

# Sun Ray Enterprise Server Man Pages

---



THE NETWORK IS THE COMPUTER™

**Sun Microsystems, Inc.**  
901 San Antonio Road  
Palo Alto, CA 94303-4900 USA  
650 960-1300 Fax 650 969-9131

Part No.: 806-3183  
Oct 1999, Revision A

Send comments about this document to: [docfeedback@sun.com](mailto:docfeedback@sun.com)

Copyright 2000 Sun Microsystems, Inc., 901 San Antonio Road, Palo Alto, California 94303-4900 U.S.A. All rights reserved.

This product or document is protected by copyright and distributed under licenses restricting its use, copying, distribution, and decompilation. No part of this product or document may be reproduced in any form by any means without prior written authorization of Sun and its licensors, if any. Third-party software, including font technology, is copyrighted and licensed from Sun suppliers.

Parts of the product may be derived from Berkeley BSD systems, licensed from the University of California. UNIX is a registered trademark in the U.S. and other countries, exclusively licensed through X/Open Company, Ltd. For Netscape Communicator™, the following notice applies: Copyright 1995 Netscape Communications Corporation. All rights reserved.

Sun, Sun Microsystems, the Sun logo, AnswerBook2, docs.sun.com, and Solaris are trademarks, registered trademarks, or service marks of Sun Microsystems, Inc. in the U.S. and other countries. All SPARC trademarks are used under license and are trademarks or registered trademarks of SPARC International, Inc. in the U.S. and other countries. Products bearing SPARC trademarks are based upon an architecture developed by Sun Microsystems, Inc.

The OPEN LOOK and Sun™ Graphical User Interface was developed by Sun Microsystems, Inc. for its users and licensees. Sun acknowledges the pioneering efforts of Xerox in researching and developing the concept of visual or graphical user interfaces for the computer industry. Sun holds a non-exclusive license from Xerox to the Xerox Graphical User Interface, which license also covers Sun's licensees who implement OPEN LOOK GUIs and otherwise comply with Sun's written license agreements.

**RESTRICTED RIGHTS:** Use, duplication, or disclosure by the U.S. Government is subject to restrictions of FAR 52.227-14(g)(2)(6/87) and FAR 52.227-19(6/87), or DFAR 252.227-7015(b)(6/95) and DFAR 227.7202-3(a).

DOCUMENTATION IS PROVIDED "AS IS" AND ALL EXPRESS OR IMPLIED CONDITIONS, REPRESENTATIONS AND WARRANTIES, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR NON-INFRINGEMENT, ARE DISCLAIMED, EXCEPT TO THE EXTENT THAT SUCH DISCLAIMERS ARE HELD TO BE LEGALLY INVALID.

---

Copyright 2000 Sun Microsystems, Inc., