Previous Workspace - Moves you to the previous workspace
 - Next Workspace - Moves you to the next workspace
 - Goto Workspace - Moves you to a specified workspace
 - Create Workspace - Creates a new workspace
 - Delete Workspace - Deletes a workspace
 - Pack Icons - Packs the icons in the workspace
 - Refresh All Windows - Updates all windows with any changes you made
 - Toggle Front Panel - Switches the front panel between the open and close state

- **Pass Keys** - The defined pass key will override all existing hotkeys. Toggle the pass key hotkey to switch between the on/off modes.

The Workspace Name listbox contains the workspace names as shown on the front panel. It also contains a system identifier in case duplicate names are created. The Workspace Name listbox is enabled only if the workspace function list on the left requires a workspace argument. If you are creating a new hotkey, the first option in the Workspace Function listbox is already selected.

- 4. Under Step 3, in the text field, type the keystrokes of your choice that will act as the hotkey.**

To determine where the hotkey will be effective, click Show Details.

- 5. (Optional) Specify where the hotkey will be active.**

- **Everywhere** - The created hotkey takes precedence over an application assigned hotkey
- **Only in application windows** - The hotkey is effective only in an application window
- **Only on the desktop** - Hotkey is effective only on the backdrop of the monitor

- 6. Click Save As New.**

- 7. Click Cancel to close the dialog box.**

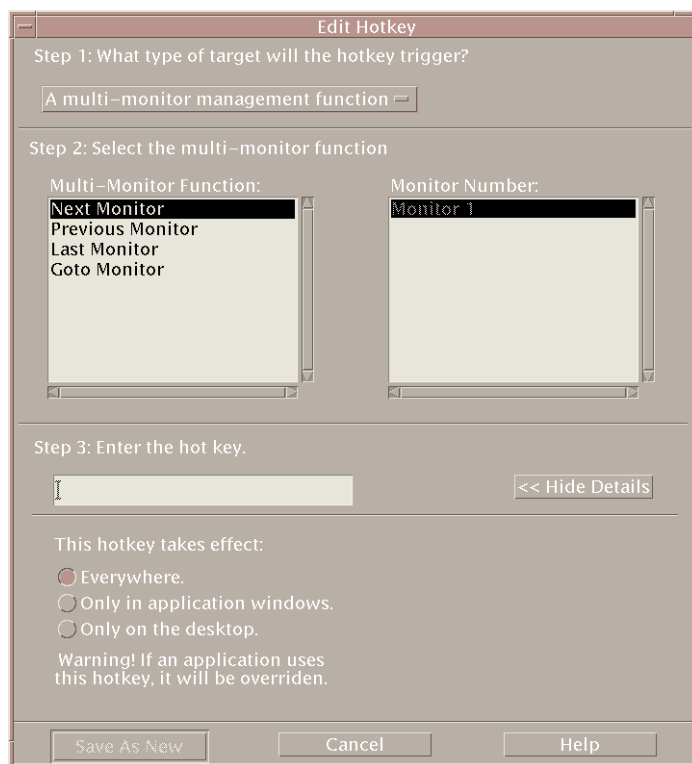
- 8. In the main Hotkey Editor window, choose Save from the File menu.**

This will activate the hotkey.

Once you have completed creating a hotkey, you can begin creating another new hotkey without exiting the current Edit Key dialog box.

To Create a Hotkey for a Multi-Monitor Management Function

- 1. From the Hotkey Editor window, click New.**



2. For Step 1, from the pull-down menu, select A multi-monitor management function.

3. In Step 2, select an option under Multi-Monitor Function:

- Next Monitor - Moves to the next monitor
- Previous Monitor - Moves to the previous monitor
- Last Monitor - Moves to the last monitor
- Goto Monitor - Moves to a specified monitor

The Multi-Monitor Function listbox contains the monitor function. The Monitor Number listbox contains a list of monitors available on your desktop.

If you are creating a new hotkey, the first option in the Multi-Monitor Function listbox is already selected.

4. Under Step 3, in the text field, type the keystrokes of your choice that will act as the hotkey.

To determine where the hotkey will be active, click Show Details.

5. (Optional) Specify where the hotkey will be active.

- Everywhere - The created hotkey takes precedence over an application assigned hotkey
- Only in application windows - The hotkey is effective only in an application window
- Only on the desktop - Hotkey is effective only on the backdrop of the monitor

6. Click Save As New.

7. Click Cancel to close the dialog box.

8. In the main Hotkey Editor window, choose Save from the File menu.

This will activate the hotkey.

Once you have completed creating a hotkey, you can begin creating another new hotkey without exiting the current Edit Key dialog box.

Editing a Hotkey

You can edit a hotkey to change or modify its target event. An edited hotkey will replace the currently defined hotkey. Hotkey Editor will not warn you prior to overriding existing hotkeys.

To Edit a Hotkey for an Application, Action, or Document

1. In the Hotkey Editor window, double-click a hotkey.

Alternatively, select a hotkey and click Open.

The Edit Key dialog box opens with the specifics for that hotkey.

2. For Step 1, from the pull-down menu, select An application, action, document.

To change the type of target that the hotkey will trigger, select the appropriate option from the pull-down menu.

3. In Step 2, establish the target that the hotkey will affect.

- a. Click either the Application Manager or File Manager to display their respective icons.

2. For Step 1, from the pull-down menu, select A workspace management function.

To change the type of target that the hotkey will trigger, select the appropriate option from the pull-down menu.

3. In Step 2, select an option under Workspace Function:

- Previous Workspace - Moves you to the previous workspace
- Next Workspace - Moves you to the next workspace
- Goto Workspace - Moves you to a specified workspace
- Create Workspace - Creates a new workspace
- Delete Workspace - Deletes a workspace
- Pack Icons - Packs the icons in the workspace
- Refresh All Windows - Updates all windows with any changes you made
- Toggle Front Panel - Toggles the front panel between the open and close state
- Pass Keys - The defined pass key will override all existing hotkeys. Toggle the pass key hotkey to switch between the on/off modes.

The Workspace Name listbox contains the workspace names as shown on the front panel. The Workspace Name listbox contains a system identifier in case duplicate names are created. The Workspace Name listbox is enabled only if the workspace function list on the left requires a workspace argument.

4. Under Step 3, in the text field, type the keystrokes of your choice that will replace the currently defined hotkey.

5. (Optional) Specify where the hotkey will be active.

- Everywhere - The created hotkey takes precedence over an application assigned hotkey
- Only in application windows - The hotkey is effective only in an application window
- Only on the desktop - Hotkey is effective only on the backdrop of the monitor

6. Click Update.

7. Click Cancel to close the dialog box.

8. In the main Hotkey Editor window, choose Save from the File menu.

This will activate the hotkey.

You cannot edit multiple hotkeys in the same Edit Key dialog box. You will have to complete the edits on the current hotkey, close the Edit Key dialog box, and then select and open the next hotkey to be edited.

To Edit a Hotkey for a Multi-Monitor Management Function

- 1. In the Hotkey Editor window, double-click a hotkey.**

Alternatively, select a hotkey and click Open.
The Edit Key dialog box displays with the specifics for that hotkey.
- 2. For Step 1, from the pull-down menu, select A multi-monitor management function.**

To change the type of target that the hotkey will trigger, select the appropriate option from the pull-down menu.
- 3. In Step 2, select the target that the hotkey will affect:**
 - Next Monitor - Moves you to the next monitor
 - Previous Monitor - Moves you to the previous monitor
 - Last Monitor - Moves you to the last monitor
 - Goto Monitor - Moves to a specified monitor

The Multi-Monitor Function listbox contains the monitor function. The Monitor Number listbox contains a list of monitors available from your desktop.
- 4. Under Step 3, in the text field, type the keystrokes of your choice that will replace the currently defined hotkey.**
- 5. (Optional) Specify where the hotkey will be active.**
 - Everywhere - The created hotkey takes precedence over an application assigned hotkey
 - Only in application windows - The hotkey is effective only in an application window
 - Only on the desktop - Hotkey is effective only on the backdrop of the monitor
- 6. Click Update.**
- 7. Click Cancel to close the dialog box.**
- 8. In the main Hotkey Editor window, choose Save from the File menu.**

This will activate the hotkey.

You cannot edit multiple hotkeys in the same Edit Key dialog box. You will have to complete the edits on the current hotkey, close the Edit Key dialog box, and then select and open the next hotkey to be edited.

Deleting and Recovering Hotkeys

You can delete and recover hotkeys. You can also choose to revert to the original settings of an edited hotkey.

To Delete a Hotkey

1. **Click on a hotkey in the main Hotkey Editor window.**
2. **From the Edit menu select Delete.**

Alternatively, click on the delete button from the tool bar. The status bar at the bottom of the window will indicate which hotkey was deleted.

To Undo the Previous Action

- **From the Edit menu select Undo.**

To Redo the Previous Action

1. **Click on a hotkey in the main Hotkey Editor window.**
2. **From the Edit menu select Redo.**

The status bar at the bottom of the window will indicate which hotkey was redone.

To Revert to a Previous Hotkey

1. **Click on a hotkey in the main Hotkey Editor window.**
2. **Click on the Revert button from the tool bar.**

This option does not activate a modified and saved hotkey, instead, it reverts to the previously defined fields for that hotkey. The status bar at the bottom of the window will indicate the hotkey to which it was reverted.

Using Personal Digital Assistant (PDA) Synchronization

The Personal Digital Assistant Synchronization (PDA Sync) application enables you to synchronize data from Sun applications, such as Calendar Manager, with data in a similar application on your PDA. It also enables you to install applications and databases from your workstation or server to your PDA.

For example, applications that have been downloaded from the web can be copied to your PDA using PDA Sync. All illustrations in this document depict the software interacting with a PDA.

The applications correlate as Calendar manager/Date Book, Address manager/Address Book, Desktop Mail/Mail, and Text Note/Memo Pad. PDA Sync supports most Palm Pilot Computing platform handheld devices, including the Palm V, Palm III and PalmPilot Professional Edition.

- Accessing PDA Sync Software
- Configuring Synchronization
- Configuring Conduits
- Configuring the Log
- Starting Synchronization
- Checking Status

Note – Please refer to "About PDA Sync" in the online help pulldown menu for important information on the differences between Sun's PDA Sync and 3COM's HotSync product.

Accessing PDA Sync Software

Access the PDA Sync software using the following procedure.

1. Using the desktop icon, open the Applications pull-down menu from the Front Panel (typically at the bottom of your screen), click on Applications to open Application Manager.
2. Double-click on Desktop_Apps to locate the PDA Sync icon.
3. Click on the PDA Sync icon.

You can also access the PDA software by entering `/usr/dt/bin/sdtpdasync` on the command line.

In order to make the PDA Sync icon more accessible in the future, drag and drop the PDA Sync icon from the Desktop_Apps screen into the Install area of the Application pull-down menu or into your user space.

For more information on the PDA Sync application, see the Help information on the PDA Sync software.

Configuring Synchronization

The application opens by default to the Synchronization tab.

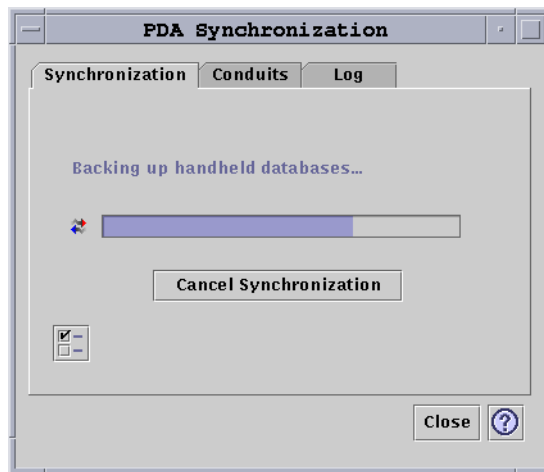


FIGURE 22-1 Configuring Synchronization

The application begins a synchronization operation using current or default configurations on the currently active or default conduits, as defined on the Conduits tab. The first thing you must do when the Synchronization window appears is establish the port setting in the Synchronization Properties window.

Setting Synchronization Properties

Clicking the properties button (the one with a checkmark on it) on the Synchronization tab brings up the Synchronization Properties dialog box (refer to the following figure). This dialog contains all of the PDA Sync options that are not directly related to specific conduits and therefore do not belong in the conduit configuration dialog boxes. The options in this dialog box are not likely to require changing very often.

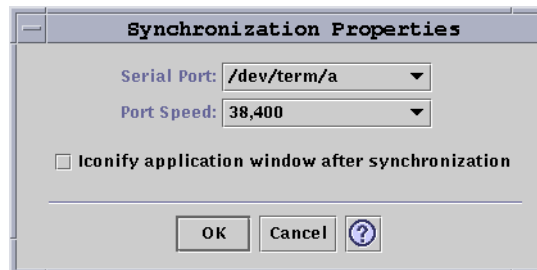


FIGURE 22-2 Setting Synchronization Properties

In this dialog you can:

- Set the serial port. Select the port from the options list to which you connected the PDA.
- Set the port speed. The default is “As fast as possible”. The choices in this pull-down menu are the speeds that are supported by the API.
- Set the “Iconify application window after synchronization” to ON (default) or OFF. The window will minimize itself to an icon automatically upon completion of the sync. If it is turned OFF, the window will remain open on the screen after the sync is completed.

Configuring Conduits

The Conduits tab contains a list of all the conduits that are available to the PDA Sync application. This is not a fixed list, as conduits can be added and removed. Active conduits are indicated with a check mark. A Synchronize operation runs all of the active (checkmarked) conduits ONLY, as shown in the following figure.

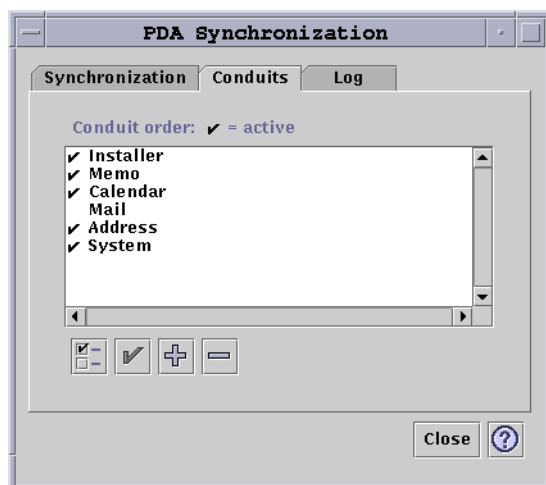


FIGURE 22-3 Configuring Conduits

The buttons below the scrolling list represent actions you can take on the selected conduit in the list (except the Add Conduit button). When the pointer is over one of the buttons, the button name is displayed in a small Button Tag that appears near the button. The button names in the toolbar are:

- "Change Conduit Settings" (a checked box) - brings up the configuration dialog for that particular conduit and is disabled if more than one item is selected.
- "Toggle the Conduit's Activate State" (a check mark) - Either activates or deactivates the conduit. When a conduit is active, it is executed in the next synchronization.
- "Add New Conduit to List" (a plus (+) symbol) - Brings up a file selection dialog enabling you to add new conduits. (See the Adding a Conduit section.)
- "Delete Conduit from List" (a minus (-) symbol) - Removes the conduit from the list, after a confirmation dialog.

Calendar

The Configure Calendar Conduit window enables you to determine how appointments are synchronized between calendar applications. Refer to the following figure.

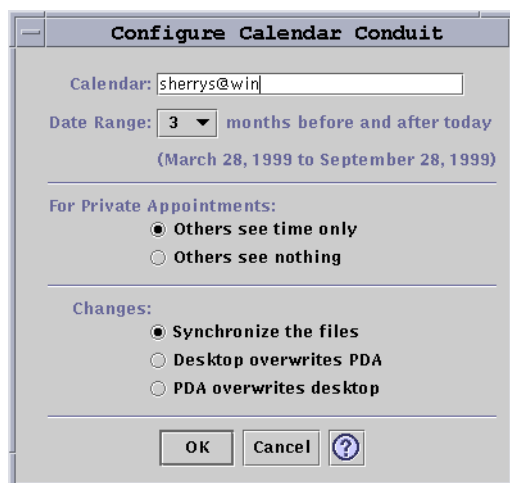


FIGURE 22-4 Configuring the Calendar Conduit

In this window you can:

- Change the host name. The default is user@host.
- Specify the base calendar on the workstation or server.
- Determine a rolling date range to synchronize. The default range is six months.
- Determine what information is displayed for others to see on private appointments marked on your PDA.
- Change the data synchronization direction to:
 - Synchronize the files (this is the default) — merges the calendar information on your desktop and your PDA.
 - Desktop overwrites PDA — replaces your PDA calendar information with the calendar information you have on your workstation.
 - PDA overwrites desktop — replaces your desktop calendar information with the calendar information you have on your PDA.

Memo

The Configure Memo Conduit window enables you to synchronize text files between the desktop and the PDA as shown in the following figure.

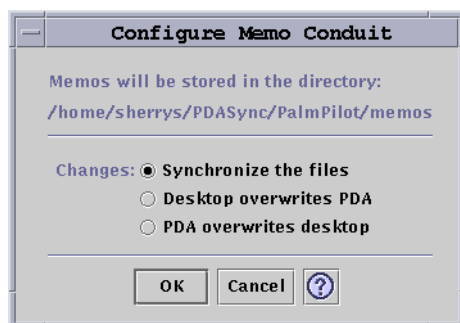


FIGURE 22-5 Configuring the Memo Conduit

You change the data synchronization direction to:

- Synchronize the files (this is the default) — merges together information on your desktop and your PDA.
- Desktop overwrites PDA — replaces your PDA memo information with the memo information you have on your workstation.
- PDA overwrites desktop — replaces your desktop memo information with the memo information you have on your PDA.

In the memos directory, separate directories can be created for different categories of memos, such as Business and Personal. These become categories on your PDA when synchronized. Conversely, new categories on your PDA become directories in the memo folder on your file system when synchronized. If the category directory is deleted from the desktop, the category and all of its records are deleted from the handheld device when synchronized.

Address

The Configure Address Conduit dialog box (refer to the following figure) enables you to determine how entries are synchronized between address applications.

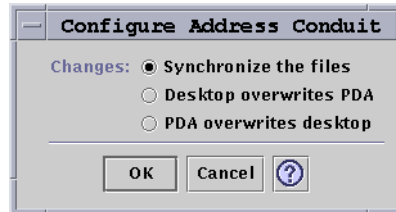


FIGURE 22-6 Configuring the Address Conduit

In this window you can select the data synchronization direction. The default is to merge the data. In the address directory, subdirectories can be created for different categories of addresses, such as Business and Personal. These become categories on your PDA when synchronized. If the category directory is deleted from the desktop, the category and all of its records are deleted from the handheld device when synchronized. Additional layers of subordinate directories are not supported.

System

The Configure System Conduit backs up all system information, graffiti shortcuts, and any .pdbc and .prcs that are NOT already associated with other applications. The default is that your PDA overwrites the desktop. Refer to the following figure.

Note – You should choose "Desktop overwrites PDA" only if everything on your PDA has been corrupted or lost. Refer to the following figure.

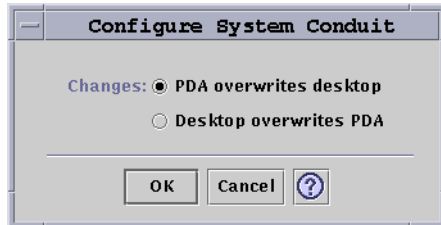
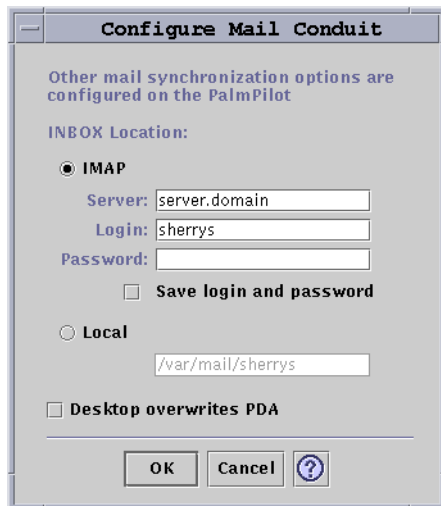


FIGURE 22-7 Configuring the System Conduit

Mail

The Configure Mail Conduit window tells your PDA your INBOX location. Refer to the following figure.



In this dialog you can define the IMAP location of the INBOX (*server.domain*) or the local location of the INBOX (path and filename).

In addition, the IMAP choice requires that you submit a login ID and password. You can save the login and password to avoid retyping. If the ID and password are NOT saved, synchronization is interrupted every time with the following dialog box (refer to the following figure).

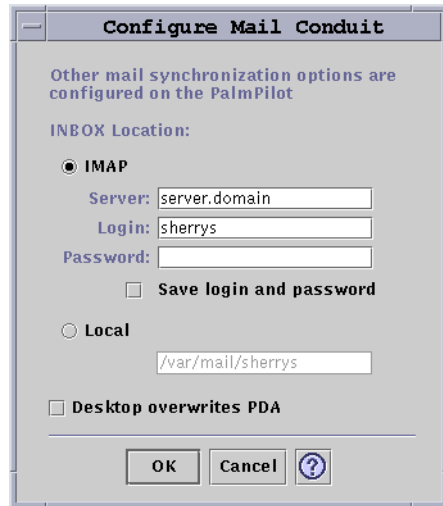


FIGURE 22-8 Configuring the Mail Conduit

You can choose to have the desktop mailbox overwrite your PDA mailbox. This is set to “OFF” by default.

Note – This option should only be used if your PDA INBOX folder is not in sync with your desktop.

All other setup for mail synchronization is done on your PDA. When you synchronize, your PDA automatically:

- Sends mail from the Outbox.
- Destroys the deleted mail in the Deleted folder.
- Does the things you have defined in the options.

In the Mail synchronization options on the PDA, you can tell your PDA to:

- Synchronize mailbox (for example, make the two Inboxes identical, given the constraints, which include no attachments and truncation of messages). This is the same as setting the PDA parm option to All.
- Send mail from the Outbox only and retrieve nothing. This is the same as setting the PDA parm option to Send Only.

- Synchronize mail according to a filter. This is the same as setting the PDA parm option to Filter. The messages are truncated to a specified length; the range is: 250, 500, 1000, 2000, 4000, 6000, 8000. The filter can operate two ways:
 - Ignore messages with a certain criteria and retrieve all others.
 - Retrieve messages with a certain criteria and ignore all others.

Installer

The Configure Installer Conduit window allows you to determine which files (applications or databases) to install on your PDA. Refer to the following figure

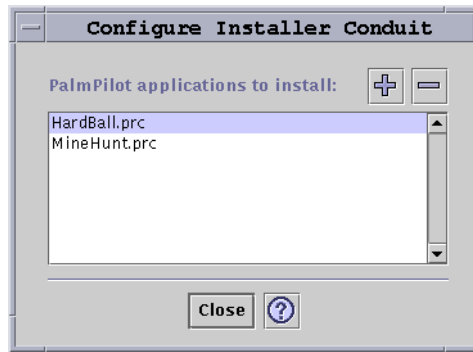


FIGURE 22-9 Configuring the Installer Conduit

In this dialog you can display all the files that are available for installation to your PDA. These are all the files currently in the default install directory. Use the Add PalmPilot Applications window refer to the following figure), by clicking the plus (+)

symbol, to add files. To delete files from the list, select the file and click the minus (-) symbol. All files in the list are installed on the next sync operation.

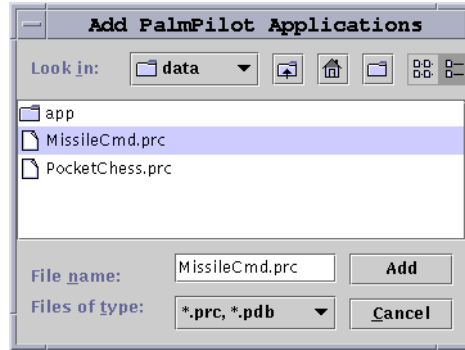


FIGURE 22-10 Adding an Application

Adding a Conduit

Click the Add button on the Add PalmPilot Applications window to get to the Add Conduit window. This enables you to add conduits to PDA Sync. Refer to the following figure.

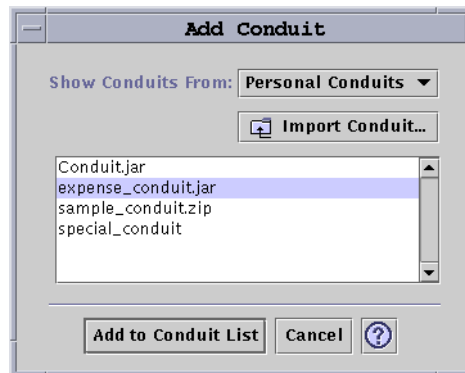


FIGURE 22-11 Adding a Conduit

The available conduits come from one of three categories, represented in the pull-down menu:

- Personal Conduits (default) — Conduits that you may have obtained from the Web or elsewhere.

- System Default — The default set that the PDA Sync application comes with (for example, Calendar, Memo, Address). You should use conduits from this category to replace any defaults that have been deleted.
- System Additions — Any third-party conduits added automatically through packages.

If you want to add a new conduit not currently in any of the folders, press the “Import Conduit” button to bring up the Import Conduit dialog. Refer to the following figure.

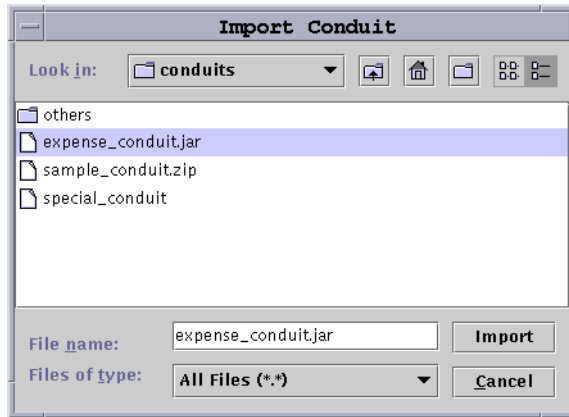


FIGURE 22–12 Importing a Conduit

Select a file and press the Import button. The file will be copied into the selected folder. If it is a conduit previously deleted from the Conduit tab, it will automatically be added back to the list. If the Conduit is a new one, then the Associate Conduit dialog will display. Refer to the following figure.

A list of the available databases will display in this list only if they are already installed on the PalmPilot. If you want to install a new database you must first install the database (refer to the Installer section under Configuring Conduits).

Then select a database in the list and click OK. The conduit will be added to the conduit list.

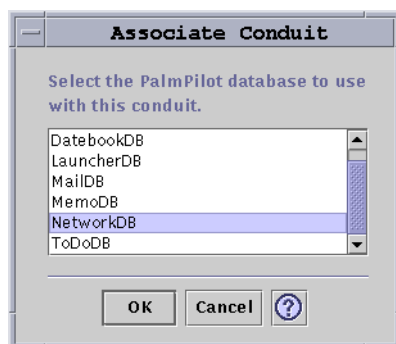


FIGURE 22-13 Associating Conduits

Configuring the Log

To configure the log you must first go to the Log tab. Refer to the following figure.

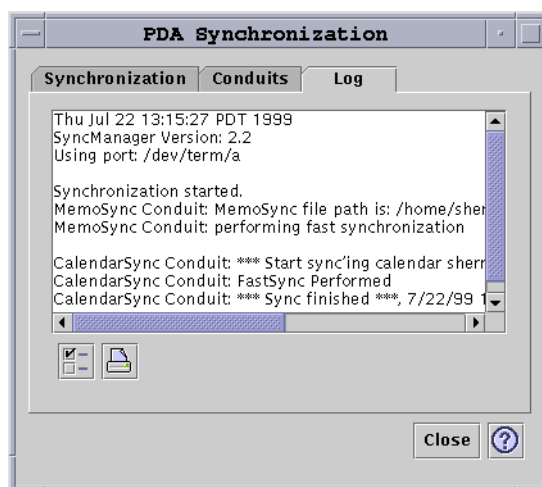


FIGURE 22-14 Configuring the Log

To configure the Log you must access the Log Properties dialog by clicking on the checked box Refer to the following figure.

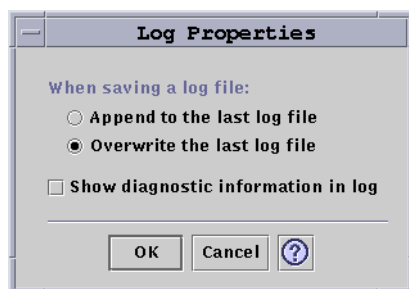


FIGURE 22-15 Configuring the Log Properties

In this dialog you can:

- Set log file properties (a log file will be saved by default).
- Append to the last log file.
- Overwrite the last log file.
- Show diagnostic information in log (default is OFF).

Viewing the Log

The third tab in the PDA Sync application lets you view the activity log for each synchronization. This area consists of a vertical and horizontal scrolling read-only text field, which displays a real-time log of a sync or install operation. Refer to the following figure.

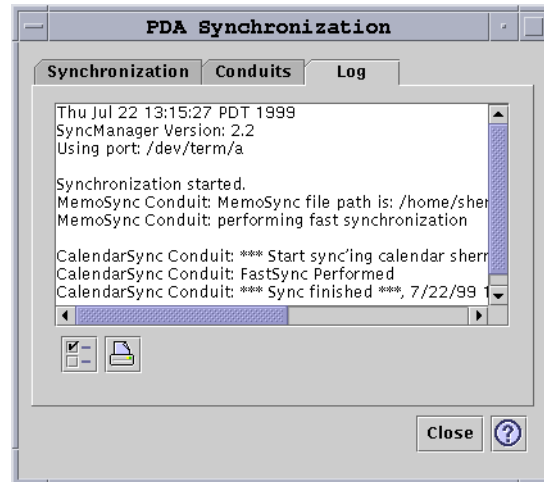


FIGURE 22-16 Viewing the Log

By default, the top of the log is displayed at the top of the data window. Because the log file can be appended (see Log Properties dialog in the next section), the top of the current log may be at the bottom of the file. This means that the scroll bar may be at the bottom of the window when the log is displayed; scrolling up reveals previous logs.

By default, the date on which the sync operation is performed is displayed at the top and bottom of the current log. Time stamp information is added as appropriate. You can also choose to show full debugging information in the log through an option on the Log Properties dialog.

If a failure occurs during a synchronization operation, the log is displayed automatically. At the time the failure occurs, the system beeps, the log shows where the failure occurred, and the sync operation is aborted. These entries usually give as much information as is reasonable to provide. You may also turn on debugging information in the Log Properties dialog in order to troubleshoot. After a failure occurs, the application does not minimize itself, regardless of the "Iconify application window after synchronization" setting in the Application Properties dialog.

Printing the Log

The log is saved to disk as a text file. The log file can also be printed. Refer to the following figure.

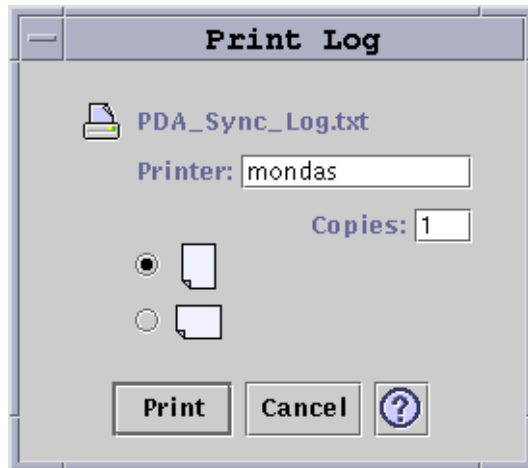


FIGURE 22-17 Printing the Log

Starting Synchronization

The PDA Sync application is available as an icon on the Common Desktop Environment (CDE) desktop. It is activated when you first log in. When you exit the application, restart it manually in order to perform synchronization again.

The following figure shows that the application is ready to synchronize, as indicated by the status line. At this point, you may press the sync button on your organizer's cradle.

If you are synchronizing for the first time after installing PDA Sync, a dialog box appears asking you to name your organizer. If your organizer already has a name, this dialog box does not appear. Refer to the following figure.

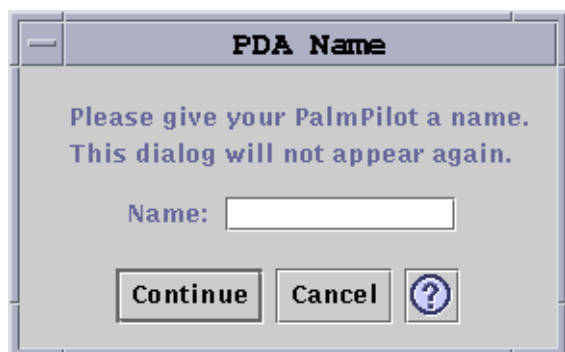


FIGURE 22-18 Naming Your PDA

If your organizer has a password, a dialog box asks you for it every time you run the application. If your organizer does not have a password, this dialog does not appear. Refer to the following figure.

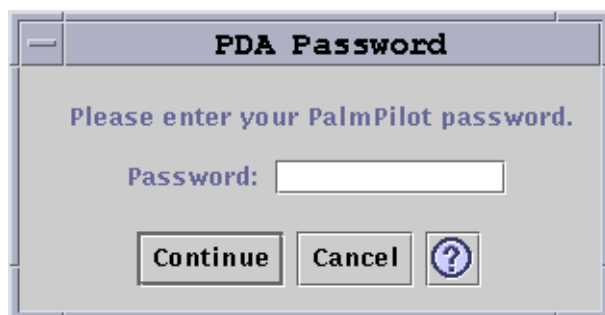


FIGURE 22-19 Assigning Your PDA a Password

Checking Status

The status area contains information about the current operation. This information includes status or prompt text, an animated graphic that indicates that an operation is in progress, and a progress bar that shows estimated progress during a sync operation.

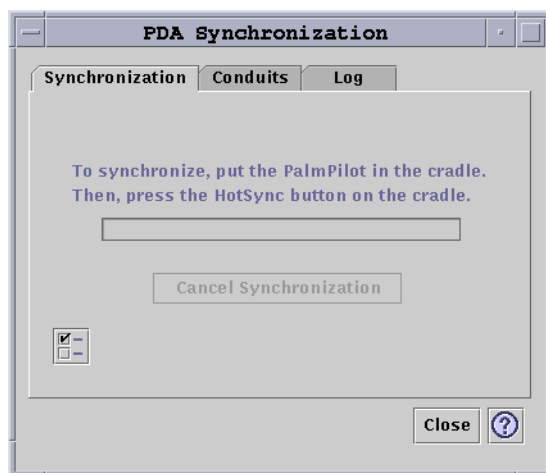


FIGURE 22-20 Checking Synchronization Status

The progress bar is not displayed unless a sync or install operation is in progress. Choosing Cancel Synchronization pauses the sync operation and brings up a confirmation dialog box. If you choose the Cancel button, the sync is aborted. If you choose Continue, the sync operation continues.

Completion of a sync operation is indicated by an audio signal. If the "Iconify application window after synchronization" option is checked in Application Properties, the window minimizes itself to an icon automatically upon completion of sync.

Note – To cancel synchronization click on the Cancel button.

Power Management

This chapter gives an overview of Power Management™ and explains the features that apply to your system by default when you use this Solaris™ release. It also explains how to customize the Power Management features.

Value of Power Management

Reducing the amount of power consumed by a computer not only reduces the cost of the electricity itself, it also reduces the efforts required to control the heat surrounding the computer. Reducing power consumption also can extend the effective life of the hardware you use.

The United States Environmental Protection Agency (EPA) has established Energy Star® guidelines for computer products. Other nations have issued similar energy efficiency guidelines. To meet these guidelines, hardware products are designed to use power efficiently.

The Power Management software provided in the Solaris operating environment works in conjunction with the hardware to reduce overall consumption of electricity. In some cases, you may need to use this software for your workstation to meet the Energy Star guidelines that apply to that hardware.

Note – As an Energy Star Partner, Sun Microsystems, Inc. has determined that its hardware products that have the Energy Star symbol on the shipping box or on the product itself meet the Energy Star guidelines for energy efficiency.

Types of Power Management

Power Management software enables two ways of reducing power consumption: Device power management and Suspend-Resume.

Device Power Management

Device power management automatically reduces the amount of power used by individual devices when they are not in demand to perform some function. Disk drives, monitors, adapters, and even CPUs can provide this power-saving feature. The effect of device power management is transparent to the computer user. The overall system is still in operation, and is able to respond to requests for service from devices. Those devices are able to power up for full service within seconds when needed.

Suspend-Resume

Suspend-Resume is a time-saving feature that allows you to turn off the power to your system without losing the state of your current activities. When you use this feature, your workspace and files are preserved when the system is powered off and restored to the same state when the system is powered on. For example, if you are in the middle of revising a document when you decide to leave, you can power off your system using the Suspend feature and your work session is automatically saved. The next time you power on the system, the Resume feature causes your work to appear in the same state as you left it. Whether a shutdown is initiated automatically (through Power Management software) or manually through keystrokes, the Suspend-Resume feature saves checkpoint information about the state of the system at that time.

Suspend-Resume can be active on your system in the following ways:

- Suspend-Resume is used automatically in some Energy Star 2.0-compliant systems.
- You can use the keyboard to suspend or resume your system whenever you choose. The steps for doing this are explained in Chapter 4 "Using the Suspend-Resume Feature".
- Dtpower software can be used to activate Suspend-Resume automatically at designated times.



Caution – Do not use System Power Management on systems that do work that should not be interrupted. Conditions where you should choose to not use the Suspend-Resume features are described in “Using the Suspend-Resume Feature” on page 560.

Hardware Support for Power Management Features

All SPARC workstations can use some features of the Power Management software. However, some features only work on certain types of hardware. Some default power states vary from one type of system to another.

The following section describes the Power Management features that are supported by your hardware, as well as the defaults that will be in effect when you first use this Solaris release with your hardware.

Note – Intel hardware running the Solaris operating environment does not support Power Management.

Power Management Features on Different Hardware Systems

The Power Management features are enabled by both the hardware’s power-saving capability and the software provided with the Solaris operating environment. The exact nature of the power-saving mode your system goes into depends on your hardware and its compliance with Energy Star. To determine the version of Energy Star to which your system complies, use the `prtconf -vp | grep energystar` command.

Power Management-capable hardware provides the features discussed in the following sections.

Energy Star 3.0-Compliant Systems

The Energy Star 3.0-compliant SPARC™ hardware reduces power consumption by entering a low-power mode from which devices can resume full operation

automatically. This hardware can turn off monitors and frame buffers, spin down disks, and drop the devices' power consumption significantly when they are idle — all while leaving the system up and running, ready for use, and visible on the network. When a job appears on the system, either through a `crontab` process, or an external demand through a network, the devices and other hardware snap back into full-power mode within seconds.

Energy Star 2.0-Compliant Systems

The earlier, Energy Star 2.0-compliant SPARC hardware does not have the capability of going into a reduced-power mode; after the designated minutes of idleness, the system completely shuts down. The exception to this are the monitors, which do have the capability of going into low-power mode and continuing to operate. Upon restart, the system takes a minute to reboot.

Systems Noncompliant with Energy Star

Systems that are noncompliant with Energy Star regulations perform power management for only the monitor; no other devices are power managed.

System Architecture Distinctions and Default Settings

The SPARC architecture of a workstation determines which Power Management features are available. The default behavior in Power Management functions varies on systems, as described in Table 23-1.

To determine your system's architecture, use the `uname -m` command.

If you have Sun Microsystems™ hardware that is not described by this manual, refer to the *Sun Hardware Platform Guide* for this Solaris release. It may contain additional information about how Power Management software functions on your system.

TABLE 23-1 Power Management Features in Different SPARC Architectures

Power Management Features	sun4m	sun4u (Energy Star 2.0)	sun4u (Energy Star 3.0)	Servers
Display PM Available	Yes	Yes	Yes	Yes
Display PM by Default	Yes	Yes	Yes	Yes
Device PM Available	No	No	Yes	No

TABLE 23-1 Power Management Features in Different SPARC Architectures *(Continued)*

Power Management Features	sun4m	sun4u (Energy Star 2.0)	sun4u (Energy Star 3.0)	Servers
Device PM by Default	N/A	N/A	Yes	N/A
Suspend-Resume Available	Yes	Yes	Yes	No
Suspend-Resume by Default	No	Yes	No	N/A
AutoShutDown Available	No	Yes	Yes	No
AutoWakeup by Default	N/A	Yes	No	N/A

Note – The SPARCstation™ Voyager is a sun4m-architecture system, but it is not supported in this Solaris release.

Power Management Software

In most cases, the default Power Management settings should suffice. If you would like to change them, however, you can do so through Dtpower, the Power Management software.

Dtpower Software

Dtpower launches a graphical user interface (GUI) that allows you change your power saving scheme, or to designate periods of inactivity after which the devices (including the monitor and disk drives) and the system will go into a power saving mode.

You can also use the Dtpower GUI to set the time of day to activate the Suspend-Resume feature (called *AutoShutdown* when configured through Dtpower). For example, if you want the AutoShutdown feature to activate only after your regular work hours. On sun4u-architecture workstations, you can also activate the AutoWakeup feature of the Dtpower software, which will power on the system at a specific time following an AutoShutdown.

Power Saving Schemes

The simplest way to manage your system power is by selecting one of three power-saving schemes offered by the Dtpower program:

- Standard — Power management for all capable devices
- Minimal — Power management for monitors only
- Disabled — No power management

In addition to these three schemes, you can also create a customized power scheme, which is discussed in “Customizing Power Schemes” on page 555.

Basic Dtpower Settings and Configurations

This chapter describes the Dtpower GUI and its conventions. It also explains the preset power-saving schemes for Dtpower.

Accessing Dtpower

In previous releases, it was necessary to start the Dtpower software as superuser to edit the configurations. In this release, the program can be started in a number of ways, all of which allow you to change the configurations.

Note – If you are unable to access Dtpower for editing purposes, it may be because you do not have the correct permissions. See the `dtpower(1M)` man page for details.

If Dtpower is already running, it may appear on your desktop as this icon:



FIGURE 23-1 The Dtpower Icon

▼ To Start Dtpower Through the CDE Workspace

1. On the CDE desktop, hold down the menu button on your mouse.
2. From the pull-down list, select **Tools**.
3. From the pull-down list, select **Power Manager**.

▼ To Start Dtpower From the Applications Manager

1. From the front panel on the CDE desktop, select Applications Manager.
2. From Applications Manager, select Desktop_App.
3. From Desktop_App, select Power Manager.

▼ To Start Dtpower From the Command Line

● Start Dtpower:

```
# /usr/dt/bin/dtpower &
```

Note – Due to system initialization, Dtpower can take some time to launch.

Overview of the Dtpower GUI

Basic Dtpower Window Controls

Every Dtpower window has one or more of the following buttons:

- A **triangle** indicates a pull-down menu. In the Figure 23–2, the Current Power Saving Scheme box can be pulled down to reveal two additional levels of power management: Minimal and Disabled.
- **OK** puts into effect the settings currently displayed in the window.
- **Cancel** reverses settings to the state they were in when OK was previously selected (or to default values if this is the first time you have run Dtpower). Cancel, however, will not return to earlier values if you have already selected OK.
- **Help** displays the Dtpower Help window.
- **More** expands the window to reveal the full options for editing the idle time for the system, monitors, and disk drives.
- **Less** reduces the window to conceal the options revealed through the More button.
- **Edit** is located in the Quick Edit tab (see Figure 23–5). It opens a window in which you can configure the AutoShutdown and AutoWakeup options.

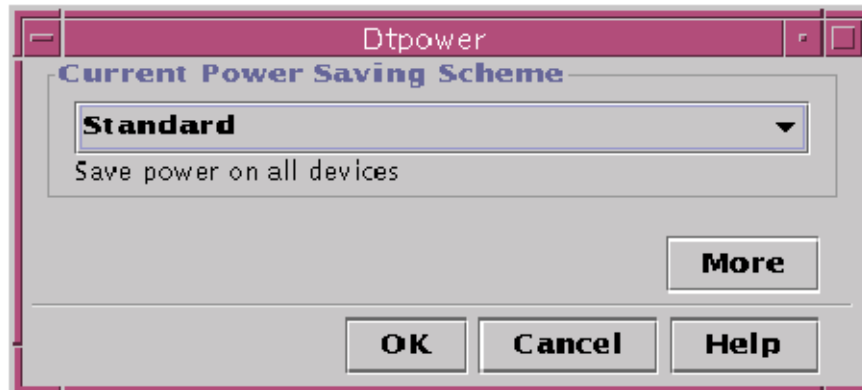


FIGURE 23-2 The Dtpower Basic Window

Power Saving Schemes

The simplest way to select a level of power management for your system is to choose one of the preset power saving schemes. The schemes appear in the Current Power Saving Scheme box in the Dtpower basic window. The default scheme is Standard, as shown in Figure 23-2.

The implementation of the power saving schemes depends on the architecture and the Energy Star capability of the hardware running Dtpower.

The implementation of the power schemes depends on the power saving capabilities of your hardware. In addition to the schemes described below, you can also modify any one of these schemes and save it as a Customized scheme. For more information on creating a customized power saving scheme, see "Customizing Power Schemes" on page 555.

The available power schemes are:

- **Standard scheme** – The default Power Management settings of your hardware determine the implementation of the Standard scheme. (To determine your system's default settings, see "Value of Power Management" on page 547.) SPARC platforms that are Energy Star 3.0 compatible, for example, reduce power consumption by entering a power-saving mode for all devices.
- **Minimal scheme** – Manages power for monitors only. The monitor goes into power-saving mode after 30 minutes of idleness; no other devices are power managed.
- **Disabled scheme** – No power management. None of the components of the system are power managed.

▼ To Select a Power-Saving Scheme

1. Start Dtpower.

This launches the Dtpower basic window.

2. From the pull-down list in the Current Power Saving Scheme box, choose a scheme.

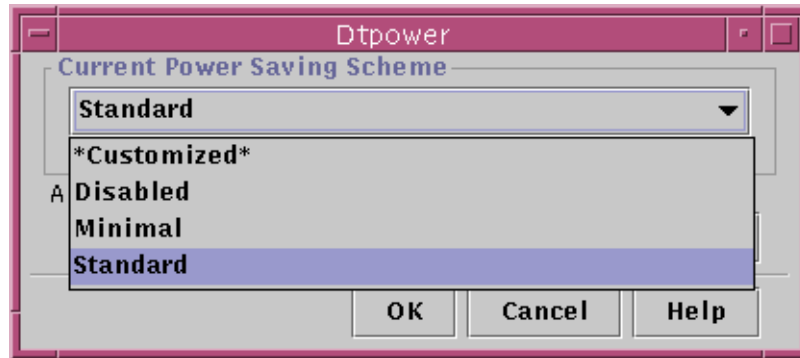


FIGURE 23-3 Pull-down List of Power Saving Schemes

3. Click OK.

Note – Some schemes in the pull-down list may be grayed out; you may be unable to select them because you do not have the correct permissions.

Customizing Power Schemes

This chapter explains how you can create a customized power scheme, overriding the schemes that come preset in the Dtpower software.

You cannot overwrite the schemes provided by the system, but you can create a customized scheme. When you change a system-shipped scheme, a new scheme called “Customized” is created. When you edit another scheme, that first Customized scheme is overwritten by the new one. Thus, only one customized scheme can be saved at any time.

The Customized scheme remains the default scheme even if you reboot your system. But it is temporary in that it only remains in the system until you select one of the three preset schemes. Once you do that, the customized scheme is deleted and removed from the pull-down list of available schemes.

Power Management of Overall System

The system idle time defines the length of time for which the CPU and the devices connected to your system must be idle before they power down. Although the GUI can be used to assign only one idle time for all devices and the CPU, the idle time of each device is measured separately. If a system has two external hard drives, for example, and you are only using one of them, the second will go to power-saving mode after 30 minutes of idleness. The first will go to the power-saving mode separately, after it has been idle for 30 minutes.

For information on configuring a different idle time for each device, refer to the `power.conf(4)` man page.

▼ To Change System Power Management

1. Start Dtpower.

This launches the Dtpower basic window:

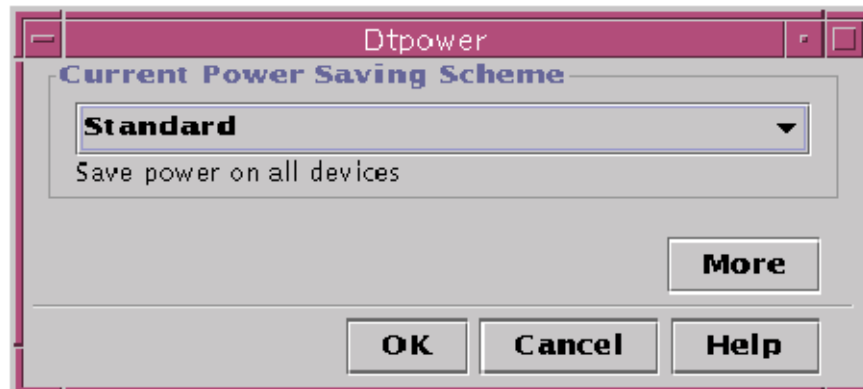


FIGURE 23-4 The Dtpower Basic Window

2. In the Dtpower basic window, select More.

The Quick Edit tab is displayed.

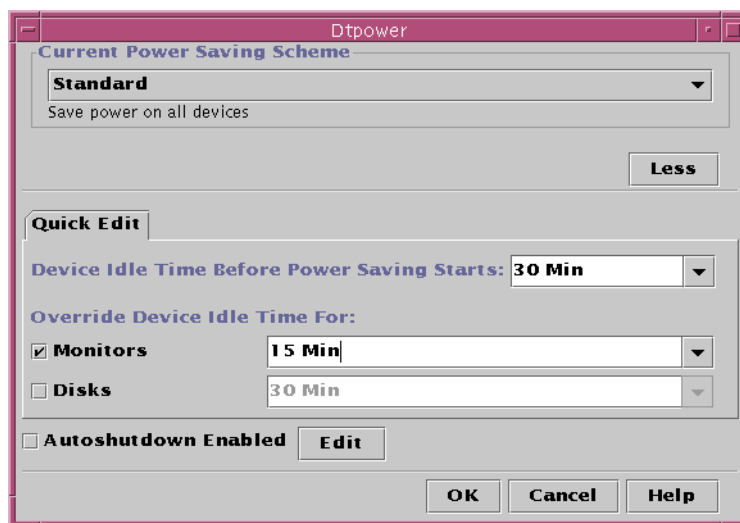


FIGURE 23-5 Quick Edit Tab

3. From the pull-down list for Default System Idle Time, choose the amount of time you want all the devices to be idle before powering down.
Or you can type in the system idle time.

Power Management of Monitors

You can override the monitor power management from the overall system power management through the Dtpower GUI. When you change the idle time for monitor power, the idle time for all other devices and the system remains as it appears in the Default System Idle Time box; only the idle time for the monitor power changes.

When the screen goes blank, some monitors can power down, and then power up when you use the computer again. Other monitors will only blank the screen but not power down.

Power management of workstations that have two monitors (sometimes called a “double-headed system”) is also handled through Dtpower. In such a case, both monitors receive the same idle time setting.

Note – In some past versions of Solaris operating environment, power management for monitors was handled through your windowing system’s screen-saver options, rather than through the Dtpower program. That is no longer the case. Power management for the monitor, disk drive, and system power are now all handled uniformly through the Dtpower program.

▼ To Change Monitor Power Management

1. Start Dtpower.

This launches the Dtpower basic window.

2. In the Dtpower basic window, select More.

The Quick Edit tab is displayed.

3. Check the Monitors - Sleep After Idling For button.

The pull-down list for the monitors’ idle time becomes active.

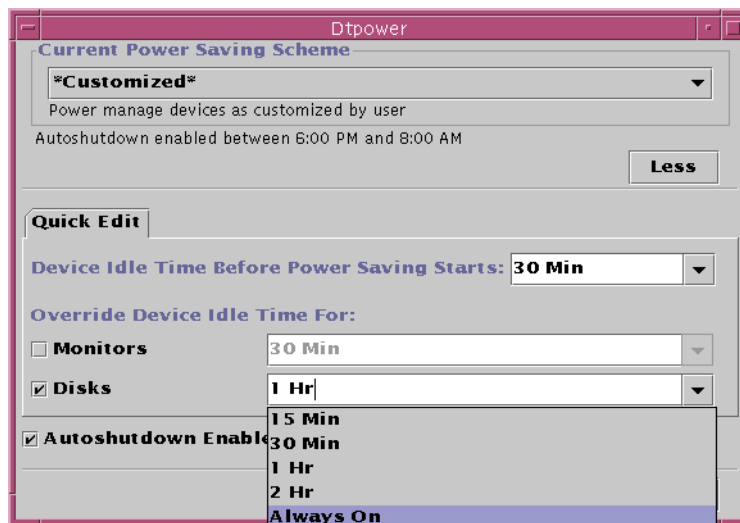


FIGURE 23–6 Pull-Down List for Disks Idle Time

4. Either choose a time from the pull-down list of idle times or enter a unique value.

You must leave a blank space between the number you enter and the units. Abbreviate the units to *Sec*, *Min*, or *Hr*, as appropriate. Decimal values are accepted. For example, if you enter 1.5 Hr, the display idle time will be set to 90 minutes.

If you enter a new value, it is added to the list and will be available the next time you use the pull-down list. The value will be displayed in the format that you entered it in

the edit box.

5. **Click OK.**

▼ To Reactivate the Monitor

- **Move the mouse or press any key.**

This restores the power to the monitor, but you may find that your screen is locked. The screen lock option is set through the Style Manager in CDE. Unlike in previous versions of the Power Management software, the screen lock is now completely independent of the Power Management software. If your screen is locked, enter your password to return to the desktop.

Power Management of Disk Drives

You can override the power management of disk drives just as you can for monitors. When you change the idle time for disk drives, the idle time for all other devices and the system remains as it appears in the Default System Idle Time box (see Figure 23-3); only the setting for the disks' power changes. All disk drives connected to the system receive the same idle time.

For information on setting a different idle time for each disk drive, refer to the `power.conf(4)` man page.

▼ To Change Disk Drive Power Management

1. **Start Dtpower.**

This launches the Dtpower basic window.

2. **In the Dtpower basic window, select More.**

The Quick Edit tab is displayed.

3. **Check the Disk Drives - Sleep After Idling For button.**

The corresponding pull-down list for idle time becomes active.

4. **Either choose a time from the pull-down list of idle times or enter a unique value.**

Leave a blank space between the number you enter and units. Abbreviate the units to `Sec`, `Min`, or `Hr`, as appropriate. Decimal values are accepted. For example, if you enter `1.5 Hr`, the disk drive idle time is set to 90 minutes.

If you enter a new value, it is added to the list, and will be available the next time you use the pull-down list. The value will be displayed the way you entered it in the edit box.

5. Click OK.

Using the Suspend-Resume Feature

This chapter discusses the issues to consider when choosing to use the Suspend-Resume feature. It describes how to use the Suspend-Resume features to manually shut down your system and start it up again in the same working state. It also explains how to use the Dtpower program to manage system power, such as to specify when you want the desktop system to shut down automatically. It describes how to activate or turn off the Suspend-Resume feature.

This chapter points out the few differences in how the Dtpower program operates on sun4m-architecture desktop machines (such as the SPARCstation™ 20) and on sun4u-architecture desktop machines (such as the Sun Ultra™ 1).

Note – A command line interface is also provided for a system administrator to change a desktop machine's system default settings and to change the idleness definition. For more information, see the `power.conf(4)` man page.

Choosing to Use Suspend-Resume

Powering off a desktop system may interfere with some operations that involve that machine. This section presents some guidelines to take into account before deciding when to use system Power Management features on a desktop machine.

Electronic Mail Issues

Mail is not sent to any mail spool file on a machine while the machine is suspended. Typically, if mail cannot be delivered for more than three days, it is returned to the sender as undeliverable.

If you suspend your system for three days or longer, and your machine has a local mail spool, you may fail to receive items of mail that have been bounced back to the sender.

Mail Alias Issues

Mail aliases on a machine are not available to other users while that machine is suspended. If the machine is suspended long enough (typically three days), messages sent to an alias on that machine are bounced back to the sender.

Remote Login Issues

While your machine is suspended, you cannot access it by remote dial-in. That is, you cannot use `rlogin(1)` to connect to a machine while that machine is suspended.

Networked Software Issues

The Suspend-Resume feature may have an impact on a networked application. A networked program may fail if it is not resilient when a peer system is suspended and does not respond to network traffic.

One example of this is when you run an Xhosted application from one system and display it on another system. If the Power Management software suspends the latter system, the application software may fail.

Solstice AutoClient Issues

Do not use Suspend-Resume features on a machine that uses Solstice™ AutoClient™ software.

ATM Issues

The Power Management software is not supported on SunATM™ devices. The ATM protocol is connection oriented, which means calls must be established between two endpoints (such as workstations) before data can be transferred. Each end of the call must maintain the connection actively, so neither end of an ATM connection can use the Power Management software to suspend and, later, resume the connection.

Cron Job Issues

Operations specified in a cron file do not run during the time a machine is suspended.

When a system resumes, cron jobs scheduled to run during the time the system was suspended with the Power Management software are handled in the following way:

- The first cron job (the one scheduled to run earliest during the time the system was suspended) is started as soon as the system resumes.
- The second and subsequent cron jobs that might have run during the time the system was suspended are not run at all.

Normally, the `cron` command identifies the next job to run and calculates the interval to wait until it is time to run that job. When a system resumes, the `cron` command calculates the interval until the first job has expired; then this already-queued cron job is run. The cron process then rechecks its queue of jobs. It only considers jobs whose execution time has not yet passed, so any additional jobs whose run time fell during the time the system was suspended are not run.

Calendar Manager Issues

The Calendar Manager software does not display pop-up windows for scheduled events that occur while the desktop machine is suspended.

Thermal Stress Issues

The goal of the Power Management software is to conserve electricity. However, you should also take into account how an increase in power cycling will affect the overall reliability of the hardware.

The Power Management software is active by default on sun4u systems (such as the Sun Ultra 1). Accordingly, the Power Management system for those machines evaluates each automatic power-cycle request that occurs due to the system being idle. If an evaluation determines that the thermal shock of power cycling on a particular occasion would decrease hardware reliability, then that power-cycle request is deferred.

Despite this feature, you can choose to turn off a sun4u system manually at any time. This checking feature is intended as a brake on the hardware being subjected to an excessive number of automatic power-cycle requests.

Suspending and Resuming Your System Manually

The Power Management software includes a timesaving feature called Suspend-Resume. This feature is used by default through the AutoShutdown and AutoWakeup features of the Dtpower program. You also can Suspend and Resume your system whenever you choose by following the procedures in this section.

The traditional process of powering off your system can be time consuming. Similarly, the process of rebooting and setting up your workspace also can take some time. With

the Suspend-Resume feature, you can power off your system and quickly save all your current work-in-process automatically. When you power on the system, the saved workspace is restored.

You can leave your system suspended and powered off for an indefinite length of time without losing data. However, there are some outside operations (such as receiving mail) that may be affected while your system is suspended. Before you use the Suspend-Resume feature, be sure to read “Choosing to Use Suspend-Resume” on page 560.

Note – The Suspend-Resume feature is not supported on systems configured as diskless clients.

You can suspend your system automatically using the AutoShutdown feature in the Power Management software. To suspend your system manually, follow the instructions in this section.

Suspend allows you to do the following without losing the current state of your system:

- Move your system from one location to another.
- Power off your system to conserve energy.

Note – Do not use the Suspend feature if you need to reconfigure your system. You must halt the operating system whenever you want to reconfigure your system.

Before you suspend a system, you must wait for operations such as the following to finish:

- Audio activity
- Floppy disk activity
- Tape activity
- ISDN activity
- Synchronous TTY activity

Initiating a Suspend and a subsequent Resume usually requires less than a minute. You can initiate Suspend in several ways:

- Use the power key, then respond to a prompt.
- Use the Shift and Power keys to Suspend without a further prompt.
- Use the standby switch available on the front of systems such as the Sun Ultra 5 and Sun Ultra 10.
- Use the CDE desktop Workspace menu.
- Use the `sys-suspend` command.

▼ To Suspend Your System Using the Keyboard

1. Press the Power key.

For examples of the location of the Power key, see Figure 23–7 and Figure 23–8.

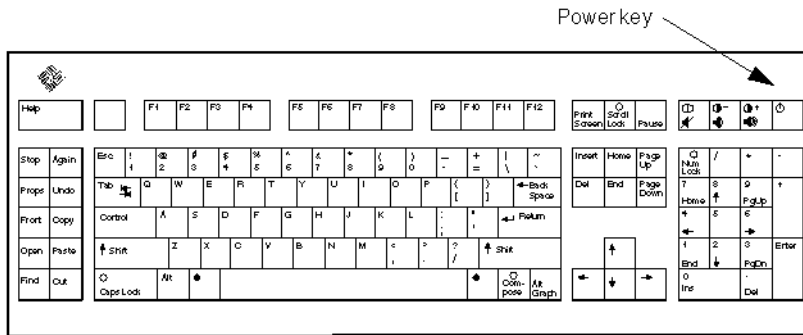


FIGURE 23–7 Example of Power Key Location on Sun Type 5 and Type 6 Keyboards

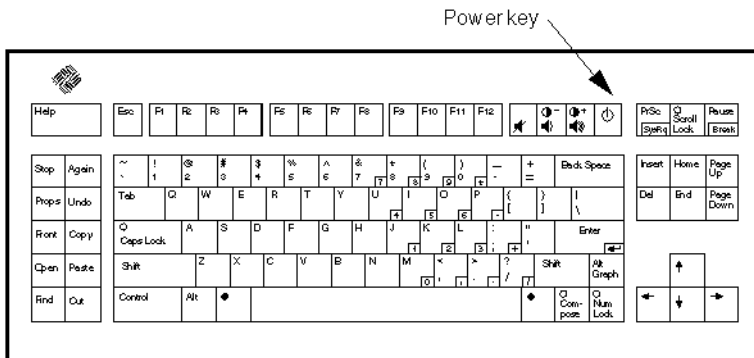


FIGURE 23–8 Power Key Location on Sun Compact 1 Keyboard

After you press the Power key, the confirmation window shown in Figure 23–9 is displayed.

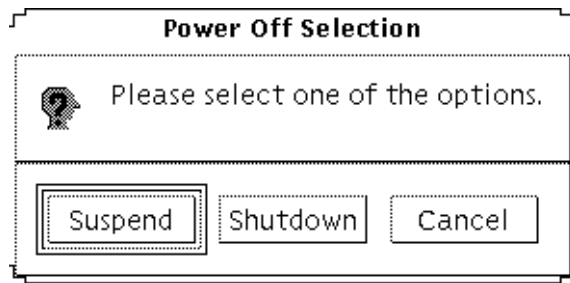


FIGURE 23-9 Default Confirmation Window for Power Key Suspend

2. Select Suspend in the confirmation window.

Suspend saves the state of the system to disk, enabling you to return later to the current system environment.

Shutdown syncs the disks to a neutral state and effectively shuts down the operating system. This is equivalent to running the `shutdown (1M)` command.

3. Wait for the system to power off.

4. Power off all external devices.

External devices include disk drives, printers, or other serial or parallel peripherals. See the manual supplied with the external device for instructions.

▼ **To Immediately Suspend Your System Using the Keyboard**

1. Press the Shift and the Power key at the same time.

See Figure 23-7 or Figure 23-8 for the location of the Power key.

2. Wait for the system to power off.

3. Power off all external devices.

External devices include external disk drives, printers, or other serial or parallel peripherals. See the manual supplied with the external device for instructions.

▼ **To Disable the Power Key**

1. As root, edit the `/usr/openwin/lib/speckeyd.map` file

```
# vi /usr/openwin/lib/speckeyd.map
```

2. comment out the two lines starting "SunPower" by putting a "#" as the first character in the line.

```
#SunPowerSwitch          -          $OPENWINHOME/bin/sys-suspen
#SunPowerSwitchShift     -          $OPENWINHOME/bin/sys-suspend -n
```

3. Save the edited file.
4. Shut down and restart the system.

▼ To Suspend Your System Using the Standby Switch

Some systems, such as the Sun Ultra 5 and Sun Ultra 10, have a standby switch on the front of the system.

1. Press the standby switch while you are in a windowing environment.



Caution – If you are not in a windowing environment, pressing the standby switch will immediately shut down the system.

In a windowing environment, the confirmation window shown in Figure 23–10 is displayed.

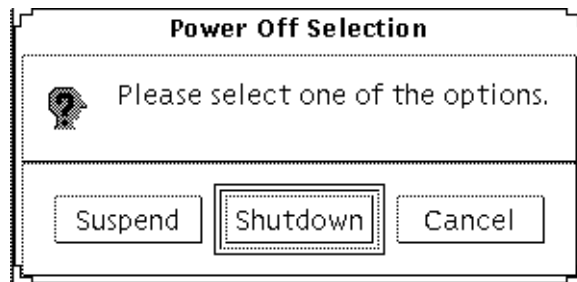


FIGURE 23–10 Default Confirmation Window for Standby Switch

2. Select Suspend in the confirmation window.

Suspend saves the state of the system to disk, enabling you to return to the current system environment.

Shutdown syncs the disks to a neutral state and effectively shuts down the operating system. This is equivalent to running the `shutdown (1M)` command.

In the window for the standby switch, Shutdown is the default. In the similar window that appears when you press the power key, Suspend is the default.

3. Wait for the system to power off.

4. **Power off all external devices.**

External devices include disk drives, printers, or other serial or parallel peripherals. See the manual supplied with the external device for instructions.

▼ To Suspend Your System Using CDE

1. **Place your cursor in the workspace and hold down the menu button.**

The Workspace menu is displayed.

2. **Select Suspend System from the Workspace menu.**

The Suspend confirmation window is displayed, as shown in Figure 23–9.

3. **Select Suspend in the confirmation window.**

4. **Wait for the system to power off.**

5. **Power off all external devices.**

External devices include disk drives, printers, or other serial or parallel peripherals. See the manual supplied with the external device for instructions.

▼ To Initiate Suspend Using the `sys - suspend` Command

Note – You do not need to be running a windowing system, such as OpenWindows or CDE, for the `sys - suspend` shell command to work, nor do you need to be superuser.

1. **At the prompt, initiate the system suspend process:**

```
example% /usr/openwin/bin/sys - suspend
```

The Suspend confirmation pop-up window is displayed, as shown in Figure 23–10. If a window system is not running, the command executes without displaying the confirmation pop-up window.

2. **Click Suspend.**

3. **Wait for the system to power off.**

4. **Power off all external devices.**

External devices include disk drives, printers, or other serial or parallel peripherals. See the manual supplied with the external device for instructions.

▼ To Resume a Suspended System

1. **Power on all external devices connected to your system.**

2. **Press the Power key.**

See Figure 23–7 or Figure 23–8 for power key locations.

3. **Enter your password to unlock the system.**

Whenever the system is suspended, it is automatically locked.

System AutoShutdown and AutoWakeup Controls

Using the Dtpower program, you can specify times for your system to shut down automatically. This feature is called AutoShutdown. If you have a sun4u desktop machine, you can also set your system to power on automatically at a specified time. This feature is called AutoWakeup.

Note – Be sure to read “Choosing to Use Suspend-Resume” on page 560 before changing the AutoShutdown settings.

AutoShutdown uses the Suspend feature to automatically power off your system. When the system powers up again, it resumes in the state in which it was suspended.

Through the Dtpower window, you can activate or deactivate the AutoShutdown and AutoWakeup features. You can also specify the following values:

- The number of minutes of idle time before AutoShutdown attempts to suspend the system
- The start and finish times when AutoShutdown can occur during each day. (If you specify the same time for both start and finish, AutoShutdown can occur at any time of day. See Figure 23–11.)
- The time of day when the system will automatically power on and resume (AutoWakeup) after being suspended by AutoShutdown (available on sun4u desktop systems only).

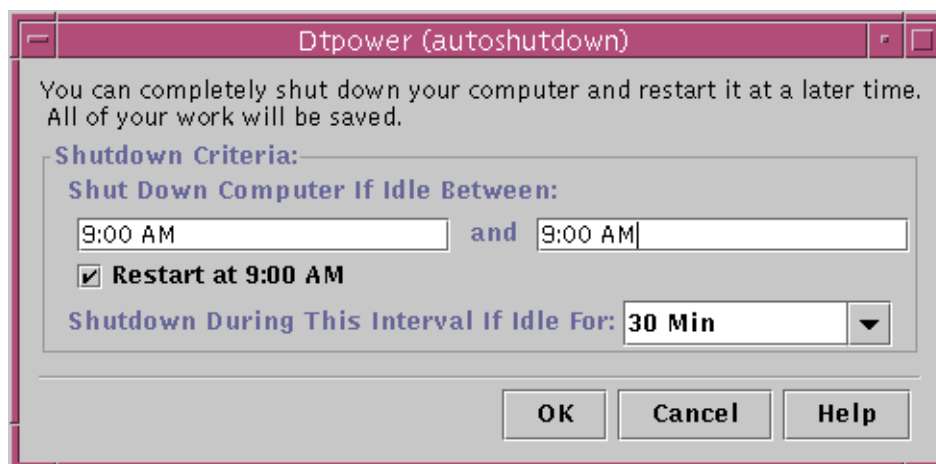


FIGURE 23-11 Autosshutdown Configuration for All Day

Note – AutoWakeup does not occur after you suspend a system manually; it can occur only after an AutoShutdown.

▼ To Set an Idle Time for AutoShutdown

1. **Start Dtpower.**

Note – Consecutive executions of AutoShutdown do not occur less than five minutes apart, even if the idle time setting is under five minutes.

2. **In the Dtpower basic window, click More.**
The window expands to show the Quick Edit tab.
3. **In the Quick Edit tab, check Enable Autosshutdown.**
4. **Click Edit.**
The AutoShutdown window is displayed.

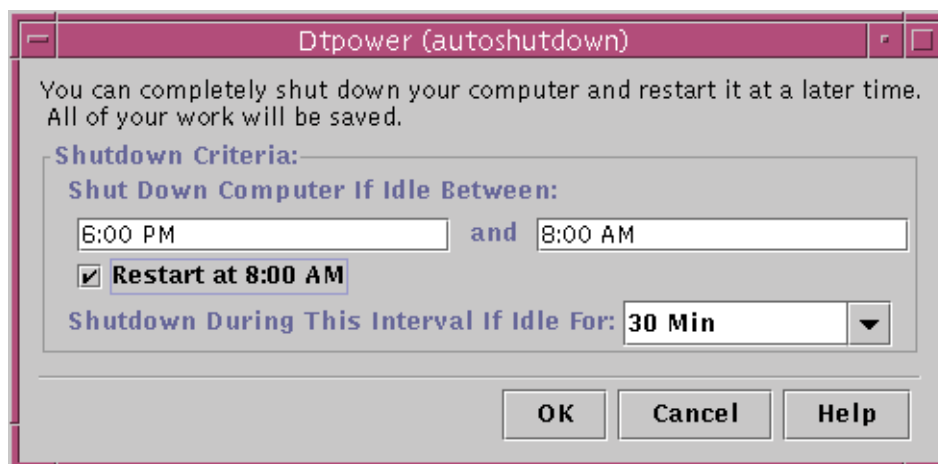


FIGURE 23-12 Autosshutdown Window

5. Enter the time you want the AutoShutdown feature to start to be active.
6. Enter the time you want the AutoShutdown feature to cease being active.
7. In the numerical box for Shutdown During This Interval If Idle for, enter the duration for which the computer must be idle before shutting down.

In Figure 23-12, the AutoShutdown will occur after 1 hour of idle time between the hours of 6:00 p.m. and 8:00 a.m.

8. Click OK when all the settings you want are displayed.
If you want to reject the displayed settings, select Cancel; the currently active settings will be displayed in the window.

▼ To Disable Autosshutdown

1. Start Dtpower.
2. In the Dtpower basic window, click More.
The window expands to show the Quick Edit tab.
3. In the Quick Edit tab, uncheck Enable Autosshutdown.
4. Click OK.

▼ To Enable AutoWakeup

Note – The AutoWakeup feature is available only on sun4u desktop systems.

1. **Start Dtpower.**
2. **In the Dtpower basic window, click More.**
This expands the window to reveal the Quick Edit tab.
3. **In the Quick Edit tab, check Enable Autoshtutdown.**
4. **Click Edit.**
The AutoShutdown window is displayed.
5. **Set the idle time for AutoShutdown.**
See “To Set an Idle Time for AutoShutdown” on page 569.
6. **Check the Restart at *<time>* button.**

The time the computer will restart is the second time you have specified for Autoshtutdown.

▼ To Disable AutoWakeup

1. **Start Dtpower.**
2. **In the Dtpower basic window, click More.**
This expands the window to reveal the Quick Edit tab
3. **In the Quick Edit tab, uncheck Enable Autoshtutdown.**
4. **Click Edit.**
The AutoShutdown window is displayed.
5. **Uncheck the Restart at *<time>* button.**

▼ To Exit Dtpower

- **Click OK to activate the new settings you made in the Dtpower window.**
The Dtpower window closes.

Troubleshooting Power Key Problems

If pressing the Power key does not suspend your system, refer to the following procedure.

▼ To Respond When the Power Key Does Not Suspend the System

1. Verify that the key processing daemon is present:

```
% ps -eaf | grep speckeyd
```

If the resulting message does not list `/usr/openwin/bin/speckeyd`, you will need to start the key processing daemon.

2. Become superuser and start the key processing daemon (if necessary):

```
% /usr/openwin/bin/speckeyd
```

Troubleshooting Suspend Failures

When the system fails to suspend, an alert appears. The exact message within the pop-up window may vary, depending on the cause of the problem, but the Suspend Failed window will appear similar to the following figure.



FIGURE 23-13 Suspend Failed Pop-up Window

When any Suspend Failed window appears, click either of the buttons at the bottom of the window:

- Power Off turns off power *without* preserving the current operating state, as a suspend operation usually does.
- Cancel cancels the suspend request, and the hardware continues to be powered on.

▼ To Respond to a Device Suspend Failure

1. **When the Suspend Failed pop-up window appears saying Device error during suspend, select Cancel.**

If you have not already saved your work, do so now. Take the corrective action described below before retrying suspend again.

2. **Check for more information in the console window in the workspace.**

An unsupported device or a device performing nonresumable activity may be the cause of this problem.

If the device specified by the console message is performing a nonresumable activity, stop the activity and try suspend again, as described in Step 1.

If your system contains devices in addition to the default configuration, then these devices may not support the Suspend feature. In that case, continue with the next step.

3. **Unload the device driver.**

Before you try to suspend again, attempt to unload the device driver by doing these steps:

- a. **Get the module ID by running `modinfo`.**

- b. **Unload that module:**

`modunload -i module_id` You might not be able to unload a driver for one of these reasons:

- There is no detach support in the code.
- Another driver must be unloaded first, such as `audio(7I)` and `dbri(7D)`.
- The device is actually in use and busy.

In such a case, contact your system administrator.

4. **Try Suspend again.**

- If Suspend succeeds, the system saves your activities and the system powers off successfully.
- If Suspend does not succeed, the alert pop-up window is displayed again. In this case, continue with the next step.



Caution – Save your work if you have not already done so.

5. Select Power Off.

Since the error persists, suspend is not possible. Selecting Power Off shuts down the system properly without causing file system damage. (Remember, your data will *not* be saved unless you have saved it manually.) When you power on again, your system automatically reboots.

However, if you select Power Off and it fails, your system does not support software power off. An alert pop-up window is then displayed with information about the power-off failure, as shown in the following figure:

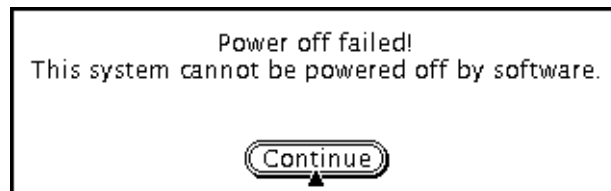


FIGURE 23-14 Power Off Failed Pop-up Window

6. Select Continue.

Your system might not support software power off due to a non-Type 5 keyboard or an outdated system PROM. If you do have a Type 5 keyboard installed, then contact your system provider for a system PROM upgrade.

Also, some sun4m-architecture systems drop to an OpenBoot™ PROM prompt after a suspend operation, because those systems do not support software power off.

7. Save your work if you have not already done so.

8. Halt the operating system.

9. **Power off by pressing the power switch on the back panel of the system to the off (0) position.**

Note – When possible, solve the problem for that device in the future by obtaining and installing a device driver that supports Suspend features, if one is available from your manufacturer.

▼ To Respond to a Process Suspend Failure

1. **When the Suspend Failed pop-window appears saying** `Process cannot be stopped`, **select Cancel.**

If you have not already saved your work, do so now. Retry Suspend again.

2. **Check for more information in the Console window in the Workspace.**

If a process is a real-time process or if it is performing certain special network operations, that process may refuse to suspend gracefully. In most cases, this is only a temporary condition and you can correct it by trying Suspend again.

However, if the problem persists, stop the offending process (as specified in the console message) and retry Suspend again.

3. **Try Suspend again.**

- If Suspend succeeds, the system saves your activities and the system powers off.
- If Suspend does not succeed, the alert pop-up window is displayed again.



Caution – Save your work if you have not already done so.

4. **Select Power Off.**

Remember, your data will *not* be saved unless you have done so manually.

When you power on again, your system automatically reboots.

▼ To Respond to an Abnormal Condition

1. **When the Suspend Failed pop-window appears saying** `Abnormal condition during suspend,,` **select Cancel.**

You'll need to take corrective action before you can try to suspend again.

If you have not already saved your work, do so now.

2. Check for more information in the Console window in the Workspace.

You may be able to take further corrective action by checking the console error messages.

3. Try Suspend again.

- If Suspend succeeds, the system saves your activities and the system powers off.
- If Suspend does not succeed, the alert pop-up window is displayed again. In this case, continue with the next step.



Caution – Save your work if you have not already done so.

4. Select Power Off.

Remember, your data won't be saved unless you have done so manually. When you power on again, your system automatically reboots.

Troubleshooting a Shortage of Disk Space

When your system suspends, it creates a statefile to preserve the current state of your system. If the file system containing the statefile is full, a Suspend Failed pop-up window is displayed that includes the following message:

```
Suspend requires more disk space for statefile.
```

Perform the following procedure in response to this message.

▼ To Respond to a Disk Space Limitation

1. Select Cancel.

You'll need to take corrective action before you can try Suspend again. If you have not already saved your work, do so now.

2. Check for more information in the Console window in the Workspace.

You must have a minimum of 10 Mbytes of space available. Clean up a partition before you try suspend again. Another solution is to change the location of the statefile to a file system with sufficient space, as described in the `power.conf(4)` man page. Contact your system administrator for assistance, if necessary.

3. Try Suspend again.

- If Suspend succeeds, the system saves your activities and the system powers off.

- If Suspend does not succeed, the alert pop-up window is displayed again. In that case, continue with the next step.



Caution – Save your work if you have not already done so.

4. Select Power Off.

Remember, your data will *not* be saved unless you have done so manually. When you power on again, your system automatically reboots.

Disabling the Screen Lock

After a Resume, the system's screen lock is invoked by default. To disable the screen lock before you use the power key to Suspend, use the following procedure.

Note – You cannot disable screen locking that is put into effect by AutoShutdown. This is a security feature. It ensures that only someone who knows your password can get access to your work session when the system resumes.

▼ To Disable the Screen Lock After Using the Power Key to Suspend

1. **Modify the `speckeyd.map` file to add the `-x` flag to the `sys-suspend` entry.**
For more information, see the man page for `speckeyd.map(4)`.



Caution – Save your work if you have not already done so.

2. **Exit the current windowing session and restart.**

In place of this step, you may also kill the `speckeyd` daemon and then restart the daemon.

Keyboard Shortcuts for the Desktop

This appendix describes keyboard alternatives to using your mouse.

- “Menu Shortcuts” on page 579
- “Moving the Keyboard Focus” on page 580
- “Opening and Closing Windows” on page 581
- “Online Help Keyboard Navigation” on page 588

Keyboard shortcuts offer a way to accomplish desktop tasks such as moving and selecting windows and controls, choosing menus, and navigating in workspaces without the use of your mouse.

When you use the keyboard to navigate on the desktop, note that:

- The Alt key is the same as the Extend char key on some keyboards.
- Return is the same as Enter on some keyboards.
- In Style Manager, the Window Behavior setting must be Click In Window To Make Active (this is the default).

For more information on the Window Behavior setting, refer to Chapter 9.

Menu Shortcuts

Menu items that appear dimmed are unavailable. They are available only under certain conditions.

An underlined character in a menu name or item is called a *mnemonic*. The sequence of keys listed to the right of some menu items is called a *shortcut key*.

Mnemonics and shortcut keys provide quick keyboard access to menu items.

To choose an item from a pull-down menu using the menu's mnemonics:

1. Hold down **Alt** and press the underlined letter in the menu's name.
2. Press the underlined letter in the menu item's name.

Keyboard Focus and the Highlight

Keyboard focus uses the highlight to show you which element of a window, menu, or control will respond to your input. To activate a selected menu item or control (such as a button), press the Spacebar.

In windows and dialog boxes, you can move the keyboard focus among *tab groups*. A tab group is a collection of related controls, such as a set of buttons.



The OK, Cancel, and Help buttons are a tab group

This portion of a dialog box shows the keyboard focus on the OK button.

Moving the Keyboard Focus

To move the keyboard focus, as shown by the highlight:

- Within a window, dialog box, or the front panel

Press	To Move To
Tab	The next tab group
Shift+Tab	The previous tab group
Down Arrow	The next control in the tab group
Up Arrow	The previous control in a tab group

Press	To Move To
F10	The window's menu bar—use the arrow keys to display menus and move among their items
Shift+F10	The selected object's pop-up menu—use the arrow keys to move among the menu's items
Alt+Spacebar	The Window menu

■ Within a workspace

Press	To Move To
Alt+Tab or Alt+Esc	The next window or icon
Shift+Alt+Tab	The previous window or icon
Alt+Up Arrow	The bottom window in a stack of windows (bringing it forward)
Alt+Down Arrow	The bottom of the window stack
Alt+F6	The next window belonging to an application, or between the Front Panel and a subpanel
Shift+Alt+F6	The previous window belonging to an application, or between the Front Panel and a subpanel

■ Within a menu

Press	To Move To
Down Arrow	The next menu item
Up Arrow	The previous menu item

Press the Spacebar to choose a selected item from within a menu.

Press Esc to dismiss a menu.

Opening and Closing Windows

This section describes how to do window-related activities through your keyboard.

▼ To Open an Application Window

From the Front Panel:

1. Press **Alt+Tab** to move the keyboard focus to the Front Panel.
2. Press the arrow keys to move the highlight within the Front Panel and select a control.
3. Press **Return** or the **Spacebar** to choose the control and open the application's window.

From Application Manager:

1. Open the Application Manager window by choosing its Front Panel control as described above.
2. Press the arrow keys to move the highlight to an application group icon within the Application Manager window.
3. Press **Return** twice to open the application group.
4. Press the arrow keys to move the highlight to an application or action icon, then press **Return** twice to start the application.

From a terminal emulator window:

1. Open a terminal emulator window by choosing its Front Panel control as described above.
2. When the window opens, type the command that starts the application.

▼ To Close an Application Window

Closing a window removes it from all workspaces.



Caution – Before closing an application window, save your work.

1. Press **Alt+Tab** to move the highlight to the window you want to close.
2. Press **Alt+F4**.

▼ To Select a Window or Icon

- **Press Alt+Tab to move the highlight to the window or icon you want to select.**

When a window or icon is selected, its border changes color to show that it is active and will receive input from the mouse or keyboard.

▼ To Turn a Window into an Icon (Minimize)

1. **Press Alt+Tab to move the highlight to the window you want to minimize.**
2. **Press Alt+Spacebar to display the Window menu.**
3. **Choose the Minimize item:**
 - Press Down Arrow until you select Minimize, then press Return.
 - *Or*, press N, the menu's mnemonic for Minimize.

▼ To Restore a Window from an Icon

1. **Press Alt+Tab to move the highlight to the icon you want to restore.**
2. **Press Alt+Spacebar to display the Window menu.**
3. **Press Down Arrow to choose Restore, then press Return.**

▼ To Move a Window or Window Icon

1. **Press Alt+Tab to move the highlight to the window or icon you want to move.**
2. **Press Alt+Spacebar to display the Window menu.**
3. **Press M, the menu's mnemonic for Move.**
4. **Press the arrow keys to relocate the window or icon.**

Hold down Control while you press an arrow key to speed up the movement of the window or icon.
5. **When you've moved the window or icon where you want it, press Return.**

To cancel the move operation, press Esc.

▼ To Resize a Window

1. Press **Alt+Tab** to move the highlight to the window you want to resize.
2. Press **Alt+Spacebar** to display the Window menu.
3. Press **S**, the menu's mnemonic for Size.
4. Press the arrow keys to stretch or shrink the window. An outline appears to show you the window's size.
Hold down **Control** while you press an arrow key to size the window faster.
5. When the outline shows the size you want, press **Return**.
To cancel the resize operation, press **Esc**.

▼ To Scroll a Window's Contents

1. Press **Alt+Tab** to move the keyboard focus, as shown by the highlight, to the window whose contents you want to scroll.
2. Press **Tab** to move to the window area you want to scroll.
3. Press the arrow keys, **Prev** and **Next**, or **Page Up** and **Page Down**.
Hold down **Control** while you press an arrow key to scroll faster.

▼ To Select a List Item

Some windows and dialog boxes display lists from which you select options or settings.

1. Press **Tab** to move the highlight to the list.
2. Press the arrow keys to move through the list.
To select more than one contiguous item in lists that allow you to do so, press **Shift+Down Arrow** or **Shift+Up Arrow**.
3. Press **Tab** to move the highlight to the appropriate button (such as **OK**), then press **Return**.

▼ To Display a Pull-down Menu

To display a pull-down menu from a window's menu bar:

1. Press **Alt+Tab** to move the highlight to the application window.
2. Press **F10** to move the highlight to the name of the first menu in the menu bar, then use the arrow keys to display menus and move among their items.
3. Press **Return** to choose a highlighted item.

To dismiss a menu without choosing an item, press **Esc**.

▼ To Use a Pop-up Menu

With the keyboard focus on the component whose pop-up menu you want to display:

1. Press **Shift+F10** to display the pop-up menu.
2. Choose a menu item:
 - Press the **Down Arrow** key to move through the menu, highlight the item you want, then press **Return**.
 - *Or*, type the underlined letter in the menu item's name (its mnemonic).
 - *Or*, type the shortcut key, as listed to the right of the item's name.

▼ To Use the Window Menu

1. Press **Alt+Tab** or **Alt+Esc** to move the keyboard focus, as shown by the highlight, to the window or icon.
2. Press **Alt+Spacebar** to display the Window menu.
3. Press the key for the menu item's mnemonic (the underlined character in the item's name).

To close the menu without choosing an item, press **Esc**.

▼ To Switch to Another Workspace

1. Press **Alt+Tab** until you've placed the keyboard focus, as shown by the highlight, on the Front Panel.

2. Press the arrow keys to move the highlight to the button for the workspace you want to display.
3. Press Return or the Spacebar.

▼ To Rename a Workspace

1. Press Alt+Tab until you've placed the keyboard focus, as shown by the highlight, on the Front Panel.
2. Press the arrow keys to move the highlight to the button for the workspace you want to rename.
3. Press Shift+F10 to display the workspace button's pop-up menu.
4. Press the Down Arrow key to select Rename, then press Return.
The button becomes a text field.
5. Edit the workspace's name in the text field.
6. Once you've renamed the workspace, press Return.

▼ To Move among Windows

To move to the next window or icon, press Alt+Tab or Alt+Esc.

To move to the previous window or icon, press Shift+Alt+Tab or Shift+Alt+Esc.

To shuffle through a stack of windows, press Alt+Up Arrow or Alt+Down Arrow.

To move between the windows belonging to an application, or the Front Panel and a subpanel, press Alt+F6 or Shift+Alt+F6.

▼ To Display a Window in Other Workspaces

1. Press Alt+Tab to move the keyboard focus, as shown by the highlight, to the window you want to display in other workspaces.
2. Display the Window menu by pressing Alt+Spacebar.
3. Press the Down Arrow key to select Occupy Workspace, then press Return.
The Occupy Workspace dialog box appears.

4. Press **Tab** until the keyboard focus is in the **Workspaces** list.
5. Select the workspaces in which you want the window to appear:
 - Press **Down Arrow** or **Up Arrow** to move through the list.
 - To select more than one workspace, press **Shift+Down Arrow** or **Shift+Up Arrow**.
6. Press **Tab** to move the keyboard focus to **OK**, then press **Return** or the **Spacebar**.

▼ To Choose a Front Panel Control

1. Press **Alt+Tab** to move the keyboard focus to the **Front Panel**.
2. Press the arrow keys to move the highlight within the **Front Panel** and select a control.
3. Press **Return** or the **Spacebar** to choose the control and open the application's window.

▼ To Choose a Subpanel Control

1. Press **Alt+Tab** to move the keyboard focus to the **Front Panel**.
2. Press the arrow keys to move the highlight within the **Front Panel** to one of the subpanel arrow controls, then press **Return**.
3. Press the arrow keys to move the highlight among the controls within the subpanel, then press **Return** or the **Spacebar** to choose a selected control.
To close the subpanel without choosing a control, press **Esc**.

▼ To Move the Front Panel

1. Press **Alt+Tab** to move the keyboard focus to the **Front Panel**.
2. Press **Alt+Spacebar** to display the **Front Panel** menu.
3. Press **M**, the menu's mnemonic for **Move**.
4. Press the arrow keys to relocate the **Front Panel**.
Hold down **Control** while you press an arrow key to speed up the movement of the **Front Panel**.

5. **When you've moved the Front Panel to where you want it, press Return.**
To cancel the move operation, press Esc.

Online Help Keyboard Navigation

Choose hyperlinks to display related information. Help topic hyperlinks appear as:

- Underlined text
- An open-cornered box surrounding a graphic

▼ To Get Help in Any Window

- **Press F1 (or the Help key if your keyboard has one).**

▼ To Choose a Help Topic Hyperlink

1. **If the help window does not already have the keyboard focus, press Alt+Tab to move the highlight to the help window.**
2. **Press Tab and the arrow keys to move the highlight to the hyperlink you want to choose, then press Return.**

To return from a hyperlink to the previous topic:

- **Press Control+B, the keyboard accelerator for Backtrack.**

For more information about using Help, refer to Chapter 3.

Running Localized Sessions

You can customize the desktop user interface in many different languages. Various elements such as screens, default languages, fonts, input (keyboard) methods, and icons can be changed. In addition, the menus, online help, and error messages can be localized and are available in multiple languages.

- “Default Language at Login” on page 589
- “Logging In to a Language-Specific Session” on page 590
- “Creating or Editing a Language-Specific File” on page 590
- “Using a Language-Specific Terminal Emulator” on page 591
- “Specifying Fonts” on page 591
- “Changing Fonts” on page 592
- “Choosing Your Input Method and Keyboard” on page 594

Default Language at Login

The messages and menus in the initial login window are displayed in the default language. If the default language has not been set up, the messages and menus are displayed using a generic “C” locale environment. You can change the language from the Options menu in the login screen.

Logging In to a Language-Specific Session

Logging in to a specific language through the desktop is easy. However, specific hardware requirements such as keyboards and printers may be required to make the localized session more usable. These requirements vary by language, character set, and country. Software and fonts can further increase the effective localization of your system. To log in to a language-specific session:

1. **Use the Options menu in the login screen to select a language.**
The list of languages includes all the supported languages.
2. **Log in normally with your name and password.**

Creating or Editing a Language-Specific File

You can create, edit, and print language-specific files. You can also give files language-specific names. However, for system administration files that are shared across a network, the file names should just contain ASCII characters. Different systems on the network might be using different locales.

If you have logged in to the desktop in a specific language, all applications will be invoked using that language. However, you can still invoke an application with another language.

If you want to create a file with a different language, invoke a new instance of Text Editor specifying your desired language.

▼ To Create or Edit a Language-Specific File

1. **In a Terminal window, set the LANG environment variable to the desired language. For example, to set the locale to Japanese, you can type:**

```
LANG=Japanese_locale
```

where Japanese_locale sets the value of the LANG environment variable for the Japanese character set. Refer to your specific platform to determine the value for

Japanese_locale.

2. In the same window, call Text Editor (dtpad) under the desired language by typing:

```
/usr/dt/bin/dtpad &
```

To start Text Editor with the Japanese language directly, type:

```
/usr/dt/bin/dtpad -xnl1language Japanese_locale
```

You can now enter Japanese characters if the locale-specific files have been installed.

You can also use the Text Editor session to edit a previously created Japanese file.

See “To Specify Fonts from the Command Line” on page 593 for an example of specifying a font set.

Using a Language-Specific Terminal Emulator

The following example uses dtterm and will start a Japanese terminal emulator. It assumes that the default language is not Japanese, that you are using the Korn shell, and that the locale-specific files have been installed.

- From a command line in a Korn shell Terminal window type:

```
LANG=Japanese_locale dtterm
```

where *Japanese_locale* sets the value of the LANG environment variable for the Japanese character set. Refer to your specific platform to determine the value for *Japanese_locale*.

Specifying Fonts

The user usually changes fonts using Style Manager, which in turn restarts Workspace Manager, resetting the desktop fonts. You can also customize fonts at the command line or in resource files. In an internationalized environment, the user must specify fonts that are independent of the code set. This is necessary because the specification can be used under various locales with different code sets than the character set (*charset*) of the font. Therefore, all font lists should be specified with a font set.

Font Specification

A font specification within a fontlist can be either an X Logical Function Description (XLFD) name or an alias for the XLFD name. For example, the following are valid font specifications for a 14-point font:

```
-dt-interface system-medium-r-normal-serif-*-*-*-p-*-iso8859-1
```

Or, `-*-r-*-14-*iso8859-1`

Font Set Specification

The font set specification within a fontlist is a list of XLFD names or their aliases (sometimes called a base name list). The names are separated by semi-colons, and any blank space before or after the semicolon is ignored. Pattern-matching (wildcard) characters can be specified to help shorten XLFD names.

A font set specification is determined by the locale that is running. For example, the Japanese locale defines three fonts (character sets) necessary to display all of its characters. The following example identifies the set of Mincho fonts needed.

- Sample name list with character set:

```
-dt-interface system-medium-r-normal-serif-*-*-*-p-*-14;
```

```
-dt-mincho-medium-r-normal--14-*-*-m-*-jisx0201.1976-0;
```

```
-dt-mincho-medium-r-normal--28-*-*-m-*-jisx0208.1983-0;
```

- Sample single pattern name without character set:

```
-dt-*-medium-*-24-*-m-*;
```

The preceding two cases can be used with a Japanese locale as long as there are fonts that match the base name list.

Changing Fonts

You can change the fonts of dtterm by using either of the following methods:

- Specifying fonts from the command line
- Specifying fonts within a resource file

▼ To Specify Fonts from the Command Line

To change the fonts for the menu from the command line, type:

```
dtterm -xrm '*fontList: fontset'
```

where *fontset* is a font set specification. A font set specification can be specified by a full X Logical Font Description (XLF) name list, a simple XLF pattern, or an alias name. Note that a font set specification is determined by the locale that is running.

For example, to use a larger font except for the menu font, type:

```
dtterm -xrm '*fontList:-dt-interface user-medium-r-normal-l*-*-**:'
```

To use a smaller font except for the menu font, type:

```
dtterm -xrm '*fontList:-dt-interface user-medium-r-normal-s*-*-**:'
```

These specifications will work for any locale.

▼ To Specify Fonts within a Resource File

For example, to change the fonts for the `dtterm` command in a resource file:

1. Edit the Dterm resource file in the `/usr/dt/app-defaults/language` directory.

You can use either the class name (`Dterm`) or the application name (`dtterm`) for a resource file of `Dterm`.

Also, setting the `LANG` environment variable alters the search path of resource files to include the `/usr/dt/app-defaults/language` directory, where *language* is the locale name.

After setting the `LANG` environment variable, the search path for resource files would include the following two folders:

```
/usr/dt/app-defaults/language/Dterm
```

```
/usr/dt/app-defaults/C/Dterm
```

2. Insert the font set you want to use at the bottom of the file.

For example, to use a monospace font, put this line at the bottom of the file:

```
dtterm -fn -dt-interface user-medium-r-normal-*-***
```

3. Save the file.

Choosing Your Input Method and Keyboard

Each locale has a single default input method associated with it. If the user does nothing, this default is selected. Because there may be many input methods installed at any one time, the following sections explain how various input methods are selected on behalf of the user.

Using Input Method Modifiers

When there is more than one input method for a locale, use the `XmNinputMethod` resource to identify the one you would like used. This is done by specifying a modifier. The modifier must be of the following form, where `modifier` is the name used to uniquely identify the input method:

```
inputMethod :@im=modifier
```

The modifier string specified in the `XmNinputMethod` resource is used to choose which input method is used.

Alternatively, set the `XMODIFIERS` environment variable. The syntax is the same as for the `XmNinputMethod` resource, but values are not. Values for `XMODIFIERS` are vendor specific.

Specifying the Input Method Style

The input method style determines how pre-editing will occur. It is controlled by the `XmNpreeditType` resource. The syntax, possible values, and default value type of the `XmNpreeditType` resource are:

Syntax	value[,value,...]
Possible values	OverTheSpot, OffTheSpot, Root, None
Default value	OverTheSpot, OffTheSpot, Root

The string list, separated by a comma, specifies the priority order for this resource. The first value supported by the input method is used.

For more information, see the *Solaris Common Desktop Environment: Advanced User's and System Administrator's Guide*.

Changing the X Keyboard Map at the Server

If the keymaps currently used by the X server do not match the physical keyboard on the system, you can change them manually by using the `xmodmap` command or a vendor keyboard mapping utility. For information on the `xmodmap` command, type `man xmodmap`.

Compose Key Sequences

If you are using the standard ISO 8859-1 (Latin-1) code set you can produce all characters by pressing the Compose key followed by other keys. These compose key sequences are listed in Table C-1.

Note – ISO Latin-1 does not support the character for the Euro currency symbol (see “Euro Currency Symbol” on page 71).

On a SPARC keyboard, pressing the Compose key should illuminate the light on the key. On an IA keyboard, the Compose key is Control-Shift-F1 (hold the Control and Shift keys down and press the F1 key).

TABLE C-1 Compose Key Sequences for ISO Latin-1 Code Set

Compose		Result	Description
space	space		Space
!	!	¡	Inverted exclamation
c	/	¢	Cents
l	-	£	Pounds sterling
o	x	¤	Currency symbol
y	-	¥	Yen
l		¦	Broken bar
s	o	§	Section
"	"	¨	Umlaut/diaeresis
c	o	©	Copyright
-	a	ª	Feminine ordinal

TABLE C-1 Compose Key Sequences for ISO Latin-1 Code Set (Continued)

Compose		Result	Description
<	<	«	Left guillemet
-		¬	Not sign
-	-	-	Soft hyphen
r	o	®	Registered
^	-	-	Macron
^	0	°	Degree
+	-	±	Plus-minus
^	2		Superscript 2
^	3		Superscript 3
\	\	´	Prime/acute accent
/	u		Mu/micro
P	!	¶	Pilcro/paragraph
^	.	.	Middle dot
,	,	¸	Cedilla
^	1		Superscript 1
_	o	º	Masculine ordinal
>	>	»	Right guillemet
1	4	¼	Quarter
1	2	½	Half
3	4	¾	Three quarters
?	?	¿	Inverted question
A	´	À	A grave
A	´	Á	A acute
A	^	Â	A circumflex
A	~	Ã	A tilde
A	"	Ä	A umlaut
A	*	Å	A angstrom
A	E	Æ	AE ligature

TABLE C-1 Compose Key Sequences for ISO Latin-1 Code Set (Continued)

Compose	Result	Description
C ,	Ç	C cedilla
E ´	È	E grave
E ´	É	E acute
E ^	Ê	E circumflex
E "	Ë	E umlaut
I ´	Ì	I grave
I ´	Í	I acute
I ^	Î	I circumflex
I "	Ï	I umlaut
D -	Ð	Eth
N ~	Ñ	N tilde
O ´	Ò	O grave
O ´	Ó	O acute
O ^	Ô	O circumflex
O ~	Õ	O tilde
O "	Ö	O umlaut
x x	x	Multiply
O /	Ø	O slash
U ´	Ù	U grave
U ´	Ú	U acute
U ^	Û	U circumflex
U "	Ü	U umlaut
Y ´	Ý	Y acute
T H	þ	Thorn
s s	ß	Eszett/digraph s
a ´	à	a grave
a ´	á	a acute
a ^	Â	a circumflex

TABLE C-1 Compose Key Sequences for ISO Latin-1 Code Set (Continued)

Compose		Result	Description
a	~	ã	a tilde
a	"	ä	a umlaut
a	*	å	a angstrom
a	e	æ	ae ligature
c	,	ç	c cedilla
e	'	è	e grave
e	'	é	e acute
e	^	ê	e circumflex
e	"	ë	e umlaut
i	'	ì	i grave
i	'	í	i acute
i	^	î	i circumflex
i	"	ï	i umlaut
d	-		eth
n	~	ñ	n tilde
o	'	ò	o grave
o	'	ó	o acute
o	^	ô	o circumflex
o	~	õ	o tilde
o	"	ö	o umlaut
-	:	÷	Divide
o	/	ø	o slash
u	'	ù	u grave
u	'	ú	u acute
u	^	û	u circumflex
u	"	ü	u umlaut
y	'	ý	y acute
t	h	Þ	thorn

TABLE C-1 Compose Key Sequences for ISO Latin-1 Code Set (Continued)

Compose	Result	Description
y "	ÿ	y umlaut

Note – Localized keyboards do not all generate the same key codes for ISO Latin-1 characters. However, system translation tables take care of producing the right character code. The SunOS system finds its tables in /usr/share/lib/keytables.

Locale Notes

This appendix describes the display, manipulation, and printing of text using CDE and the Thai and Hebrew locales.

Thai Locale

The Solaris 7 operating environment includes the Thai Language Environment (TLE). TLE provides a localized Thai language environment that enables you to type, display, and print the Thai language. In addition, TLE provides a platform for building Thai language applications, commands, and other features for the operation and maintenance of Solaris 7 and CDE 1.3.

The following list describes the features of TLE:

- Code Set Standard
This release supports the Thai Industrial Standard (TIS 620-2533) for representing Thai characters. Directory and file names can consist of Thai characters.
- Thai Text Input
This release includes an input mode indicator for each window to indicate the current input mode. You can also convert ASCII input to Thai characters using the dynamically loadable module for the internationalized X11R6 library. You can type text using a regular Sun Type 4 or Type 5 keyboard.
- Thai Text Output
All Common Desktop Environment (CDE 1.3) text rendering routines have been enhanced for displaying Thai text. The output method algorithm is based on the WTT 2.0 Thai text display specification, which is maintained by the Thai government. This release also includes Thai bitmap and TrueType fonts.

- Thai Text Printing
Printer support is provided for 15 dot matrix printers. For a list of printers supported, see Appendix C in *Thai Language Supplement for Solaris 2.6: Release Overview*.
- Common Desktop Environment Productivity Tools
All CDE 1.3 application windows display and accept Thai text. You can also cut and paste text between window applications. This release supports Thai input at the Xlib level and Thai output at the toolkit level, including CDE 1.3. This release also provides localized CDE desktop tools that display Thai labels and messages, and supports the use of Thai text, file names, and so on.
- Complex Text Layout (CTL)
CTL additions enable Motif APIs to support writing systems that require complex transformations between logical and physical text representations. It also provides character shaping and the transformation of static and dynamic text widgets. In addition, CTL supports right-to-left and left-to-right text orientation and tabbing for dynamic text widgets.

CDE 1.3 Library Features

TLE contains the CDE 1.3 library, which includes Thai text manipulation (insertion, deletion, selection, cut, copy, paste, drag, and drop) according to WTT 2.0 standards. For information about using the library to develop programs, see *Solaris Common Desktop Environment: Programmer's Guide*.

Thai Text Manipulation

This section explains the mechanics of manipulating Thai characters.

Typing Thai Text

You may need to intersperse Thai and English text in the same file. To toggle a window between English and Thai or Thai and English, press Ctrl+spacebar. The message window at the base of each tool displays the current input language.

Editing Thai Text

This section describes how to work with Thai text, specifically, how to:

- Insert and delete text

- Wrap text
- Move the cursor
- Select text
- Copy/paste and drag-and-drop text

Character Insertion and Deletion

Inserting and deleting Thai characters changes the display of the text, depending on whether the character classes can be composed.

The following graphics show the sequence of inserting MAIHUNAKAT (AV2 vowel) between SARA_II (AV3 vowel) and YOYAK (consonant) .

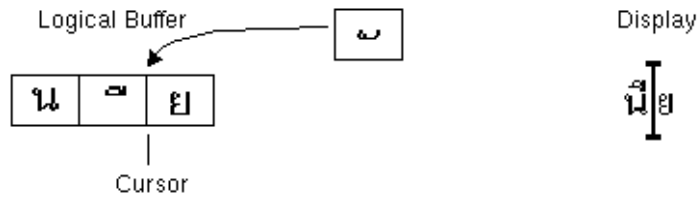


FIGURE D-1 Logical Buffer and Display Before Text Insertion



FIGURE D-2 Logical Buffer and Display After Text Insertion

MAIHUNAKAT cannot be composed with SARA_II, so it must be displayed in its own cell.

The following example shows the deletion of SARA_II (AV3 vowel).



FIGURE D-3 Logical Buffer and Display Before Text Deletion



FIGURE D-4 Logical Buffer and Display After Text Deletion

MAIHUNAKAT can be composed with NONU (consonant class CONS). Therefore, it is displayed in the previous cell.

Character Wrapping

There are no delimiters (spaces) between words in Thai. This makes correct character wrapping difficult because of the combinations of spacing and non-spacing characters.

In Solaris 7 TLE character wrapping is done at the display cell, and the TLE software compensates for non-spacing characters when wrapping a line. For example, when a forward spacing character is typed in the last column of a line, the cursor advances to the next line. If a non-spacing character is typed at the same point, the cursor does not advance to the next line. The non-spacing character is displayed in the last display cell of the previous line, and the cursor location remains unchanged.

Text Selection, Copy/Paste, and Drag-and-Drop

When a display cell is selected, all characters within the display cell (spacing and non-spacing) are selected.

Cursor Movement in an Editor Window (dtpad)

The multiple display levels of the Thai language may seem to cause unusual cursor movement in dtpad (text editor) windows. The cursor physically moves only between display cells. However, because there is frequently more than one Thai character in a display cell, the cursor does not physically move between them.

Cursor Movement in a Terminal Window (dtterm)

Cursor movement in a Terminal window is slightly different from editing text in one of the Thai CDE tools using text widgets (such as dtpad). When you move the cursor in a Terminal window, if there is only one character in a display cell, the cursor will be highlighted in the cell. If the character shares a display cell, the entire display cell will be highlighted.

You can display a combination of Thai and English characters using the four Thai fonts included in this release. The fonts are listed in Table D-1 and Table D-2.

Thai Fonts

You can display a combination of Thai and English characters using the four Thai fonts included in this release. The fonts are listed in Table D-1.

TABLE D-1 Solaris 7 TLE Fonts (Scalable)

Type Face	Style	Font Name
Angsana	Normal	-monotype-angsa-medium-r-normal--*-*-*--m-* -tis620.2533-0
	Bold	-monotype-angsab-bold-r-normal--*-*-*--m-* -tis620.2533-0
	Italic	-monotype-angsai-medium-i-normal--*-*-*--m-* -tis620.2533-0
	BoldItalic	-monotype-angsaz-bold-i-normal--*-*-*--m-* -tis620.2533-0
Browalia	Normal	-monotype-browa-medium-r-normal--*-*-*--m-* -tis620.2533-0
	Bold	-monotype-browab-bold-r-normal--*-*-*--m-* -tis620.2533-0
	Italic	-monotype-browai-medium-i-normal--*-*-*--m-* -tis620.2533-0

TABLE D-1 Solaris 7 TLE Fonts (Scalable) (Continued)

Type Face	Style	Font Name
	BoldItalic	-monotype-browaz-bold-i-normal--*-*-*-*-*m-* -tis620.2533-0
Cordia	Normal	-monotype-cordia-medium-r-normal--*-*-*-*-*m-* -tis620.2533-0
	Bold	-monotype-cordiab-bold-r-normal--*-*-*-*-*m-* -tis620.2533-0
	Italic	-monotype-cordia-i-medium-i-normal--*-*-*-*-*m-* -tis620.2533-0
	BoldItalic	-monotype-cordiaz-bold-i-normal--*-*-*-*-*m-* -tis620.2533-0

TABLE D-2 Solaris 7 TLE Fonts (Fixed Width)

Type Face	Style	Font Name
Gothic Normal	12pt	-logic-gothic-medium-r-normal--12-120-75-75-c-80 -tis620.2533-0
	14pt	-logic-gothic-medium-r-normal--14-140-75-75-c-90 -tis620.2533-0
	16pt	-logic-gothic-medium-r-normal--16-160-75-75-c-80-tis620. 2533-0
	20pt	-logic-gothic-medium-r-normal--20-200-75-75-c-100 -tis620.2533-0
	24pt	-logic-gothic-medium-r-normal--24-240-75-75-c-100 -tis620.2533-0
Gothic Bold	12pt	-logic-gothic-bold-r-normal--12-120-75-75-c-100 -tis620.2533-0
	14pt	-logic-gothic-bold-r-normal--14-140-75-75-c-110 -tis620.2533-0
	16pt	-logic-gothic-bold-r-normal--16-160-75-75-c-80 -tis620.2533-0
	20pt	-logic-gothic-bold-r-normal--20-200-75-75-c-120 -tis620.2533-0
	24pt	-logic-gothic-bold-r-normal--24-240-75-75-c-120 -tis620.2533-0

TABLE D-2 Solaris 7 TLE Fonts (Fixed Width) (Continued)

Type Face	Style	Font Name
Gothic Italic	16pt	-logic-gothic-medium-i-normal--16-160-75-75-c-80 -tis620.2533-0

Printing

This section describes how to print Thai text from CDE 1.3 and a dot matrix printer. For a list of dot matrix printers supported, see Appendix C of *Thai Language Supplement for Solaris 2.6: Release Overview*.

Printing From CDE Tools

If the Angsana UPC font is installed on your printer, you can print from any CDE 1.3 tool (fonts are not provided in Solaris 7 TLE).

Setting Up Thai Printing on a Dot Matrix Printer

This section assumes that your printer is registered in the WTT 2.0 standard listed in Appendix C, "Printer Brand, Model, and Code IDs" of *Thai Language Supplement for Solaris 2.6: Release Overview*.

If the system you are setting up uses printers that are registered in the WTT 2.0 standard, set them up using the instructions in the *Setting Up User Accounts, Printers, and Mail* manual of the SunOS 5.6 documentation.

Once your printer is set up, follow these steps to enable printing of Thai characters:

1. Type `cd /usr/lp/interfaces`

2. Edit the file named for the printer you just set up.

Change `lp.cat` to `lp.filter` in the following line:

```
if [! -x "${LPCAT:=${LOCALPATH}/lp.cat}"]
```

3. Create a shell script in `/usr/lib/lp/bin` called `lp.filter` that pipes printer jobs through `lp.cat`.

The `lp.filter` program should have the syntax given below. See the `thaifilter(1)` man page in Appendix D, "Manual Pages", of the *Thai Language Supplement for Solaris 2.6: Release Overview* for the syntax of the `thai_filter_command`.

```
thai_filter_command | lp.cat
```

Printing Thai Text

This section describes how to use the `thaifilter(1)` print utility and printer conversion tables, which you may need to print Thai text.

Using the `thaifilter(1)` Utility

The `thaifilter(1)` program is a filter that converts Thai text into three levels:

- Base level characters (including any ASCII characters)
- Above-level characters
- Below-level characters

This system is called *3-Level Classification*. The two main uses for files converted to 3-Level Classification are:

- To direct printers to print Thai characters at the correct display level.
- To view Thai text files on terminals that normally do not allow the multi-level (normal) display of Thai text.

Note – Some newer printers come with 3-Level Classification software already installed. For that reason the `thaifilter(1)` program has the `-x` option that turns 3-Level Classification off.

The `thaifilter(1)` man page is supplied in the TLE 2.6 software, and is also available in printed form in Appendix D, "Manual Pages", of the *Thai Language Supplement for Solaris 2.6: Release Overview*.

Setting Up Printer Software

The WTT 2.0 standard identifies the following terms and conventions for printing Thai text:

- Printer IDs
Printer IDs are 6-character codes defined by TAPIC to specify a printer's model, brand name, and character code. Printer vendors should have their printer codes clearly marked on their printers. The syntax for a printer ID is *BBMMCC*, where *BB* is a two-letter brand abbreviation, *MM* is a two-letter model abbreviation, and *CC* is a two-digit number representing the conversion code the printer uses. The printer brand and model abbreviations are listed in Appendix C, "Printer Brand, Model, and Code IDs," of the *Thai Language Supplement for Solaris 2.6: Release Overview*. See the next section for a discussion of printer conversion codes.

For example, the first line of Table D-3 shows that the brand and model abbreviations for a Data Products IZR650 printer are *DA* and *ZI*. If this printer

used the code conversion table number 10, the full printer ID would be: DAZI10.

■ Conversion codes and printer code conversion tables

Use the codes listed in the right side of Table A-3 when specifying a printer ID. Solaris 7 TLE adheres to TIS 988-2533, which specifies a table of codes for printing to the TAC11x11 . COD standard. Because not every printer uses this table, the TIS standard specifies a total of 17 code conversion lookup tables to convert other known printer codes to TAC11x11.COD. (TAC is an abbreviation for the Thai API Consortium. APIs defined by the Thai Internationalization Committee are prefixed with "TAC.")

These 17 code conversion tables are supplied with Solaris 7 TLE for converting the codes supplied with various printers to the TAC11x11 . COD standard. The tables, listed in Table D-3, are stored in the `/usr/lib/lp/files` directory.

TABLE D-3 Code Conversion Tables

Code Conversion Table	Code for Use With Printer ID
TAC11x10.COD	10
TAC11x12.COD	12
TAC11x13.COD	13
TAC11x14.COD	14
TAC11x15.COD	15
TAC11x16.COD	16
TAC11x17.COD	17
TAC11x18.COD	18
TAC11x19.COD	19
TAC11x20.COD	20
TAC11x21.COD	21
TAC11x22.COD	22
TAC11x40.COD	40
TAC11x41.COD	41
TAC11x42.COD	42
TAC11x43.COD	43
TAC11xAA.COD	AA

If your printer does not use one of the printer code conversion tables, see the following section for help with creating your own.

Creating a New Printer Code Conversion Table

Printer conversion tables are used to convert printing instructions to the TIS 988-2553 format, which is the WTT 2.0 default printing format. The code conversion tables listed in the WTT 2.0 standard are included with Solaris 7 TLE.

If the printer you are using does not use the TIS 988-2553 format, and cannot use any of the code conversion tables, then you need to create a custom conversion table. This section explains how to create a new printer code conversion table.

Conversion Table Syntax

The following is an example of a code conversion file:

```
-- -- -- -- TN -- ! TAC11x10.COD      16 AUG 1991
00 01 02 03 04 05 06 07 08 09 0A 0B 0C 0D 0E 0F
10 11 12 13 14 15 16 17 18 19 1A 1B 1C 1D 1E 1F
20 21 22 23 24 25 26 27 28 29 2A 2B 2C 2D 2E 2F
30 31 32 33 34 35 36 37 38 39 3A 3B 3C 3D 3E 3F
40 41 42 43 44 45 46 47 48 49 4A 4B 4C 4D 4E 4F
50 51 52 53 54 55 56 57 58 59 5A 5B 5C 5D 5E 5F
60 61 62 63 64 65 66 67 68 69 6A 6B 6C 6D 6E 6F
70 71 72 73 74 75 76 77 78 79 7A 7B 7C 7D 7E 7F
3F 3F 3F 3F 3F 3F 3F 3F 3F 3F 3F 3F 3F 3F 3F 3F
3F 3F 3F 3F 3F 3F 3F 3F 3F 3F 3F 3F 3F 3F 3F 3F
3F A1 A2 A3 A4 A5 A6 A7 A8 A9 AA AB AC AD AE AF
B0 B1 B2 B3 B4 B5 B6 B7 B8 B9 BA BB BC BD BE BF
C0 C1 C2 C3 C4 C5 C6 C7 C8 C9 CA CB CC CD CE CF
D0 D1 D2 D3 D4 D5 D6 D7 D8 D9 DA 3F 3F 3F 3F DF
E0 E1 E2 E3 E4 E5 E6 E7 E8 E9 EA EB EC ED EE EF
F0 F1 F2 F3 F4 F5 F6 F7 F8 F9 FA FB 3F 3F 3F FF
! End of TAC11x10.COD
```

The first line of a code conversion table uses the following syntax:

```
CC LG UM EX TN SP      ! comment
```

If one of the two-character fields is not used, it must be replaced with two dashes (--). The fields in the first line are explained in Table D-4.

TABLE D-4 Code Conversion Tables

Field	Description
CC	Combined Code at TIS 988-2553, for example SaraI and MaiEk
LG	Line Graphic
UM	The combination code of SaraAm and Nikhahit
EX	Ascender Extension
TN	Thai Numerics

TABLE D-4 Code Conversion Tables (Continued)

Field	Description
SP	Special code not defined in TIS 988-2553
! comments	Any comments you have. In the WTT 2.0 standard this field contains the name of the file and the date. The comment must be preceded by the "!" symbol.

The middle of the conversion file contains 16 lines of 16 codes, a total of 256 codes. These codes are the replacement for the TIS 988-2553. The TIS988-2553 code is shown below:

```
-- -- -- -- TN -- ! TAC11x11.COD      16 AUG 1991
00 01 02 03 04 05 06 07 08 09 0A 0B 0C 0D 0E 0F
10 11 12 13 14 15 16 17 18 19 1A 1B 1C 1D 1E 1F
20 21 22 23 24 25 26 27 28 29 2A 2B 2C 2D 2E 2F
30 31 32 33 34 35 36 37 38 39 3A 3B 3C 3D 3E 3F
40 41 42 43 44 45 46 47 48 49 4A 4B 4C 4D 4E 4F
50 51 52 53 54 55 56 57 58 59 5A 5B 5C 5D 5E 5F
60 61 62 63 64 65 66 67 68 69 6A 6B 6C 6D 6E 6F
70 71 72 73 74 75 76 77 78 79 7A 7B 7C 7D 7E 7F
80 81 82 83 84 85 86 87 88 89 8A 8B 8C 8D 8E 8F
90 91 92 93 94 95 96 97 98 99 9A 9B 9C 9D 9E 9F
A0 A1 A2 A3 A4 A5 A6 A7 A8 A9 AA AB AC AD AE AF
B0 B1 B2 B3 B4 B5 B6 B7 B8 B9 BA BB BC BD BE BF
C0 C1 C2 C3 C4 C5 C6 C7 C8 C9 CA CB CC CD CE CF
D0 D1 D2 D3 D4 D5 D6 D7 D8 D9 DA DB DC DD DE DF
E0 E1 E2 E3 E4 E5 E6 E7 E8 E9 EA EB EC ED EE EF
F0 F1 F2 F3 F4 F5 F6 F7 F8 F9 FA FB FC FD FE FF
! End of TAC11x10.COD Note: There is no conversion in this table
```

The last line of the conversion table is another comment, preceded by the "!" symbol. The WTT 2.0 conversion tables end with the line:

```
! END OF filename
```

Hebrew Locale

The Solaris 7 operating environment includes the Hebrew Language Environment. This section describes the main features of the Hebrew Language Environment.

Typing Hebrew Text

You may need to intersperse Hebrew and English text in the same file. To toggle between Hebrew and English input modes, use Ctrl+t. The message at the base of each tool displays the current input language.

Editing Hebrew Text

This section describes how to work with Hebrew text, specifically, how to manipulate the cursor within the logical edit mode.

Note – You may find a residual cursor image at the beginning of a line of text, after text has been entered. Functionality is not affected by this residual image. Continue entering data.

Character Insertion

There is ambiguity when the text insertion point is in the boundary between Hebrew and English text. To solve this ambiguity, a split cursor has been implemented to reflect the two positions. The display will be ab|DC| where “|” represents each cursor.

Note – The split cursor may not display properly when pressing the Home or End keys.

Printing Hebrew Text

Hebrew printing is implemented by using a set of filters. The Hebrew locale package SUNWheu should be installed on both the server machine to which the printer is attached and the client machine.

Installed Hebrew Filters

The following list of filters are included in the Hebrew locale package.

heb2ps

This heb2ps filter converts any text to postscript and sends the Hebrew font together with font to printer.

- Input types: heb2ps
- Output types: postscript
- Printer types: any
- Printers: any
- Filter type: slow
- Command: **/usr/openwin/bin/mp**
- Options: INPUT * = -A4
Options: INPUT * = -L he

hebl2r

When printing with the hebl2r filter, no reordering is done on input text. Text is formatted to fit an 80 column paper size. This would be useful for printing an English document with a few Hebrew words.

- Input types: hebl2r
- Output types: heb2ps
- Printer types: any
- Printers: any
- Filter type: slow
- Command: **/usr/lib/lp/postscript/convert_text**
- Options: INPUT * = -linewidth 80

hebr21

When printing with the hebr21 filter, all text is indiscriminately reversed and the resulting printer output is aligned to the right.

- Input types: hebr21
- Output types: heb2ps
- Printer types: any
- Printers: any
- Filter type: slow
- Command: **/usr/lib/lp/postscript/convert_text**
- Options:
INPUT * = -linewidth 80
-inputLayoutDirection right_down -outputLayoutDirection left_down

hebtxt

When printing with the *hebtxt* filter, text is sorted in both Hebrew and English directions and the resulting printer output is aligned to the right

- Input types: *hebtxt*
- Output types: *heb2ps*
- Printer types: any
- Printers: any
- Filter type: slow
- Command: `/usr/lib/lp/postscript/convert_text`
- Options:

```
INPUT * = -inputTextMode text_mode_implicit
          -outputTextMode text_mode_visual -lineWidth 80 -inputLayoutDirection
          left_down -outputLayoutDirection right_down
```

Using the Hebrew Filter From the Command Line

To print from the command line, use the *hebtxt* filter. The *lp* printing command is `lp -T hebtxt -d printer_name`.

Printing from dt Applications

The print action field in the *dt* configuration files should be modified to add the Hebrew text filter. For example, in the *dtmail* application, the print action in the file `/usr/dt/appconfig/types/he/dtmail.dt` should be:

```
ACTION Print
{
LABEL          Print
ARG_TYPE       DTMAIL_FILE
TYPE           COMMAND
WINDOW_TYPE    NO_STDIO
EXEC_STRING     sh -c ' \
                dtmailpr -p -f %(File)Arg_1% |
                /usr/lib/lp/postscript/convert_text -inputTextMode
                -text_mode_implicit -outputTextMode text_mode_visual
                -lineWidth 80 -inputLayoutDirection left_down
                -outputLayoutDirection right_down| mp -A4 -L he| dtlp
                -u %(File)Arg_1%;'
```

The listed `convert_text` parameters will print right-aligned text right-to-left. To print text aligned to left, left-to-right replace the previous parameters with `-lineWidth 80`.

Access for Users With Disabilities

Many users with disabilities have trouble using the standard keyboard and mouse on computers. They may find it difficult or impossible to hold down two keys at once (to type capital letters or control characters), or to use a mouse, or type accurately.

AccessX is an extension to OpenWindows that makes it easier for people with disabilities to use a keyboard and to move a pointer around their screen. With AccessX running, you can:

- Keep the Control, Shift, Alt, and Meta keys pressed and active while you press another key, enabling you to type capital letters, Control-C, Alt-M, and so forth. (See “StickyKeys” on page 622.)

Note – Not all keyboards have all these keys. On some keyboards, for example, the Meta key is replaced by Control-Alt.

- Use the numeric keypad to emulate the mouse. You can move a pointer around the screen and perform mouse button actions (for instance, double-clicking), all from the keyboard. (See “MouseKeys” on page 624.)
- Make the computer beep when certain keys are activated or deactivated; people with limited vision can then tell whether, for example, the Caps Lock key is on. (See “ToggleKeys” on page 626.)
- Prevent a key from repeating if you have trouble releasing it quickly. (See “RepeatKeys” on page 626.)
- Prevent a key that you hit accidentally from inputting to the system. (See “SlowKeys” on page 627.)
- Make a key accept input as intended, even if you are unable to hold the key down steadily. (See “BounceKeys” on page 628.)

Starting AccessX

AccessX is an extension to OpenWindows.

To start OpenWindows with the AccessX extension, type

```
openwin -accessx
```

This enables you to activate and deactivate AccessX features both with buttons in AccessX windows and with certain keystroke combinations. For example, you can turn StickyKeys on and off by pressing the Shift key five times.

Alternately, you can start OpenWindows without the `-accessx` option. You still have the full AccessX functionality; however, you can't use the special keystroke sequences to turn features on or off. You must use buttons in AccessX windows instead.

The `-accessx` option does not affect the use of other OpenWindows options.

(If OpenWindows comes up automatically, from your `.` or `.login` file, you may want to add the `-accessx` option to the line that calls OpenWindows.)

AccessX Windows

If you've brought up OpenWindows, and no AccessX windows are already up on your screen, type `accessx &` in a command window.

If you're running AccessX and want to have AccessX windows come up automatically when you start OpenWindows, choose Save Workspace from the Utilities submenu of the main (background) OpenWindows menu.

The AccessX Main Window

After you type `accessx &`, this window appears:

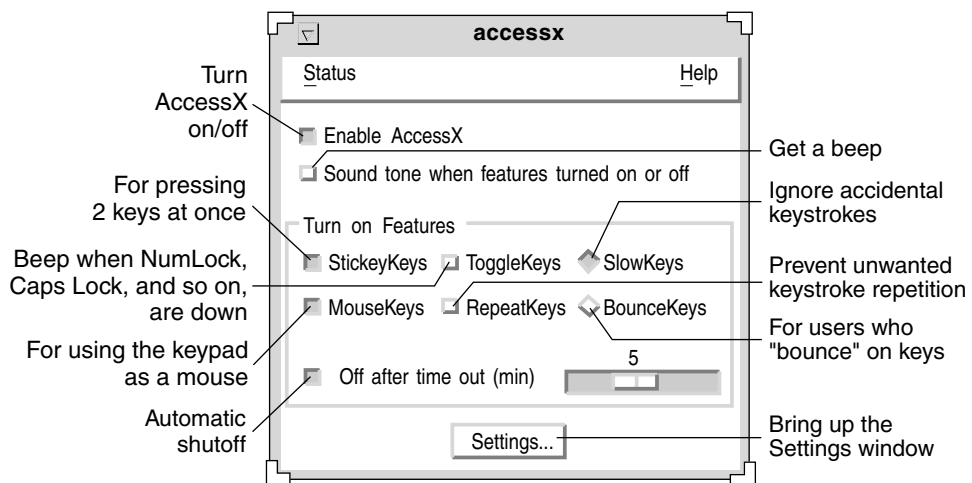


FIGURE E-1 The AccessX Main Window

Displaying the Status of Buttons and Keys

From the Status menu, you can display two windows that show the status of mouse buttons and certain keys. The StickyKey status window indicates if a key such as Control or Shift is pressed; the MouseKeys status window does the same for mouse buttons.

To open the Status menu, either use the MENU mouse button, or press the F10 key and the letter s. Use the arrow keys to move through the menu.

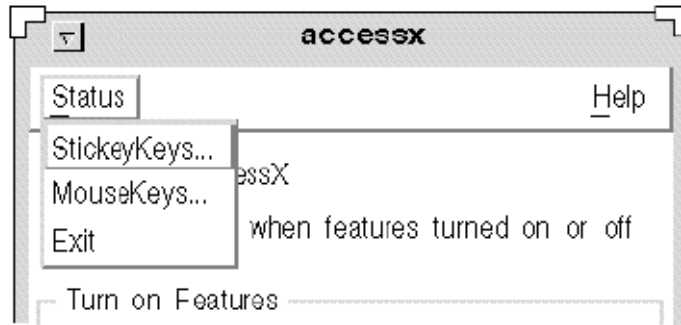


FIGURE E-2 The Status Menu

Note – If you’re using StickyKeys or MouseKeys, it’s a good idea to display the status window for that feature. Otherwise, you may encounter unexpected behavior that can be very confusing. In StickyKeys, for example, if the Control key is “locked” down, pressing the letter c sends a Control-C to the computer. The StickyKeys status window reminds you that Control is active.

Getting a Beep When a Feature is Turned On or Off

The main window has a check box labeled “Sound when features turned On/Off.” (See Figure E-1.) If you check this box, any time a feature such as StickyKeys or SlowKeys is activated or deactivated, the computer beeps.

Setting the Automatic Shutoff Timer

If you share your computer with someone who doesn’t use AccessX, you may want to have AccessX turn itself off automatically if the machine isn’t used for a certain period of time. That way, neither you nor the person who uses your machine after you has to remember to shut off AccessX.

To activate this timeout, check the “Off after time out (min)” check box. (See Figure E-1.) Move the associated slider to set the amount of time AccessX should wait without input before disabling itself. You can set this time to be anywhere from zero to six minutes.

Getting On-Line Help

AccessX has several help windows; choose the subject that interests you from the main window's Help menu. To open this menu, either use the MENU mouse button, or press F10 and the letter *h*. Use the arrow keys to move through the menu.

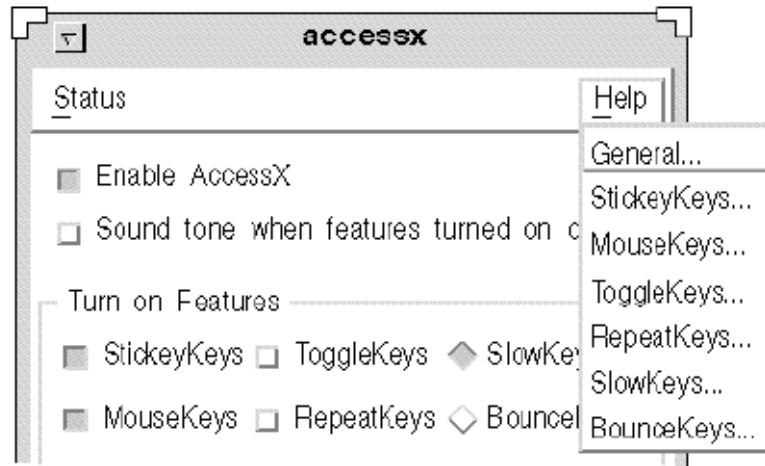


FIGURE E-3 The Help Menu

The Settings Window

Click the Settings button in the AccessX main window to display the Settings window. This window displays adjustable parameters for various AccessX features. These parameters are discussed in the section covering each individual feature.

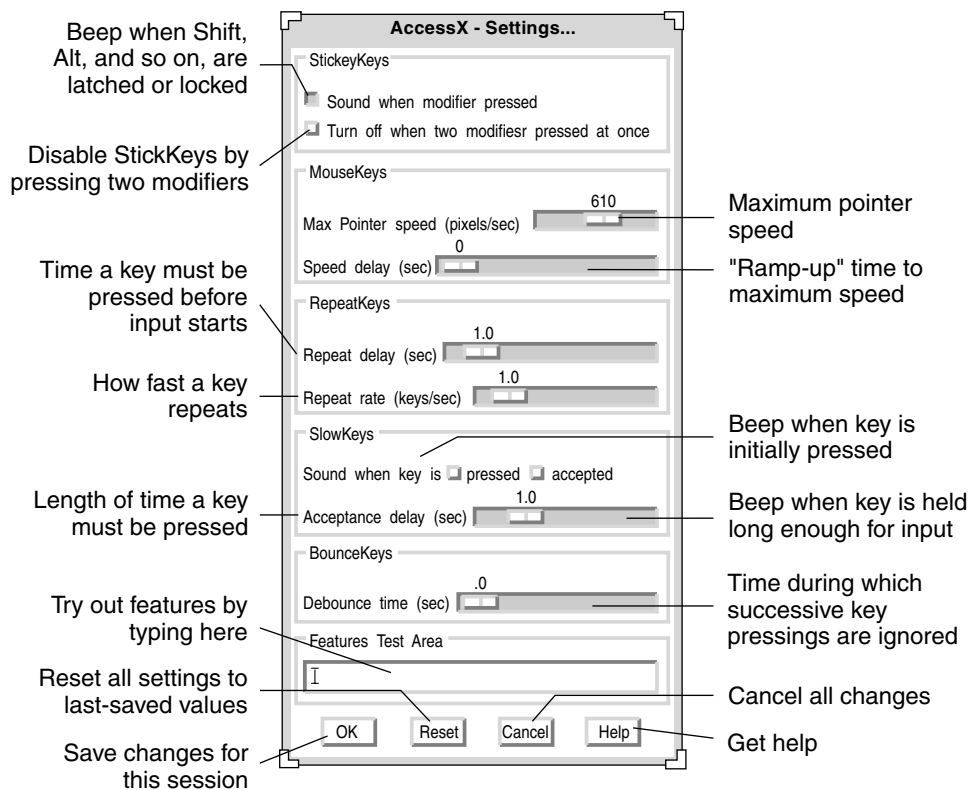


FIGURE E-4 The AccessX Settings Window

Individual Features

StickyKeys

Many people with disabilities have trouble holding down two keys at once, making combinations like Control-D or Shift-Mouse-Click difficult. When StickyKeys is turned on, *modifier keys* (generally, Shift, Alt, Control, and Meta) stay active while you type another key or click a mouse button.

Turning StickyKeys On and Off

There are four ways to turn StickyKeys off:

- Check the StickyKeys check box in the AccessX main window.
- Press the Shift key five times in succession (valid only if you've started OpenWindows with the `-accessx` option).
- Press a modifier and any other key — for example, Shift-x or Control-Shift (valid only if you've started OpenWindows with the `-accessx` option).
- Press two modifier keys at once (see under "StickyKeys Settings" on page 623).

Latching and Locking

Sticky keys may be either *latched* or *locked*:

- You *latch* a modifier key by pressing it once.
A latched key stays active until a non-modifier key is pressed. Suppose that, with StickyKeys on, you press the Control key. It will stay "pressed" while you press the *l* key, giving you Control-L. Once you press *l*, Control is "released."
- You *lock* a modifier key by pressing it twice in succession.
The key stays locked until you press it again. For example, suppose you want to enter

:wR

In this case, you would press Shift twice to lock it. Then you'd press the colon key and the letters *w* and *r*. To unlock Shift, press it again.

You can bring up a Status window to see which keys are latched or locked. (See "Displaying the Status of Buttons and Keys" on page 619.)

StickyKeys Settings

Getting a Beep Whenever a Modifier is Pressed

You can have your computer beep every time you press a modifier key (with StickyKeys on). Since pressing these keys latches, locks, or releases them, a beep can be a useful reminder that you've enabled or disabled a modifier. (It's easy to forget this in the course of normal typing.)

To enable this setting, check the "Sound when modifier pressed" check box in the Settings window. (See Figure E-4.)

Turning StickyKeys Off by Pressing Two Modifiers at Once

When you check this box (in the Settings window), you allow yourself to turn off StickyKeys by pressing two modifiers at once (such as Control and Shift). Some people find this easier than clicking with a mouse or pressing Shift five times.

MouseKeys

If you have trouble using a mouse, use MouseKeys to make the numeric keypad on your keyboard emulate mouse actions. You can move the pointer around your screen, as you would with a mouse, and click or press mouse buttons.

Turning MouseKeys On and Off

There are two ways to turn MouseKeys on and off:

- Check the MouseKeys check box on the AccessX main window
- Press the Alt, Shift, and Num Lock keys at once. (Valid only if you've started OpenWindows with the `-accessx` option.)

Keyboard Emulations of Mouse Actions

When MouseKeys is turned on, the keys on the numeric pad have three different kinds of functions:

- Keys 1-4 and 6-9 move the pointer around the screen.
- The 5, + (plus), 0 (zero) and . (decimal point) keys simulate mouse button clicks and presses.
- The / (slash), * (multiply), and - (minus) keys switch the keyboard mapping between various mouse buttons.

You can bring up a Status window to see which mouse keys are currently pressed.

Note: Your keyboard (and mouse) may differ.

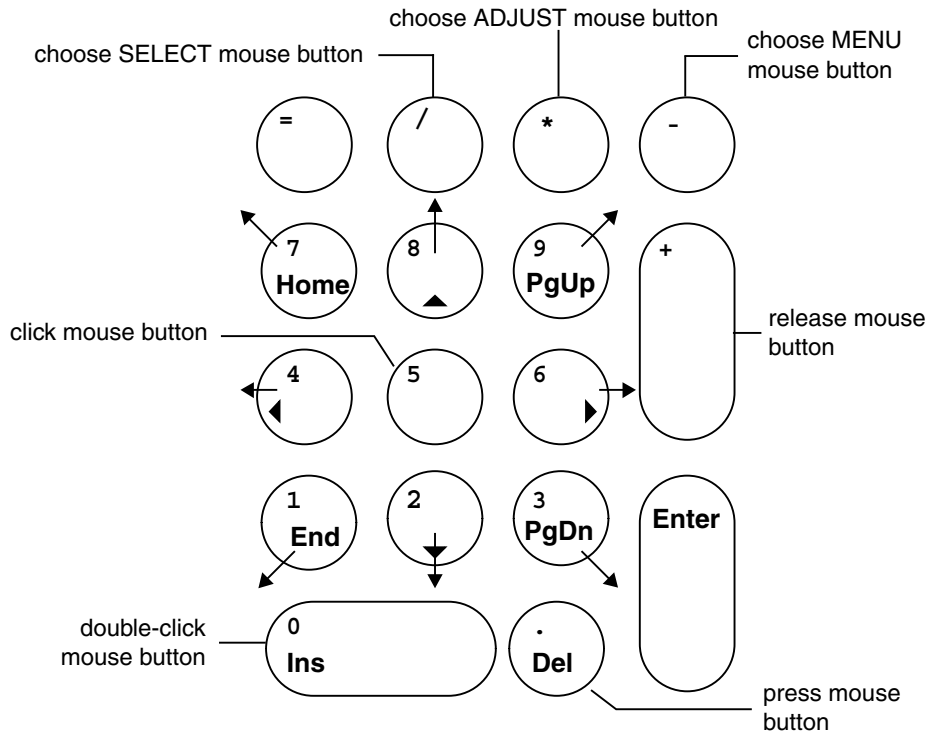


FIGURE E-5 Mouse Button Equivalents for a Numeric Keypad

MouseKeys Settings

Changing the Maximum Speed of the Pointer

If you have trouble moving the pointer with the accuracy you want, you can slow it down. To change how fast the pointer moves, check the box marked “Max. pointer speed (pix/sec).” (See Figure E-4.) Adjust its slider bar to the speed that you want. The speed is in pixels/per second, and can range from 10 up to 1000.¹

Setting the “Ramp-Up” Speed for the Pointer

You can set how fast the pointer reaches its maximum speed (when MouseKeys is set). To do this, adjust the slider marked “Time to max speed” (see Figure E-4.) This way,

¹ Limits on pointer speed apply only when MouseKeys is turned on.

you can be more deliberate in moving the pointer. You can set the mouse to take up to four seconds to reach full speed.

ToggleKeys

Many keyboards have indicator lights (LEDs) that light up when certain keys are active. An example of this is the Caps Lock key. When Caps Lock is pressed, its indicator light goes on.

For people with no or little eyesight, these indicator lights are of limited use. The ToggleKeys feature serves as the aural equivalent of such a light. When you make Num Lock, Caps Lock, or Scroll Lock active, the computer beeps once. When you deactivate the key, the computer beeps twice.

Turning ToggleKeys On and Off

Check the ToggleKeys check box in the AccessX main window to turn this feature on and off.

RepeatKeys

Some users with limited motor abilities have a hard time taking their finger (or mouth stick) off keys quickly. As a result, for example, they sometimes type *kkkkkkkk* when they mean to type *k*.. With RepeatKeys on, a key must be held down for a certain length of time before it starts to repeat.

Turning RepeatKeys On and Off

There are two ways to turn RepeatKeys on and off:

- Check the RepeatKeys check box in the AccessX main window.
- Hold down the Shift key (either one) for eight seconds.

The computer beeps at four seconds to let you know that you're turning this feature on or off. (Valid only if you've started OpenWindows with the `-accessx` option.)

Note – Holding down the Shift key for eight seconds also turns on SlowKeys.

RepeatKeys Settings

Delaying the Onset of Repetition

You can set the amount of time you want a key to be pressed before it begins repeating. This interval can be anywhere from a tenth of a second up to ten seconds. To set this parameter, move the “Delay until repeat” slider (see Figure E-4) to the number of seconds you want keys to wait before repeating.

Setting the Rate of Repeating

You can also set the repeat rate. The repeat rate represents how many times a pressed key will repeat per second. The rate ranges from 0.1 (that is, ten seconds per key) to 10 (that is, ten keys per second). *The higher you set this value, the faster the key repeats.* Set this to a low value to keep a pressed key from repeating, or from repeating too quickly.

Move the “Repeat rate” slider to the value you want. (See Figure E-4.)

SlowKeys

Users who have trouble typing often hit the wrong key, or keys, while trying to type. They may, for example, hit *r* while reaching to type *t*. When SlowKeys is turned on, only keys that are held down for a minimum, specified time will be accepted as input. Keys that are hit inadvertently will not register.

Note – Both SlowKeys and BounceKeys cannot be active at once.

Turning SlowKeys On and Off

Turn SlowKeys on and off in either of these ways:

- Check the SlowKeys check box on the AccessX main window
- Hold either Shift key down for at least eight seconds. The machine will beep at four seconds to let you know you’re turning this feature on or off. (Valid only if you’ve started OpenWindows with the `-accessx` option.)

Note – Holding down the Shift key for eight seconds also turns on RepeatKeys.

SlowKeys Settings

Setting the Notification Style

You may want to be notified of a key's status while SlowKeys is active. That way you don't have to guess whether you've held the key down long enough for it to be accepted.

There are two check boxes ("pressed" and "accepted") in the Settings window for setting how you want to be notified of a key's status when SlowKeys is in effect. By checking these boxes, you can have your machine beep:

- When a key is initially pressed
- When the key-press is accepted
- Both when the key is first pressed and when the key-press is accepted
- Not at all

Setting the Acceptance Delay

The acceptance delay is the interval between when you first press a key and when it transmits input. You can set this with the "Acceptance delay (sec)" slider located in the Settings window. (See Figure E-4.) This delay can range from zero to five seconds.

BounceKeys

BounceKeys aids people who have trouble holding down a key, or who tend to hit a key repeatedly when they mean to press it only once. BounceKeys sets the window system to ignore rapid, repeated pressings of a single key.

Note – Both SlowKeys and BounceKeys cannot be active at once.

Turning BounceKeys On and Off

To turn BounceKeys on and off, check the BounceKeys check box on the AccessX main window.

BounceKey Settings

Setting the Debounce Time

The Debounce Time is the interval that must pass before a second pressing of a key is accepted.

You can set this interval with the “Debounce time (sec)” slider. (See Figure E-4.) This delay can range from zero to five seconds.

Keystrokes for AccessX Features

Table E-1 shows the various AccessX features and their associated keystrokes. You must start OpenWindows with the `-accessx` option to use these keystrokes.

TABLE E-1 Features and Their Keystrokes

Feature	Keystroke
Turn StickyKeys on or off.	Press Shift five times.
Turn StickyKeys off.	Press any two modifiers (e.g., Shift and Alt) at once. Note: You must turn this ability on from the Settings menu.
Turn MouseKeys on or off.	Alt - Shift - Num Lock
Move the pointer (when MouseKeys is turned on).	1-4, 6-9 keys on the numeric keypad
Click	5
Double-click	0
Press	.
Release	+
SELECT (mb1)	/
ADJUST (mb2)	*
MENU (mb3)	-
Turn RepeatKeys on or off.	Hold down Shift for eight seconds (beeps at four seconds)
Turn SlowKeys on or off.	Hold down Shift for eight seconds (beeps at four seconds)

Glossary

access privileges	Permissions granted to a user or group of users to perform various operations on a file or folder (directory). See <i>permission</i> .
action	A desktop construct that provides a method for running applications, executing commands, and other activities such as printing, removing files, and changing directories. Actions are defined in a database of configuration files.
action icon	An icon that represents an action in a File Manager or Application Manager window, or in the workspace. An action icon is created by creating an empty executable file with the same name as the action it represents.
action label	The name displayed under the icon of an action. See <i>action name</i> .
action name	The name associated with an action, which by default is displayed under the icon for the action. See <i>action label</i> .
active	A window, window element, or icon that is currently affected by keyboard and mouse input. Active windows are differentiated from other windows on the workspace by a distinctive title-bar color or shade. An active window element is indicated by a highlight or selection cursor.
active window	A window that receives keyboard input.
address	An electronic mail location of a user.
address card	A file (conforming to the vCard standard) containing contact information about a user. Address cards are displayed by the Address Manager application.
alias	An alternative name or names assigned to a program or to an electronic mail address.

	In electronic mail, an address for mailing to a group of users. An alias can be created to send electronic mail to a small group of people or to many people.
alias card	An alias (see above), as displayed in Address Manager application.
application	See <i>software application</i> .
application group	An Application Manager folder that holds a specific software application or set of software applications.
application icon	See <i>action icon</i> .
Application Manager	A window containing objects representing the system actions available to you.
application server	A host computer that provides access to a software application.
Apply	A choice that causes a selection (or group of selections) in a dialog box to take effect.
Appointment Editor	In Calendar, a window you use to schedule, change, or delete an appointment.
Appointment List	A chronological list of appointments displayed by Calendar.
arrow button	An element of a scroll bar used to scroll a window by small increments. Also, a control in the Front Panel used to slide up or slide down a subpanel.
arrow keys	The four directional keys on a keyboard. Also see <i>navigation keys</i> .
attachment	In Mailer, a data object within an electronic mail message that is displayed as an icon in the Attachments list. An attachment can be text, sound, or a graphic. Multiple messages can be added (attached) to a single electronic mail message.
backdrop	The pattern that covers the <i>workspace background</i> .
background	The underlying area of a window on which elements, such as buttons and lists, are displayed.
Backtrack	In Help Manager, a button and Navigate menu item you use to follow links backward, in the reverse order they were traversed.
base name	The file name of an icon file minus the file-name suffixes for size (.l, .m, .s, .t) and type (.bm, .pm). For example, the base name of an icon file named <code>myicon.m.pm</code> is <code>myicon</code> .
bitmap	An image stored in a raster format. Usually refers to an image limited to two colors (a foreground and a background color). Contrast with <i> pixmap</i> .
busy light	A control that blinks when a Front Panel action has been invoked prior to the appearance of a window or when reloading actions.

button	A generic term for a window control. See <i>push button</i> .
Calculator	A software application that mimics the function of a hand-held calculator.
Calendar	A software application that enables you to schedule appointments and create To Do lists.
Calendar view	The day, week, month, or year displayed in the main Calendar window.
Cancel	A push button that removes a window without applying any changes made in that window.
cards	The Address Manager application uses the concept of cards (similar to Rolodex cards) when searching and displaying information about users (address cards), hosts (host cards), and aliases (alias cards).
CDE	An acronym for Common Desktop Environment, a graphical user interface running on UNIX.
check box	A nonexclusive control whose setting is indicated by the presence or absence of a check mark. A check box has two states, on and off.
choose	To use the mouse or keyboard to pick a menu item, button, or icon that begins a command or action. Contrast with <i>select</i> .
click	To press and release a mouse button without moving the mouse pointer. Unless otherwise specified, mouse button 1 is assumed.
client	A system or software application that requests services from another application, usually across a network.
clipboard	A buffer that temporarily stores the last cut, copy, or pasted data.
Clock	A Front Panel control that displays the local time.
Close	A menu item used to remove a window and all related secondary windows from all workspaces.
command-line prompt	A prompt (usually %, >, or \$) that shows the computer is ready to accept commands. In a terminal emulation window, you display the command-line prompt by pressing Return.
Compose window	In Mailer, the window you use to create new electronic mail messages. Several message-composing options are available from the Compose window menu bar.
configuration file	A file that is used to customize the properties of an application.
container	A control intended to hold objects or data. A folder and a notebook are examples of containers.

	In Mailer, your electronic mailbox and filing system that contains all mail messages. Once a message is put in a container, you can display, modify, delete, print, include, forward, and reply to it.
control	A generic term for a variety of elements (such as buttons, check boxes, and scroll bars) that perform an action or indicate an option setting. See <i>Front Panel control</i> .
Create Action	A software application that enables you to associate an icon with a command so that the command can be issued by clicking on the icon. Create Action is also used to define specific data types for an application's data files and to associate icons with those data types.
current folder	The currently opened folder in an active File Manager view.
current item, current selection	The currently highlighted item in a list.
current session	The session saved by Session Manager when you log off. At the next login, unless you specify otherwise, this session automatically opens, enabling work to continue where you left off. Contrast with <i>home session</i> .
cursor	A graphical device that shows the area that will receive keyboard or pointing device input.
customization	The process of changing settings to alter the appearance and behavior of the desktop and applications running on the desktop.
data type	A mechanism that associates particular data files with the appropriate applications and actions. Data types can determine the type of a file based on file-naming conventions, such as a particular extension name, or on the contents of the file.
default	A value set automatically by an application.
desktop	See <i>workspace</i> .
dialog box	A window displayed by an application that requires user input.
dimmed	Reduced contrast to show unavailable emphasis.
directory	A collection of files and other subdirectories. In graphical user interface applications, may be called a folder.
double-click	To quickly press a mouse button twice without moving the mouse pointer. Unless otherwise specified, mouse button 1 is assumed. Double-clicking can often be used as an alternative to selecting menu items.
drag	To press and hold down any mouse button while moving the pointer—and the object under the pointer—on the screen.
drag and drop	To directly manipulate an icon by using a pointing device to move and place the icon somewhere else. Also referred to as drag transfer.

drag transfer	See drag and drop.
drop	After starting the drag of an object, the act of releasing the mouse button. If the object is dropped in an appropriate area, an action is initiated.
drop target	A rectangular graphic that represents the drop zone in an application.
drop zone	An area of the workspace, including the Trash Can, Print Manager, and Mailer Front Panel controls, that accepts a dropped icon. Icons can be dropped on the workspace for quick access.
duplicate button	Mouse button 2 is referred to as the duplicate button because, when clicked in an editable area, it copies the currently selected text to the position at which it was clicked.
element	A generic term for any entity that can be considered a standalone item in a broader context, such as an item in a list or a control in a window.
email	Short name for “electronic mail.” Email usually describes text messages addressed and sent to you electronically and are received in your electronic mailbox. Sometimes just known as “mail.”
environment variables	Standard UNIX variables that are used by the shell and by applications.
error message	A message that requires the user’s immediate attention. Error messages are used to convey a message about a user error.
execute	A file or folder (directory) access permission. For files, execute permission enables the user to run a program or shell script file. For folders (directories), execute permission enables the user to access the folder (directory) contents.
Exit button	A Front Panel control used to log out of the desktop.
extended selection	To add multiple items to a selected set by augmenting the selection technique. For example, you can add to a selection by moving the pointer to a new item and pressing Control and mouse button 2 simultaneously.
file	A unit of data, such as text, program, image, and so on, that is stored in a folder (directory).
File Manager	The software application that manages the files and directories on your system.
file name	The name of the file as it is stored in a folder (directory) or on a storage device. A file name consists of a base name and any suffixes. A fully qualified file name also includes the path.
file server	A host computer that stores data files used by applications.
file suffix	A suffix added to the end of a file name, often used in file typing or to categorize files for the user.

file type	Characteristics of a file that determine how it is used. The type of a file may be determined by a portion of its name (for example, the file extension) or by its content.
filter	Used to display only objects that meet certain criteria, such as a name pattern match, and to hide all other objects from view.
focus	The place to which keyboard input is directed, indicated by the highlight.
folder	An icon that represents a <i>directory</i> .
font	A complete set of characters (letters, digits, and special characters) of one size and one typeface. Ten-point Helvetica bold is an example of a font.
foreground	The content of a window and the color or shading used to distinguish it from the window's background.
Front Panel	A centrally located window containing controls for accessing applications and utilities, including the <i>workspace switch</i> . The Front Panel occupies all workspaces.
Front Panel control	An object in the Front Panel used as an interface to basic system services and frequently performed tasks and operations. Controls in the default Front Panel are: Clock, Calendar, Mailer, Text Editor, Help Viewer, File Manager, Printer, Style Manager, Application Manager, and Trash Can.
Front Panel move handles	An area on each end of the Front Panel used for moving the Front Panel and for bringing it to the front of the workspace.
grab handles (or handles)	The small squares displayed at the corners and midpoints of a selected graphic element.
group	A collection of users who are referred to by a common name. Also, a permission setting that determines a group's access to files.
Group Appointment	In Calendar, an appointment for a group of people, scheduled using the Group Appointment Editor.
header	In Mailer, the basic information about an electronic mail message as it appears in the mailer container. A message header displays the name of the sender, subject, the date and time it was received, and message size.
Help	A button or menu item used to access information about objects, choices, tasks, and error messages.
help family	A set of <i>help volumes</i> that provide online information about related applications.
Help Index	An alphabetic listing of help topics.

help key	A designated key, usually the F1 key, used to request online help information about what the cursor is currently on. Some keyboards have a dedicated Help key that may take the place of F1.
Help Manager	A special help volume that lists all the online help registered on your system.
Help Viewer	The software application that displays online help.
help volume	A complete body of help information about a subject.
help window	A secondary window that displays help information.
hierarchical file system	A way to organize data on computer systems using a hierarchy of containers, often called folders (directories) and files. In this scheme, folders may contain other folders and files. The successive containment of folders within folders creates the levels of organization, which is the hierarchy.
highlight	(<i>v</i>) To make something stand out on the screen by selecting or choosing it. Also (<i>n</i>) the visual indicator that something is selected.
history	A list of the most recently accessed commands, files, folders, or help topics.
home directory	A directory where you keep personal files and additional directories. In graphical user interface applications, may be called the <i>home folder</i> .
<i>HomeDirectory</i>	Symbolizes your home directory. For example: If your home directory is <code>/users/anna</code> , then <i>HomeDirectory</i> / <code>bitmaps/smile.bm</code> represents <code>/users/anna/bitmaps/smile.bm</code> .
home folder	A folder where you keep personal files and additional directories. By default, File Manager and Terminal Emulator windows are set to the home folder when you first open them. When discussing command-line activities, may be called the <i>home directory</i> .
home session	A choice at logout to designate a particular session, other than the one you are currently in, as the one you will automatically return to at the next login.
host	A computer system.
host card	The details of a host, as displayed in the Address Manager application.
hyperlink	In Help text, text or a graphic you click to display another Help topic.
icon	A graphical representation of an object consisting of an image, an image background, and a label. An icon can be directly manipulated.
Icon Editor	The software application used to create new icons and to modify existing icons.

Inbox	The main or default Mailer container. The Inbox receives all incoming mail. Messages can be moved out of the Inbox and put in various containers.
index	In a help volume, an alphabetical list of words or phrases that can be searched to find help on a subject. The Help System displays the index when you choose the Index button in a help dialog box.
insertion point	The point at which data typed on the keyboard, or pasted from the clipboard or a file, appears on the screen. In text, a synonym for <i>cursor</i> .
Install Icon	An item on a subpanel used to install icons into the Front Panel using <i>drag and drop</i> .
ITE	Internal Terminal Emulator. ITE allows use of a bitmapped display as a terminal (through command-line mode from the login screen).
items	Elements in a list or menu.
label	The text appearing next to an icon or control that names the element.
link	Synonym for <i>symbolic link</i> .
list	A control that contains elements from which you select. Also called selection list.
Lock button	A Front Panel control used to lock the screen.
log in	To supply a user name and password to gain access to a system or desktop session.
login	The process of gaining access to a system.
log out	To terminate or end access to a system or desktop session.
logout	The termination of a desktop session.
Mailer	An application that enables you to send, receive, and compose electronic mail messages.
mailer container	The electronic mail box and filing system that contains all mail messages. Once a message is put in a container, you can display, modify, delete, print, include, forward, and reply to it.
Mailer control	The Front Panel control used to start the Mailer software application. Dropping a file on the control loads the file into the Mailer Compose window.
Main Panel	The portion of the Front Panel excluding the subpanels.
mapping	A method of using one action to run another action. Also, a pairing of entities in one set with those in another set.
Maximize	A choice that enlarges a window to its largest possible size.

maximize button	A button on a window's title bar that you choose to display the window in its largest size.
menu	A list of items from which you select to perform a particular application task. Also see <i>submenu</i> .
menu bar	The part of the application window between the title bar and the work area where menu names are listed.
menu item	An element in a menu that represents a choice (for example, Copy on the Edit menu).
Minimize	To turn a window into an icon. The push button that minimizes a window is located near the upper right corner of the window frame.
minimize button	A button on a window's title bar that you choose to display the window as an icon.
mnemonic	A single, underlined character in a command. The mnemonic indicates that you can choose the command by typing that letter. Mnemonics are used most commonly in menu commands; however, other buttons may also have mnemonics.
modifier key	A key that when pressed and held along with another key or mouse button changes the meaning of the second key or mouse click. Control, Alt, and Shift are examples.
mouse	A device for moving the pointer and making selections.
mouse button	A mechanism on a mouse that you press to make selections.
mouse button 1	On a mouse, the leftmost button when configured for right-handed use; the rightmost button when configured for left-handed use. Mouse button 1 is primarily used for selection, and is the default button for the "click" instruction.
mouse button 2	On a three-button mouse, the middle button. Mouse button 2 has two modes: Transfer and Adjust.
mouse button 3	On a mouse, the rightmost button when configured for right-handed use; the leftmost button when configured for left-handed use. Mouse button 3 activates pop-up menus.
Move	A Window menu choice used to put a window in a different location on the screen.
navigation keys	The keyboard keys used to move the current location of the cursor. These include the arrow keys (with or without the Control key); the Tab key (with or without the Control or Shift keys); the Begin and End keys (with or without the Control key); and the Page Up and Page Down keys.
newline character	An unseen character that marks the end of a line of text in a document. It tells a printer or screen to break a line and start a new one.

object	Any logical piece of data that has associated behavior. For example, in File Manager, files, folders, actions, and applications are all considered objects. Each type of object has specific associated actions. Typically, each object is represented as an icon.
object type	A desktop mechanism used to associate particular data files with the appropriate applications and actions. Object typing defines the criteria for typing the file (such as name or contents), the appearance (the icon used in File Manager), and the behavior of the object (for example, what happens when you double-click it).
OK	A choice that accepts the information in a window and closes it. If the window contains changed information, those changes are applied before the window is closed.
On Item help	When you choose On Item from the Help menu, the cursor changes to a question mark and you can obtain information about a particular command, operation, dialog box, or control by clicking that object.
On Item Help control	A Front Panel control used to access item help information on the Front Panel.
overwrite	To replace.
page	To advance text displayed in a window by one full screen at a time, usually using a scroll bar.
palette	A range of graphically displayed choices, such as colors or collections of tools, that you can select in an application.
parent directory	A directory that contains subdirectories and files. In graphical user interface applications, this may be called the <i>parent folder</i> .
parent folder	A folder that contains subfolders and files. When discussing command-line activities, this may be called the <i>parent directory</i> .
password	A sequence of characters that users type to prove their identity to the system.
path	A text string that specifies the hierarchical location of a folder (directory).
pause	To temporarily suspend a process without ending it.
permission	A setting that determines how users or groups of users may access a file or folder (directory).
pixmap	An image stored in a raster format. Usually refers to an image that may have more than two colors. Contrast with <i>bitmap</i> .
point	To move the mouse until the pointer rests on a particular screen element or area.

pointer	A cursor that shows the area that receives input from a pointing device. The pointer can take the form of an arrow, an I-beam, a cross, or other graphic. Also see <i>cursor</i> .
pop-up menu	A menu that, when requested, is displayed next to the object with which it is associated. Pop-up menus are usually displayed by clicking mouse button 3 or pressing Shift+F10.
Print Manager	A software application that shows all the printers on your system.
print server	A host computer to which one or more printers are connected, or the UNIX process that manages those printers.
Printer control	The Front Panel control used to start the Printer software application. Dropping a file on the control displays a dialog box you can use to print the file to the default printer.
Printer Jobs	A software application that provides information about jobs on a single printer.
program	A sequence of instructions that a computer can interpret and execute.
Properties	A menu item used to set characteristics of an item, such as its date or name, or display identifying characteristics of an item, such as typefaces.
pull-down menu	A menu of related choices that extends from a cascading choice when you click mouse button 1 on a menu bar item or the Window menu button.
push button	A control that immediately starts an action by an application, usually executing a command (such as Apply), displaying a window, or displaying a menu.
queue	An ordered list of jobs waiting to be performed.
radio button	An exclusive control whose setting is indicated by the presence or absence of a graphical indicator, usually part of a radio group. A radio button has two states, on and off.
Read	Permission to look at the data in a file or permission to list the files and folders (directories) in a folder (directory).
Reset	A button or menu item used to return an item to the condition it was in when it was last opened or to the condition it was in before the most recent changes were applied to it, whichever is more recent.
resize border	A control used to change the size of a window or a pane in a window.
resource	A mechanism of the X Window System™ for specifying an attribute (appearance or behavior) of a window or application. Resources are usually named after the elements they control.
restart	To stop a process and start it again.

Restore	A menu item used to return a window to the size and position it occupied before you minimized or maximized it.
root, root user	See <i>superuser</i> .
root directory	In a hierarchical file system, the directory that contains all other directories and files. Represented by a / (slash) in UNIX systems.
run	To start an application or action.
sash	A box on a separator or split bar that enables you to increase or decrease the size of a window pane using the mouse. You can navigate to the sash using the keyboard.
screen lock	A function that locks the workstation screen, barring further input until the valid user password is entered.
screen saver	A choice that, after a specified time period, switches off the workstation display or varies the images that are displayed, thereby prolonging the life of the screen.
scroll	To move the cursor through data one increment at a time. While scrolling, data shifts within the window to indicate the current position of the cursor.
scroll bar	A control located at the right or bottom of a window that enables you to display window content not currently visible.
scroll box	The part of a scroll bar that shows the position of the visible information relative to the total amount of information available in a window. You click a scroll box to see information that is not currently visible.
select	To add highlighting or some other visual cue to an item or element so that it can be operated or enabled. Selection does not imply the initiation of an action but rather a change of state, such as highlighting an item in a list, or toggling a check box on.
server	A system that supplies services to a client.
session	The elapsed time between user <i>login</i> and <i>logout</i> . Also, a particular configuration of workspaces that includes Style Manager settings, open applications, and the size and position of objects.
Session Manager	A software application that controls saving sessions, restoring sessions, screen locking and unlocking, and the use of screen savers. When a session is saved, the state of the desktop environment (location of icons, size and location of open windows, open/closed status of applications, current color palette, and so on) is preserved so that it can be restored at the next login.
session server	A system that provides networked sessions. Session files reside on the session server and are used whenever you log in to a system on the network.

shortcut	General term for a mouse gesture that simplifies filling out a dialog box. For example: As a shortcut, double-click an item in the Filename list box to select it and choose OK in one action.
shortcut keys	A keyboard key sequence used to activate a menu item, usually through a special accelerator key. For example: Press Alt+F to choose Print from the File menu.
slider	A control that uses a track and arm to set a value from among the available values. The position of the arm (or a separate indicator) gives the currently set value.
software application	A computer program that provides you with tools to do work. Style Manager, Text Editor, and File Manager are examples of software applications.
status area	A part of a window where information is displayed that shows the state of an object or the state of a particular view of an object.
Style Manager	The software application used to customize some of the visual elements and system device behaviors of the workspace environment, including colors and fonts, and keyboard, mouse, window, and session start-up behaviors.
subdirectory	A directory contained within another directory (sometimes called the <i>parent directory</i>). In graphical user interface applications, this may be called a <i>subfolder</i> .
subfolder	A folder contained within another folder (sometimes called the <i>parent folder</i>). When discussing command-line activities, this may be called a <i>subdirectory</i> .
submenu	A menu displayed by choosing an item from a menu.
subpanel	An extension of the Front Panel that slides up, providing access to additional elements. Subpanels usually contain groups of related elements.
suffix	A part of a file name, added at the end, separated from other suffixes or the base file name by some punctuation, such as a period (.).
superuser	A login identity that enables special permissions for modifying system files that most users do not have permission to modify. Superuser is also called “the root user” or “root” because the user ID for superuser is <code>root</code> . On most computer systems, only a few users have permission to become superuser.
symbolic link	A type of link that is capable of pointing to a file or directory that resides on another physical storage device or partition.
template	In Mailer, an ASCII file you can create for conveniently including frequently typed information, such as your name and electronic mail address, in your mail messages.

Terminal	In the CDE desktop, an icon used to open a terminal window.
terminal emulator	A window that emulates a particular type of terminal for running nonwindow programs. Terminal emulator windows are most commonly used for typing commands to interact with the computer's operating environment.
text cursor	A cursor that shows the insertion point for textual input. This cursor usually takes the form of an I-beam. Contrast with <i>location cursor</i> and <i>pointer</i> .
Text Editor	The software application used to create and edit documents.
text field	A rectangular area in a window where information is typed. Text fields with keyboard focus have a blinking text insertion cursor.
title bar	The topmost area of a window containing the window title, window menu button, and the maximize and minimize buttons. See also <i>window title</i> .
toggle	To change the state of a two-state control, such as a radio button or check box, using either the mouse or keyboard.
topic tree	In a general help dialog box, a list of topics that can be selected to display help information.
Trash Can	A container for deleted files or folders.
tree view	A view of a folder or files that includes all lower-level folders in the search path.
user name	An identifier for making a user known to the system. Sometimes called a login name. For example, a user whose name is John Doe might have the user name jdoe. The login screen prompts for the user name.
window	A rectangular area on the display. Software applications typically have one main window from which secondary windows, called <i>dialog boxes</i> , can be opened.
window frame	The visible part of a window that surrounds a software application. A window frame can contain up to five controls: title bar, resize borders, minimize button, maximize button, and the Window menu button.
window icon	A minimized window.
Window Manager	The software application that provides users with the capability to manipulate windows on the workspace; for example, opening, resizing, moving, and closing windows.
Window menu	The menu displayed by choosing the Window menu button. The menu provides choices that manipulate the location or size of the window, such as Move, Size, Minimize, and Maximize.
Window menu button	The control at the upper left corner of a window, next to the title bar. Choosing it displays the Window menu.

work area	The part of a window where controls and text appear.
workspace	The current screen display, the icons and windows it contains, and the unoccupied screen area where icons can be placed.
workspace backdrop	See <i>backdrop</i> .
workspace background	The portion of the display not covered by windows or icons.
workspace icon	An icon that has been copied from File Manager to the workspace.
Workspace Manager	The software application that controls the size, placement, and operation of windows within multiple workspaces.
Workspace menu	The menu displayed by pointing at an unoccupied area of the workspace and clicking button 3 on the mouse.
workspace object	An object that resides in a workspace, rather than inside a viewer in a window. Workspace objects include windows, icons (minimized windows), and objects that have been dragged from File Manager and Application Manager and dropped on a workspace.
workspace switch	A control that enables you to select one workspace from among several workspaces.
workspace switch area	The rectangular area in the center of the Front Panel that contains the workspace switches, the Lock control, the Exit button, and the busy light.
Wrap To Fit	In Text Editor, this setting controls whether lines are automatically wrapped to fit the window width as you enter text. If set, lines wrap at the edge of the window. If not set, you must press Return to end the line.
Write	Permission to modify the contents of a file or folder.

Index

Numbers and Symbols

.. (parent directory), 189

A

absolute path, 148

access

- denying to your calendar, 371
- granting to your calendar, 368, 371
- to calendar, changing, 368
- to other calendars, 361

Access Control Lists, 163, 167

- adding entries, 169
- changing entries, 170
- default permissions, 172
- deleting entries, 171
- viewing, 168

accessing Dtpower, 552

AccessX, 617, 629

- automatic shut-off, 620
- beeping on locked keys, 626
- BounceKeys, 628
- controlling repeat behavior of keys, 626
- holding a key down, 622
- ignore multiple key presses, 628
- initial delay of repeating keys, 627
- keyboard equivalent of mouse buttons, 624
- keystrokes for features, 629
- latching and locking keys, 623
- main window, 618
- MouseKeys, 624

AccessX (*continued*)

- pressing two keys at once, 622
- preventing accidental input, 627
- RepeatKeys, 626
- setting rate of repeating keys, 627
- Settings window, 621
- SlowKeys, 627
- sound when feature enabled/disabled, 620
- starting, 618
- StickyKeys, 622
- ToggleKeys, 626

accidental input, preventing, 627

ACL-enabled, 167

action icon, 223

- and file names, 228

actions

- creating, 229
- double-clicking, 156
- executing, 160
- executing the default, 161
- on Process Manager entries, 501

Actions menu, 156

Activity Indicator

- control on main panel, 116

add calendar, 375

adding

- applications, 229
- applications to personal application group, 227
- attachments to mail messages, 287
- calendars to Browse list, 360
- controls with Install Icon, 139

- adding (*continued*)
 - group appointment, 362
 - mail signatures to all messages, 276
 - palette, 240
 - subpanels, 140
 - To Do item, 356
 - workspaces, 141
- Address Manager
 - Front Panel control, 483
- addresses, 268
- aliases, 268
- ancestry
 - showing for a process, 503
- AnswerBook, displaying, 98
- appending
 - a message to a file, 260
- application
 - adding to Front Panel, 139
- application groups, 222
 - built-in, 223
 - definition of, 223
 - personal, 227
- application help, 81
- application icon, 223
 - on workspace backdrop, 226
- Application Manager, 43, 221
 - application groups, 222
 - built at login, 223
 - control on subpanel, 222
 - customizing, 227
 - folders in, 222
 - Front Panel control, 222
 - labels and file names, 228
 - location in file system, 228
 - opening, 221
 - running applications from, 46, 47, 224
 - updating, 227
 - window, 222
- applications
 - adding, 229
 - registering, 231
 - reloading, 227
 - running from Application Manager, 46, 47, 224
 - running from drop zones, 47
 - running from File Manager, 231
 - running from Front Panel, 46
- applications (*continued*)
 - running from terminal emulator, 48
 - running from Workspace menu, 46
 - starting in Terminal window, 388
- Applications
 - subpanel, 222
- applications
 - using Text Editor with, 340
- applications, opening, 65
- Appointment Editor
 - changing defaults, 366
 - Group, 361
 - options, 352
 - standalone, 377
 - using, 351
- appointment list
 - displaying, 354
 - printing, 359
- appointments
 - adding to mail message, 289
 - basic, 351
 - changing, 353
 - creating, 351
 - creating using standalone Appointment Editor, 377
 - deleting, 353
 - deleting using dtcm_delete, 379
 - dragging from File Manager, 364
 - dragging from Mailer, 364
 - dragging to File Manager, 365
 - dragging to Mailer, 365
 - finding, 353
 - finding using dtcm_lookup, 378
 - format for mail message, 363
 - frequency of, 352
 - inserting, 351
 - inserting using dtcm_insert, 379
 - inserting using standalone Appointment Editor, 377
 - looking up, 378
 - mailing, 363, 368
 - options, 352
 - reminders, 352
 - scheduling, 351
 - scheduling using standalone Appointment Editor, 377
- ATM issues, 561

- attachments
 - adding to mail message, 287
 - adding with drag and drop, 288
 - as part of a template, saving, 272
 - printing, 287
 - reading, 287
 - saving, 288
 - viewing, 287
- Audio
 - command-line start, 450
 - description, 441
 - opening a file, 454
 - playing audio file, 457
 - playing audio files, 454, 457
 - starting, 450
 - starting from command line, 450
 - starting from Front Panel, 450
 - starting from Voice Note control, 452
 - starting from Workspace Programs
 - menu, 451
 - startup, 450
 - workspace menu startup, 451
- audio activity, 563
- Audio main window, 451
- automatic mail messages, 276
- automatic shut-off for AccessX, 620
- AutoShutdown, 563, 568
 - availability, 551
 - disabling, 570
 - setting idle time, 569
 - window, 570
- AutoShutdown and AutoWakeup, 562
- AutoWakeup, 568
 - availability, 551
 - disabling, 571
 - enabling, 571

B

- backdrop, *See* workspace backdrop
- Backdrop dialog box, 244
- base name font list, 592
- basic appointment, 351
- basic file management skills, 149
- basic permissions, 165
 - default, 172

- basic user types, 164
- Beep Calendar reminder, 352
- beep, changing settings for, 246
- Beep dialog box, 246
- beep when modifier key is pressed
 - (AccessX), 623
- beeping on locked keys, 626
- bell options in Terminal, 396, 398
- blanking the screen, 552, 557
- BottomShadow, 413
- BounceKeys, 628
 - set the debounce time, 629
- bringing up AccessX, 618
- Browse list, 361
- browsing calendars, 360
- Browsing Help on Your System, 98
- buttons
 - check box, 58
 - OK, 57
 - radio, 58
 - types of, 57

C

- Calendar
 - add, 375
 - control on Main Panel, 115
 - convert version 3 to version 4, 375
 - creating, 374
 - delete, 375
 - Front Panel control, 343
 - list calendars, 374
 - menus, 345
 - saving data in a file, 360
 - starting, 343
 - starting from command line, 344
 - Tool bar, 345
 - tool bar, 345
- Calendar access
 - world (anyone), 369, 370
- Calendar Manager on suspended
 - machines, 562
- Calendar tools, 373
- Calendar views
 - changing, 347, 348, 349, 350
 - changing default, 368

- Calendar views (*continued*)
 - Day, 347
 - default, 345
 - displaying, 347
 - Month, 349
 - printing, 359
 - Week, 348
 - Year, 350
- calendars
 - access to other, 361
 - browsing, 360
 - comparing, 361
 - deleting from the Browse list, 360
- Cancel button, 553
- canceling
 - dragging, 151
 - print jobs, 304
- capturing region of display, 416, 417
- CDE, 552, 558
- CDE workspace, 552
- CD-ROM, 192
 - ejecting, 195
- changing
 - Appointment Editor defaults, 366
 - appointments, 353
 - beep settings, 246
 - calendar access and permissions, 368
 - Calendar printer settings, 372
 - Calendar time zone, 373
 - Calendar views, 347, 348, 349, 350
 - colors, 238
 - date format in Calendar, 373
 - default Calendar view, 368
 - disk drive Power Management, 559
 - File Manager default preferences, 189
 - Front Panel lock settings, 247
 - how your next session starts, 251, 252
 - initial calendar displayed, 367
 - monitor Power Management, 558
 - number of colors, 241
 - permissions for your calendar, 371
 - printer icon, 309
 - printer label, 310
 - privacy defaults in Calendar, 366
 - reminders in Calendar, 366
 - system Power Management, 556
- changing (*continued*)
 - time boundaries on Day and Week views, 367
 - To Do item, 356
- changing ramp-up speed of pointer, 625
- changing the character set of an incoming message, 257
- changing the character set of an outgoing message, 271
- character marker for included mail messages, changing, 290
- character set
 - incoming message, changing, 257
 - outgoing message, changing, 271
- characters
 - composing special, 70
- check boxes, 57, 58
- child processes
 - a definition of, 504
 - tracing in Process Manager, 504
- choosing
 - Front Panel controls with the keyboard, 587
 - help, 72
 - help topic hyperlinks with the keyboard, 588
 - menu items, 67
 - push buttons, 57
 - subpanel controls with the keyboard, 587
 - Window menu items, 66
 - Workspace menu items, 65
- choosing to use Power Management, 560
- Clean Up (command in View menu), 188, 189
- clicking, 39
 - to make window active, 249
- Clock
 - control on Main Panel, 115
- closing
 - application windows, 50, 582
 - subpanels, 108
- code sets
 - composing special characters, 70
- color
 - changing, 238
 - in Terminal window, 396
 - displaying use of in image, 423
 - for icons, 412, 413
 - grabbing from workspace, 240

- color (*continued*)
 - in help windows, 103
 - limiting usage of, 241
 - viewing image in, 422
 - Color dialog box, 238, 240
 - color flashing, 235
 - Color setting in Image Viewer, 422
 - colormap flashing, 235
 - command line
 - to start Calendar, 344
 - Command Line Login mode
 - definition of, 77
 - exiting, 77
 - logging in to, 77
 - command-line startup
 - Audio, 450
 - commands
 - entering in Terminal window, 388
 - issuing for printing, 300
 - Compare Calendars grid, using, 362
 - comparing calendars, 361
 - composing
 - special characters, 70
 - contents, finding file using, 182
 - control
 - adding to subpanel, 139
 - control characters in Terminal, 402, 403
 - Control key, 68
 - controls
 - adding with Install Icon, 139
 - customizing in the workspace switch, 142
 - deleting, 112
 - moving to Main Panel, 139
 - renaming, 112
 - replacing in Main Panel, 140
 - controls, Front Panel, 43
 - convert version 3 Calendar to version 4, 375
 - copying
 - a region of an icon, 414
 - files, 157
 - folders, 157
 - objects, 157
 - palette, 240
 - text, 327
 - text in Terminal window, 389
 - Create Action, 229
 - creating, 229
 - copying (*continued*)
 - actions, 229
 - appointment using standalone Appointment Editor, 377
 - appointments, 351
 - custom palette, 240
 - data types, 229
 - document, 314
 - file with language-specific characters, 590
 - files, 156
 - folders, 156
 - mail aliases, 269
 - mail search scripts, 265
 - mail signatures, 275
 - mailboxes, 260, 281
 - objects, 156
 - personal application group, 227
 - To Do items, 356
 - creating a calendar, 374
 - cron jobs on suspended machines, 561
 - cron process, 550
 - current folder, 148
 - current session, 69
 - definition of, 78, 251
 - resuming at, 251
 - cursor movement keys, 320
 - cursor options in Terminal, 394, 395
 - custom fields in Format menu, adding, 290
 - Custom Time, in Calendar, 373
 - customized power saving scheme, 555
 - customizing
 - Calendar printer settings, 359, 372
 - colors, 239
 - File Manager views, 184, 185
 - keyboard behavior, 244
 - mouse behavior, 245
 - palette, 239
 - screen saver, 247, 248
 - cutting a region of an icon, 414
- D**
- data types, 229
 - date format, 373
 - Day view
 - Calendar, 347

- Day view (*continued*)
 - changing time boundaries, 367
 - three-month mini-calendar, 347
- debounce time, 629
- debugging a process
 - in Process Manager, 506
- default actions, 161
- default permissions, 172
 - optional Default entry types, 172, 174
 - required Default entry types, 172, 173
- default Power Management settings, 550
- default printer
 - changing, 296
 - definition of, 295
 - determining, 295
- default terminal emulator, 383
 - changing, 403
- defaults, 562
 - Calendar view, 345
 - changing access and permissions, 368
 - changing Appointment Editor, 366
 - changing Calendar reminder, 366
 - changing Calendar view, 368
 - changing privacy, 366
 - date format in Calendar, 373
 - initial calendar displayed, 367
 - time boundaries on Day and Week views, 367
- delaying a snapshot, 438
- delete calendar, 375
- deleting
 - appointments, 353
 - appointments using dtcm_delete, 379
 - calendars from Browse list, 360
 - controls from subpanels, 112
 - files, 163
 - folders, 163
 - mail messages, 260
 - mailboxes, 283
 - palette, 241
 - subpanels, 140
 - text, 326
 - To Do items, 356
 - workspaces, 142
- denying access to your calendar, 371
- deselecting text, 54
- desktop
 - current session, 69
 - exiting, 69
 - help, 72
 - logging out, 69
 - workspaces, 54
- desktop session, 76
- detach support, 573
- device drivers, 573, 575
- device idle time, 556
- device Power Management availability, 550
- device suspend failure, 573
- dial in to suspended machines, 561
- directories, *See* folders
- disabled users, interface for, 617
- disabled users, see also handicapped users and AccessX, 617
- disabling
 - AutoShutdown, 570
 - AutoWakeup, 571
 - the power key, 565
 - the screen lock, 577
- disk space shortage, 576
- diskette, 192
 - copying files and folders to, 195
 - creating files and folders on, 196
 - deleting files and folders from, 196
 - ejecting, 195
 - formatting, 194
 - moving files and folders to, 195
 - renaming, 195
- diskless clients, 563
- display
 - capturing region of, 416, 417
 - locking, 70
 - refreshing, 65
 - unlocking, 70
- display Power Management availability, 550
- displaying
 - appointment list, 354
 - Calendar views, 347
 - concealed windows, 53
 - Front Panel pop-up menus, 109
 - help, 72
 - image in color, 422
 - man pages, 99
 - message line in Print Manager, 308

- displaying (*continued*)
 - pop-up menus, 63, 66, 585
 - PostScript file in black and white, 429
 - PostScript file in color, 429
 - PostScript files, 429
 - print job properties, 305
 - print jobs, 303
 - Print Manager problem flag, 308
 - printer properties, 309
 - pull-down menus, 62, 66, 585
 - subpanels, 107
 - To Do list, 357
 - Window menu, 63
 - Workspace menu, 64
 - workspaces, 55, 585
- document
 - creating, 314
 - editing, 311
 - formatting, 337
 - going to specific line in, 321
 - including file in, 327
 - including file through drag and drop, 335
 - justifying text in, 338
 - margins, 338
 - new lines in, 319
 - opening existing, 316, 318
 - opening existing from File Manager, 317
 - printing, 338
 - restoring, 311
 - saving, 315
 - searching, 336
 - word wrap, 320
- dot files, 189
- double-clicking, 40
 - action performed, 156
- double-headed systems, 557
- drafts
 - creating for mail messages, 273
 - deleting draft mail messages, 274
 - using for mail messages, 273
- drag and drop, in Text Editor, 335
- dragging, 40
 - appointment from Calendar to File Manager, 365
 - appointment from Calendar to Mailer, 365
 - appointment from File Manager to Calendar, 364
- dragging (*continued*)
 - appointment from Mailer to Calendar, 364
 - canceling, 151
 - file to Text Editor, 335
 - files, 151
 - folders, 151
 - objects, 151
 - text, 335
- drawing icon image, 408
 - undo, 410
- drawing tools for Icon Editor, 409, 410
- drop zones
 - running applications from, 47
- dropping
 - file in Text Editor, 335
 - files, 151
 - folders, 151
 - objects, 151
 - text, 335
- dtcm
 - to start Calendar from command line, 344
- dtcm_convert, 375
- dtcm_delete, 379
- dtcm_editor, 377
- dtcm_insert, 379
- dtcm_lookup, 378
- Dtpower
 - accessing, 552
 - AutoShutdown, 562
 - AutoWakeup, 562
 - basic window, 554, 556
 - conventions, 552
 - exiting, 571
 - GUI, 551, 552, 553
 - program, 551
 - starting from command line, 553
 - starting through CDE workspace, 552
 - window controls, 553
- dtterm command, 383
- dtterm, Terminal, 383
- due date, setting for To Do item, 356
- duplicating
 - using mouse, 41
- dynamic colors for icons, 413

E

- Edit button, 553
- editing
 - existing mail message text, 259
 - file with language-specific characters, 590
 - text fields, 61
 - text or document, 311
- effective permissions, 165
- electronic mail on suspended machines, 560
- enabling AutoWakeup, 571
- encoding
 - incoming messages, 257
 - outgoing messages, 271
- Energy Star, 547
- Energy Star, v.3, 550
- Enter key, 68
- entering
 - commands in Terminal window, 388
 - text in a text field, 60
- errant processes
 - a definition, 495
 - tips for finding, 496
- Esc key, 68
- Euro
 - currency symbol, 71
- executing actions, 160
- Exit control, 69, 76, 117
- exiting Dtpower, 571
- Extend char key, 68
- external devices, 565, 567

F

- F1 key, 72
- failsafe session, 77
- File Finder
 - find by properties, 182
 - to open, 178
 - using, 178
- file management, basic skills, 149
- File Manager
 - changing icon display area size in, 191
 - control on Main Panel, 115
 - determining headers for, 185
 - disabling icon browsing in, 191
 - Front Panel control, 45, 146

- File Manager (*continued*)
 - icon browsing in, 190
 - Information dialog box, 154
 - main window, 146
 - opening existing text document from, 317
 - printing using, 298
 - removable media, 192
 - running applications from, 231
 - saving current preferences as default, 189
 - starting, 146
 - starting Icon Editor from, 407
- File Manager views
 - aligning icons in, 189
 - arranging icons in, 185
 - changing, 184
 - changing sort order of, 187, 188
 - customizing, 184, 185
 - folder, 187
 - saving, 189
 - tree, 185, 186
- file names
 - and action icons, 228
 - in Application Manager, 228
- file path, 148
- file system
 - concepts, 147
 - hierarchical, 147
 - moving through, 159
- files
 - ACL-enabled, 167
 - changing ownership, 166
 - copying, 157
 - copying to diskette, 195
 - creating, 156
 - creating on diskette, 196
 - default permissions, 172
 - deleting from diskette, 196
 - dragging, 151
 - dropping, 151
 - dropping in Text Editor document, 335
 - with language-specific characters, 590
 - finding by contents, 182
 - finding by name, 179
 - getting help on, 154
 - hidden, 189
 - hiding, 190

- files (*continued*)
 - including in document through drag and drop, 335
 - including in mail messages, 275
 - including in Text Editor document, 327
 - locating, 178
 - moving, 157
 - moving to diskette, 195
 - opening, 156
 - ownership, 163
 - putting on workspace backdrop, 177
 - removing from workspace, 178
 - renaming, 153
 - restoring from Trash Can, 162
 - security, 163
 - selecting multiple, 150
 - selecting single, 150
 - sorting, 189
 - types for printing, 296, 297
 - viewing on CD-ROM, 194
 - viewing on diskette, 194
- files, in CDE, 43
- Files subpanel, 43
- filing mail messages
 - manually, 282
- filter
 - applying to Process Manager display, 497
- find
 - a process, 498
- Find
 - menu item in File Manager, 178
- Find File
 - control on Files subpanel, 178
- Find Process
 - Front Panel control, 497
- finding
 - a file by properties, 182
 - appointment using `dcm_lookup`, 378
 - appointments, 353
 - files and folders, 178
 - mail messages, 261
 - objects, 178
 - objects using wildcards, 181
 - print jobs, 303
- finding files, 43
- Flash Calendar reminder, 352
- flashing
 - colors on screen, 235
- Flip tool, in Image Viewer, 424
- flipping an image, 426
- flipping part of an icon, 415
- floppy disk activity, 563
- folder view in File Manager, 187
- folders
 - ACL-enabled, 167
 - changing, 159
 - changing ownership, 166
 - changing to, 159
 - copying, 157
 - copying to diskette, 195
 - creating, 156
 - creating on diskette, 196
 - default permissions, 172
 - definition of, 147
 - deleting, 163
 - deleting from diskette, 196
 - dragging, 151
 - dropping, 151
 - finding by name, 179
 - getting help on, 154
 - hidden, 189
 - hiding, 190
 - moving, 157
 - moving to diskette, 195
 - opening, 156
 - ownership, 163
 - putting on workspace backdrop, 177
 - removing from workspace, 178
 - renaming, 153
 - restoring from Trash Can, 162
 - security, 163
 - selecting multiple, 150
 - selecting single, 150
 - sorting, 189
 - viewing on CD-ROM, 194
 - viewing on diskette, 194
- Font dialog box, 242, 243
- font group
 - adding, 242
 - deleting, 243
 - selecting, 242
- font set specification, 592
- font specification, 592

- fonts
 - internationalizing, 591, 593
 - selecting font group, 242
 - selecting new size for, 242, 243
 - specifying from the command line, 593
 - specifying within a resource file, 593
 - viewing attributes, 243
- format of image, displaying, 423
- formatting
 - document in Text Editor, 337
 - mail message text, 279
- forwarding messages, 259
- frame buffer activity, 549
- frame controls, 48
- frequency of appointments, 352
- Front Panel, 43, 105
 - Address Manager control, 483
 - Application Manager control, 222
 - Calendar control, 343
 - changing the printer in, 306
 - contents, 115
 - Exit control, 69, 76
 - File Manager control, 146
 - Find Card control, 483
 - help, 113
 - Help control, 131
 - Icon Editor control, 407
 - Lock control, 70
 - lock settings, 247
 - minimizing, 114
 - moving, 113
 - On Item help, 113
 - pop-up menus, 109
 - printing through, 297, 298
 - removing customizations made through the GUI, 141
 - restoring default, 141
 - running applications from, 46
 - Text Editor control, 312

G

- globe
 - control on main panel, 116
- grabbing
 - region of display, 416, 417

- grabbing color from workspace, 240
- granting access to your calendar, 368
- Graphical Workspace Manager, 212
- gray scale, displaying image in, 422
- grid
 - Calendar Week view, 348
 - Compare Calendars, 362
 - in Icon Editor, 417
- Group Appointment Editor, starting, 361
- group appointments
 - inserting, 362
 - mailing reminders, 362
 - scheduling, 362
- guidelines for using Power Management, 560

H

- handicapped users, see also AccessX, 617
- handicapped users
 - avoiding unintentional input, 627, 628
 - controlling key repeat behavior, 626
 - getting a beep for locked keys, 626
 - ignoring inadvertent key presses, 627, 628
 - pressing two keys at once, 622
 - using keys to mimic the mouse, 624
- handicapped users, interface for, 617
- hardware support for Power Management, 549
- hardware's power-saving capability, 549
- height of image, displaying, 423
- help
 - browsing, 95
 - context-sensitive, 82
 - displaying, 72
 - displaying for file, 154
 - displaying for folder, 154
 - displaying topics, 87
 - Front Panel, 113
 - on objects, 154
 - hyperlinks, 588
 - index, 92
 - keyboard navigation, 588
 - moving between topics, 89
 - On Item help, 83
 - pop-up menu, 90
 - printing help topics, 101

- help (*continued*)
 - using Help key, 82
 - window colors, 103
 - windows, 85
- Help button, 553
- help commands
 - Backtrack, 89
 - History, 89
 - Home Topic, 89
 - Index, 94
 - New Window, 97
 - Print, 101
 - Top Level, 96
- Help key, 72
- Help Manager
 - control on the Main Panel, 117
 - Front Panel control, 83
 - opening, 95
- Help Manager control, 130
- Help menu, 73
- help windows
 - color in, 103
 - duplicating, 97
 - topic display area, 86
 - topic tree, 86
 - types of, 85
- hidden files, 189
- hiding
 - files, 190
 - folders, 190
 - waiting print jobs, 303
 - Icon Editor grid, 417
 - objects, 190
 - Snapshot dialog box during snap, 439
- hierarchical file system, 147
- highlight, keyboard, 580
- \$HOME
 - definition of, 178
- home folder, navigating to, 160
- home session
 - definition of, 78, 251
 - returning to, 251
 - setting, 78, 251
 - starting automatically at login, 78
- hotspot in an icon, 416
- hyperlink, used in help, 87

I

- icon browsing, 191
- Icon Editor
 - control, 407
 - drawing tools, 409, 410
 - hiding grid in, 417
 - opening icon for editing, 407
 - saving icon, 412
 - saving icon with new name, 412
 - starting, 407
 - starting a new icon, 408
 - starting from File Manager, 407
 - starting from Terminal, 407
- icons
 - aligning in File Manager view, 189
 - arranging in File Manager view, 185
 - behavior of in Front Panel, 139
 - browsing in File Manager, 190
 - changing display area size in File Manager, 191
 - changing for printer, 309
 - changing magnification of, 417
 - clearing loaded, 408
 - color usage for, 412, 413
 - copying a region of, 414
 - cutting a region of, 414
 - displaying in icon box, 250
 - displaying on workspace, 250
 - drawing image, 408
 - flipping part of, 415
 - hotspot, 416
 - moving a region of, 414
 - naming, 411
 - opening existing, 407
 - output format, 412
 - resizing, 415
 - resizing a region of, 415
 - rotating part of, 415
 - saving, 412
 - saving with new name, 412
 - selecting an area of, 413
 - selecting multiple, 150
 - selecting single, 150
 - size conventions for, 411
- idle time
 - device, 556
- ignore multiple key presses, 628

- image
 - changing orientation in the View window, 422
 - displaying color usage of, 423
 - displaying format of, 423
 - displaying height of, 423
 - displaying in color, 422
 - displaying in gray scale, 422
 - displaying size of, 423
 - displaying width of, 423
 - flipping, 426
 - moving within View window, 422
 - opening in Image Viewer, 421
 - printing, 435
 - rotating, 426
 - saving, 428
 - saving a PostScript file page as, 432
 - saving region of to new file, 425
 - saving to a new file, 428
 - scaling, 427
 - Image Viewer
 - opening image in, 421
 - palette tools, 424
 - starting from Application Manager, 420
 - starting from command line, 420
 - starting from Workspace Programs menu, 420
 - IMAP
 - default mailbox folder in IMAP server, 284
 - filing server, 284
 - mailbox, 254
 - included text, marker for, 278
 - including multiple messages in a mail message, 274
 - initial calendar displayed, changing, 367
 - input method for locales, 594, 595
 - inserting
 - appointment, 351
 - appointment using dtcm_insert, 379
 - appointment using standalone Appointment Editor, 377
 - group appointment, 362
 - To Do item, 356
 - Install Icon
 - behavior of icons installed with, 139
 - control, 106
 - Install Icon control, 139
 - internationalization and fonts, 591
 - Internet Messaging Access Protocol (IMAP)
 - Inbox, logging in to, 255
 - ISDN activity, 563
- J**
- justification, setting in Text Editor, 338
- K**
- key, power, 564, 565, 568
 - key processing daemon, 572
 - keyboard, 564, 574
 - basic skills, 68
 - choosing menu items with, 67
 - Compact 1, 564
 - cursor movement keys in Text Editor, 320
 - customizing behavior, 244
 - displaying menus with, 585
 - focus, 580
 - highlight, 580
 - navigation, 68, 579
 - navigation and Window Behavior
 - setting, 68
 - options in Terminal, 399, 400
 - shortcuts, 68, 579
 - tab groups, 580
 - type 5, 564
 - type 6, 564
 - keyboard access for handicapped users, 617
 - Keyboard dialog box, 244
 - keyboard equivalents of mouse buttons, 624
 - keyboard shortcuts, 565
 - keyboard used to Suspend or Resume, 548
 - keymaps, changing, 595
 - keys
 - controlling repeat behavior, 626
 - ignore multiple presses, 628
 - latching and locking, 623
 - modifier, 622
 - rate of repeat, 627
 - keystrokes for AccessX features, 629
 - keywords, for mail search scripts, 261, 264

- kill
 - a process, 501
- L**
- labels
 - changing for printer, 310
 - in Application Manager, 228
- LANG environment variable, 590
- language, setting for desktop session, 76
- language-specific
 - characters in file, 590
 - data, 590
 - login, 590
 - sessions, 589
 - terminal emulator, 591
 - Text Editor, 591
- latching keys (AccessX), 623
- Less button, 553
- link, creating symbolic, 158
- list
 - of appointments, 354
 - of To Do items, 357
- list calendars, 374
- lists
 - scrollable, 57
 - selecting items in, 59
- local time, setting in Calendar, 373
- Lock control, 70, 116
- locked screen, 577
- locking keys (AccessX), 623
- locking the display, 70
- log file
 - in Process Manager, 500
- logging in, 76
 - to language-specific session, 590
- logging in to
 - IMAP Inbox, 255
 - Mailer, 254
- logging out, 69, 76
- login, language-specific, 590
- login screen, 75
- logout confirmation, 252
- logout, determining session resumption at, 251
- looking up appointments, 378

- M**
- magnification of icons, 417
- mail aliases, 268
- mail aliases on suspended machines, 561
- Mail Calendar reminder, 352
- mail messages, *See* messages
- mail notification, customizing, 291
- mail on suspended machines, 560
- mail search scripts
 - creating, 265
 - keywords for, 261, 264
- mail signatures
 - adding to specific messages, 276
 - automatically adding to all messages, 276
 - creating, 275
- mailboxes
 - adding to menus, 284
 - changing default directory for, 284
 - closing, 282
 - creating, 281
 - deleting, 283
 - filing messages in, 282
 - filing using drag and drop, 283
 - opening, 282
 - renaming, 281
 - views of, 266, 268
- Mailer
 - control on Main Panel, 116
 - logging in to, 254
 - main window, 256
 - starting, 253
- Mailer Inbox
 - IMAP (remote), 254
 - local, 254
- mailing
 - Calendar appointment, 363, 368
 - reminders of group appointment, 362
- Main Panel, 106
 - changing controls in, 139
 - contents, 115
 - moving subpanel control to, 112
 - replacing a control, 140
- man pages, displaying, 99
- managing files, 43, 149
- margins, document, 338
- marking To Do item completed
 - using To Do Editor, 358

- marking To Do item completed (*continued*)
 - using To Do list, 358
- mask, 175
 - modifying, 175
- maximize button, 49
- menu bar
 - removing from Terminal window, 391
 - restoring to Terminal window, 392
- menus
 - Calendar, 345
 - mnemonics, 62, 579
 - shortcut keys, 63, 579
 - using, 62
 - Window, 63
 - Workspace, 64
- message filing
 - manual, 282
- messages
 - adding attachments to, 287
 - adding Calendar appointments to, 289
 - adding signature to specific, 276
 - automatically generated, 276
 - Calendar appointment format for, 363
 - changing character set of incoming, 257
 - changing character set of outgoing, 271
 - changing text, 280
 - checking spelling, 280
 - deleting, 260
 - displaying numbers of, 290
 - editing existing, 259
 - filing, 282
 - finding text in, 280
 - forwarding, 259
 - frequency of checking for new, 290
 - including signature in all, 276
 - including text files, 275
 - printing, 285
 - reading, 257
 - replying to, 258
 - restoring deleted, 260
 - saving as template, 272
 - searching for, 261
 - setting marker for included text in, 278
 - sorting, 258
 - viewing, 257
- MIME format, email in, 277
- minimize button, 49

- minimizing
 - Front Panel, 114
 - windows, 50
- mnemonics, menu, 62, 579
- modifier keys, 622
- Modify dialog box, 240
- modinfo command, 573
- modunload command, 573
- monitors, double, 557
- Month view, 349
- More button, 553
- More Criteria
 - option in File Finder, 182
- mouse
 - choosing a menu item, 66
 - click, 39
 - customizing behavior, 245
 - double-click, 40
 - dragging, 40
 - duplicating, 41
 - using, 39
- mouse access for handicapped users, 617
- mouse button 1, 39
- mouse button 2, 54
- mouse button 3, 63
- Mouse dialog box, 245
- MouseKeys, 624
 - change maximum speed of pointer, 625
 - changing ramp-up speed, 625
 - keyboard equivalents, 624
- moving
 - controls to Main Panel, 139
 - files, 157
 - folders, 157
 - Front Panel, 113
 - icons, 51
 - keyboard focus, 580
 - a region of an icon, 414
 - objects, 157
 - subpanels, 113
 - windows, 51, 583
- My Time, setting Calendar time zone, 373

N

- name, finding file by, 179

- names
 - for icon files, 411
- navigating
 - moving text insertion cursor, 320
 - to home folder, 160
 - to specific line in document, 321
 - with keyboard, 579
- networked applications, 561
- Next key, 59
- notification of new mail, customizing, 291

O

- objects
 - aligning in File Manager view, 189
 - copying, 157
 - creating, 156
 - dragging, 151
 - dropping, 151
 - executing action of, 160
 - finding by name, 179
 - folder, 147
 - getting help on, 154
 - hiding, 190
 - manipulating, 156
 - moving, 157
 - opening, 155, 156
 - pop-up menu for, 177
 - putting on workspace backdrop, 177
 - removing from workspace, 178
 - renaming, 153
 - restoring from Trash Can, 162
 - selecting multiple, 150
 - selecting single, 150
 - sort order in File Manager, 187, 188
 - sorting, 189
- Occupy Workspace dialog box, 55
- OK button, 57, 553
- On Item help, 83, 154
- On Item Help control, 131
- online help, 81
 - displaying, 72
 - keyboard navigation, 588
- opening
 - application windows, 49, 581
 - Audio file, 454

- opening (*continued*)
 - existing document, 316, 318
 - File Finder application, 178
 - files, 156
 - folders, 156
 - icon, 407
 - mailboxes, 282
 - objects, 155, 156
 - Style Manager, 234
 - subpanels, 107
 - Terminal window in current directory, 160
- opening applications, 65
- overstrike mode, in Text Editor, 325
- overview of Dtpower GUI, 553
- overview of power management, 549

P

- page
 - printing, 435
- Page Down key, 59
- Page Up key, 59
- palette
 - adding, 240
 - creating, 240
 - deleting, 241
 - modifying, 239
 - restoring, 241
 - selecting, 238
- palette (Image Viewer)
 - description of tools in, 424
 - displaying automatically, 424
- Pan tool, in Image Viewer, 424
- parent folder, navigating to, 160
- pasting
 - text, 54
 - text in Terminal window, 389
- path, 148
- pending To Do item, 358
- Performance Meter
 - control on the Main Panel, 117
- permissions
 - Access Control Lists, 167
 - basic, 163
 - basic user types, 164
 - changing for your calendar, 368, 371

- permissions (*continued*)
 - default, 172
 - effective, 165
 - mask, 175
 - modifying basic, 165
 - setting for your calendar, 369
- Permissions dialog box, 165, 173, 174
- personal application group
 - adding applications to, 227
 - creating, 227
- pointer
 - change speed of, 625
- pointer speed
 - changing, 625
 - changing ramp up, 625
- pointing to make window active, 249
- Popup Calendar reminder, 352
- pop-up menus
 - displaying, 63, 66, 152
 - for objects, 176, 177
 - Front Panel, 109
 - for subpanels, 112
- PostScript file
 - changing the size of display of, 431
 - displaying, 429
 - displaying in black and white, 429
 - displaying in color, 429
 - paging through, 430
 - printing, 434, 435
 - reversing page order, 431
 - saving a page as bitmap image, 432
 - viewing a specific page, 430
- power cycling, 562
- power key, 564, 568, 572
- power key, disabling, 565
- power key with Shift, 565
- Power Management
 - disk drives, 559
 - monitors, 557
 - Suspend-Resume feature, 560
 - system, 556
- power on, 568
- power saving schemes, 551
 - customized, 555
 - default scheme, 554
 - grayed out, 555
 - selecting, 555
- power-off failed message, 574
- preferences, saving File Manager current, 189
- Prev key, 59
- print commands, issuing, 300
- Print dialog box, 299, 300
- print jobs
 - canceling, 304
 - definition of, 303
 - determining type in Print Manager
 - display, 307
 - display of in Print Manager, 307
 - displaying, 303
 - displaying properties of, 305
 - finding, 303
 - hiding, 303
 - properties, 304
- Print Manager
 - determining type of print jobs
 - displayed, 307
 - display of print jobs in, 307
 - displaying message line in, 308
 - printer display in, 307
 - printing using, 298
 - problem flag, 308
 - starting, 301, 302
 - window, 300
- print options, setting, 299
- printer
 - changing the default, 296
 - changing the Front Panel, 306
 - definition of default, 295
 - determining the default, 295
- Printer control, 117
- Printer Jobs, 302
 - starting, 302
- printers
 - changing icon of, 309
 - changing label of, 310
 - display of in Print Manager, 307
 - displaying properties of, 309
- printing, 434, 435
 - a page from a document, 435
 - allowable file types, 296, 297
 - an image file, 435
 - appointment list, 359
 - Calendar views, 359
 - changing Calendar printer settings, 372

- printing (*continued*)
 - document, 338
 - help topics, 101
 - image, 434, 435
 - issuing print commands, 300
 - mail attachments, 287
 - mail messages, 285
 - PostScript file, 434, 435
 - using File Manager, 298
 - through the Front Panel, 297, 298
 - using Print Manager, 298
 - setting options for, 299
 - To Do list, 359
- privacy, changing Calendar defaults, 366
- problems
 - device suspend fails, 573
 - disk space filled, 576
 - power key, 572
 - process suspend fails, 575
 - suspend failures, 572
- process
 - errant, 495
- Process
 - finding, 498
- process
 - search for a, 498
 - sending a signal to, 501
 - to kill a, 501
- Process Manager
 - continuous sampling mode, 499
 - copying process entries, 500
 - debugging a process, 506
 - equivalent UNIX commands for
 - actions, 495
 - killing a process, 501
 - log file, 500
 - main window, 497
 - performing actions, 501
 - sampling interval, 499
 - saving process entries, 500
 - sending a signal to a process, 501
 - setting up a log file, 500
 - showing the ancestry for a process, 503
 - Showing the stack for a process, 505
 - to open, 497
 - tracing child processes, 504
 - tracing system calls for a process, 505

- process suspend failure, 575
- processes
 - definition of, 495
 - displaying only certain processes, 497
- Programs submenu
 - (now Applications), 65
- properties
 - of print jobs, 304, 305
- Properties dialog box, 155, 166, 167, 168, 169
 - opening from command-line, 166
- pull-down list for monitor idle time, 558
- pull-down menus, displaying, 62, 66
- push buttons, 57

Q

- question mark pointer, 73
- Quick Edit tab, 557
- Quit button, 571

R

- radio buttons, 58
- reactivating the monitor, 559
- reading mail messages, 257
- real-time process, 575
- reconfiguring systems, 563
- region of screen, taking a snapshot of, 438
- registering applications, 231
- relative path, 149
- reloading applications, 227
- reminders
 - appointment, 352
 - changing defaults, 366
 - of group appointment, mailing, 362
- remote login on suspended machines, 561
- removable media, 192
 - drag-and-drop behavior, 192
 - viewing files and folders, 194
- removing
 - files or folders from workspace, 178
 - Front Panel customizations made through
 - the pop-up menus, 141
 - Front Panel customizations made with the
 - Install Icon control, 141

- removing (*continued*)
 - mailboxes, 283
 - menu bar from Terminal window, 391
 - scroll bar from Terminal window, 393
 - workspaces, 142
- renaming
 - controls from subpanels, 112
 - files, 153
 - folders, 153
 - mailboxes, 281
 - objects, 153
 - workspaces, 56, 111, 586
- renaming workspaces, 141
- RepeatKeys, 626
 - rate of repeating, 627
 - setting initial delay, 627
- replacing controls in Main Panel, 140
- replying to mail messages, 258
- resizing
 - icons, 415
 - a region of an icon, 415
 - windows, 52, 584
- restoring
 - deleted mail messages, 260
 - items in Trash Can, 162
 - menu bar to Terminal window, 392
 - palette, 241
 - scroll bar to Terminal window, 393
 - Text Editor file, 340
 - window icon, 51
 - windows from an icon, 51, 583
- resuming a suspended system, 568
- Return key, 68
- reversing page order display, 431
- Rotate tool, in Image Viewer, 424
- rotating an image, 426
- rotating part of an icon, 415

S

- sample interval
 - of Process Manager display, 499
- saving
 - appending to a text file, 260
 - Calendar data in a file, 360
 - document to new file, 315

- saving (*continued*)
 - document to original file, 316
 - icons, 412
 - icons with new name, 412
 - images, 428
 - incoming or outgoing mail message as text, 259
 - mail attachments, 288
 - mail message as template, 272
- saving current work, 562
- Scale tool, in Image Viewer, 424
- scaling an image, 427
- scheduling
 - appointments, 351
 - appointments using standalone Appointment Editor, 377
 - group appointments, 362
 - To Do items, 356
- screen blanker, settings for, 247
- screen blanking, 552, 557
- screen control options in Terminal, 401, 402
- Screen dialog box, 247, 249
- screen lock, 559, 577
 - duration before starting, 249
 - enabling, 249
- screen saver, customizing, 247, 248
- screen, taking snapshot of, 438
- scroll bar
 - removing from Terminal window, 393
 - restoring to Terminal window, 393
- scrolling
 - setting in Terminal window, 396
 - window contents, 59
- scrolling window contents, 584
- sdtcm_admin
 - creating a calendar, 374
- search and replace, in Text Editor, 336
- search scripts, *See* mail search scripts
- searching for mail messages, 261, 266
- secondary selection, in Text Editor, 322
- selecting
 - an area of an icon, 413
 - backdrop, 244
 - check boxes, 58
 - files, 150
 - folders, 150
 - font size, 242, 243

- selecting (*continued*)
 - icons, 150
 - list items, 59, 584
 - multiple files, 150
 - multiple folders, 150
 - multiple icons, 150
 - multiple objects, 150
 - objects, 150
 - palette, 238
 - radio buttons, 58
 - a window, 49
 - text, 53, 322
- selecting a power saving scheme, 555
- Selector tool, in Image Viewer, 424
- sending mail messages in MIME or Sun Mail Tool format, 277
- session
 - changing startup, 251
 - current, 78, 251
 - determining for each login, 79
 - home, 78, 251
 - language-specific, 589
- setting idle time for AutoShutdown, 569
- settings for AccessX, 621
- Shift-power key (suspend), 565
- shortcut keys, 63, 579
 - in Text Editor, 324
- shortcuts, keyboard, 565
- Showing a stack
 - for a process, 505
- showing ancestry
 - for a process in Process Manager, 503
- shutdown, automatic, 569
- shut-off (AccessX), 620
- signal
 - sending to a process, 501
- signals to send, 501
- signatures for mail messages
 - adding to specific messages, 276
 - automatically adding to all messages, 276
 - creating, 275
- size of image, displaying, 423
- sizes of icons, 411
- sliders, 57, 59
- SlowKeys, 627
 - setting notification parameters, 628
 - setting the acceptance delay, 628
- snapshot
 - delaying, 438
- Snapshot
 - hiding dialog box during snap, 439
- snapshot
 - of region, 438
 - of screen, 438
 - of window, 437
- Snapshot
 - starting, 437
- Solstice AutoClient issues, 561
- sort order
 - changing File Manager, 187, 188
 - of objects, 187, 188
 - of Process Manager display, 498
- sorting
 - files and folders, 189
 - mail messages, 258
- SPARC architectures, 550
- special characters
 - in Terminal, 402, 403
 - in Text Editor, 320
- speakeysd daemon, 577
- speakeysd key processing daemon, 572
- speakeysd.map file, 577
- speed of pointer
 - changing, 625
 - changing ramp up, 625
- spelling, correcting in Text Editor, 329
- stack
 - for a process, 505
- standalone Appointment Editor, 377
- standby switch, 566
- starting
 - Application Manager, 221
 - applications in Terminal window, 388
- Starting
 - Audio, 451
- starting
 - Audio, 450
 - Audio from command line, 450
 - Audio from Front Panel, 450
 - Audio from Voice Note control, 452
 - Audio from Workspace Programs menu, 451
 - Calendar, 343
 - Calendar from command line, 344

- starting (*continued*)
 - Command Line Login Mode, 77
 - File Manager, 146
 - home session automatically at login, 78
 - Icon Editor, 407
 - Image Viewer from Application Manager, 420
 - Image Viewer from command line, 420
 - Image Viewer from Workspace Programs menu, 420
 - Mailer, 253
 - new icon, 408
 - Print Manager, 301, 302
 - Printer Jobs, 302
 - Snapshot, 437
 - Style Manager, 234
 - Terminal, 384, 388
 - terminal emulator with specific language, 591
 - Text Editor with specific language, 591
- starting AccessX, 618
- starting Dtpower from command line, 553
- starting Dtpower through CDE workspace, 552
- startup
 - changing session, 251
- Startup dialog box, 251, 252
- statefile, 576
- status line
 - in Text Editor window, 314
- StickyKeys, 622
 - disable by pressing two modifier keys, 624
 - sound when modifier key is pressed, 623
- Style Manager, 558
 - opening, 234
 - starting, 234
 - Window Behavior setting, 68
- subdirectories
 - changing to, 159
- subfolders
 - changing to, 159
- submenu
 - Applications, 65
- subpanel
 - adding, 140
 - deleting, 140
- subpanels, 43, 106
- subpanel (*continued*)
 - adding, 140
 - deleting, 140
 - displaying, 107
 - moving, 113
 - opening and closing, 107
- Sun Mail Tool format, email in, 277
- Sun Microsystems Computer Corporation (SMCC), 550
- Sun Ultra 10, 566
- Sun Ultra 5, 566
- sun4m systems, 560
- sun4u systems, 560
- sun4u UltraSPARC III (Energy Star, v3), 551
- superuser, 552
- suspend confirmation message, 565
- suspend failed message, 572
- suspend failures, 572
- suspending and resuming system
 - manually, 562
- suspending your system
 - immediately, 565
 - Sun Ultra 10, 566
 - Sun Ultra 5, 566
 - using CDE, 567
 - using sys-suspend, 567
 - using the standby switch, 566
 - ways to, 563
- Suspend-Resume, 548
- Suspend-Resume feature
 - issues to consider, 560
- symbolic link, creating, 158
- symbols
 - special characters, 70
- synchronous TTY activity, 563
- sys-suspend command, 563, 567, 577
- system architecture distinctions, 550
 - sun4m, 551
 - sun4u (pre Energy Star 3.0), 551
 - sun4u (pre Energy Star, v3), 551
- system calls
 - tracing in Process Manager, 505
- system idle time, 556

T

- tab groups, 580
- Tab key, 580
- tape activity, 563
- templates
 - creating for mail messages, 272
 - using for mail messages, 272
- Terminal
 - bell options, 396, 398
 - color control in, 396
 - control characters in, 402, 403
 - cursor options, 394, 395
 - entering commands in window, 388
 - Global Options dialog box, 394
 - keyboard options, 399, 400
 - removing menu bar from window, 391
 - removing scroll bar from window, 393
 - resizing window, 389
 - restoring menu bar to window, 392
 - restoring scroll bar to window, 393
 - running on another system, 389, 391
 - screen control options, 401, 402
 - scroll behavior in, 396
 - setting language through, 590
 - starting, 384, 388
 - starting applications in window, 388
 - starting Icon Editor from, 407
 - stopping, 388
 - Terminal Options dialog box, 398
- terminal emulator, 383
 - changing the default, 403
 - default, 383
 - definition of, 383
 - language-specific, 591
 - running applications from, 48
- Terminal window
 - opening in current directory from File Manager, 160
- text
 - alignment, 338
 - automatic wrapping, 320
 - copying, 327
 - copying and pasting among windows, 53
 - copying in Terminal window, 389
 - cutting and pasting, 327
 - deleting, 326
 - deselecting, 54
- text (*continued*)
 - dragging, 335
 - dropping, 335
 - editing, 311
 - editing in a field, 61
 - entering, 319
 - entering in a field, 60
 - finding in Text Editor, 336
 - justifying, 338
 - pasting, 54
 - pasting in Terminal window, 389
 - selecting, 53, 61, 322
 - selecting characters, 61
- Text Editor
 - closing, 312
 - cursor keys, 320
 - drag and drop in, 335
 - entering text, 319
 - formatting document in, 337, 338
 - Front Panel control, 312
 - menu shortcut keys, 324
 - opening document, 314
 - printing document, 338
 - saving document, 314
 - saving document to new file, 315
 - saving document to original file, 316
 - special characters and, 320
 - Spelling Checker, 328, 334
 - Spelling Checker, customizing
 - dictionaries, 331, 334
 - starting, 311
 - starting with specific language, 591
 - status line, 314
 - UNIX (Emacs) key bindings, 325
 - used in other applications, 340
 - using Undo in, 326
 - window, 313
 - word wrap, 320
 - Wrap To Fit option, 320
- text fields, 57
- Text Note
 - control on Main Panel, 115
- thermal stress issues, 562
- three-month mini-calendar
 - Calendar Day view, 347
- time zone, in Calendar, 373
- title bar, 49

- To Do items
 - changing, 356
 - deleting, 356
 - inserting, 356
 - marking completed, 356, 358
 - pending, 358
 - scheduling, 356
 - setting due date, 356
- To Do list
 - displaying, 357
 - printing, 359
- ToggleKeys, 626
- Tool bar, Calendar, 345
- tool bar, Calendar, 345
- Toolbar in Mailer, configuring, 291
- tools
 - Calendar, 373
- topic display area, 86
- topic tree, 86
- TopShadow, 413
- tracing
 - system calls in Process Manager, 505
- tracing child processes
 - in Process Manager, 504
- Trash
 - control on the main panel, 118
- Trash Can
 - emptying, 163
 - opening, 162
 - restoring objects from, 162
 - using, 162
- tree view, in File Manager, 185, 186
- troubleshooting, 572
- TTY activity, 563

U

- unblinking the screen, 559
- Undo, in Text Editor, 326
- UNIX key bindings, 325
- unlocking the display, 70

V

- version 3 Calendar
 - convert to version 4, 375
- viewing, 354
 - mail attachments, 287
 - mail messages, 257
- views
 - Calendar, 347
 - controlling File Manager, 184
 - of mailboxes, 266, 268
- Voice Note, 452
- Voice Note command, 452

W

- Week grid, Calendar Week view, 348
- Week view
 - Calendar, 348
 - changing time boundaries, 367
 - Week grid, 348
- width of image, displaying, 423
- wildcards
 - for finding files, 181
 - to search help index, 92
- window controls in Dtpower, 553
- Window menu
 - displaying, 63
 - items, 63
 - keyboard usage, 585
- Window menu button, 49, 63
- windows
 - bringing forward, 53
 - closing, 50
 - copying and pasting text, 53
 - determining how to display active, 250
 - dragging, 52
 - focus policy for, 249
 - frame controls, 48
 - icon display policy for, 250
 - icons, moving, 51
 - icons, restoring, 51
 - moving, 51
 - opening, 49
 - placing in other workspaces, 55, 586
 - policy for activating, 249
 - removing, 50

- windows (*continued*)
 - resize border, 49
 - resizing, 52, 584
 - restoring from an icon, 51, 583
 - scroll bar, 59
 - scrolling, 59, 584
 - selecting with keyboard, 583
 - taking a snapshot of, 437
 - title bar, 49
 - turning into an icon, 50, 583
- word wrap, 320
- workspace
 - adding, 141
 - deleting, 142
 - renaming, 141
- workspace backdrop
 - putting file or folder on, 177
 - selecting, 244
- workspace, definition of, 43
- Workspace menu, 64
 - definition, 43
 - running applications from, 46
- Workspace Programs submenu, accessing, 43
- workspace switch, 43, 106, 107
- Workspace Switch
 - control on Main Panel, 116
- workspace switch
 - customizing, 142
 - customizing controls in, 142
 - help for, 111
 - switch area of, 111
- workspace utilities and Suspend, 567
- workspaces
 - adding, 141
 - bringing windows forward in, 53
 - changing colors of, 238
 - customizing, 141
 - deleting, 142
 - displaying, 55
 - keyboard navigation, 586
 - placing windows in, 55
 - removing files or folders from, 178
 - removing objects from, 178
 - renaming, 56, 111, 586
- world access
 - to grant access to anyone, 369, 370
- Wrap to Fit, turning on and off, 320

X

- Xhosted applications, 561
- XLFD, 592
- XmNinputMethod resource, 594
- XmNpreeditType resource, 594
- XMODIFIERS environment variable, 594
- xmodmap command, 595

Y

- Year view, 350

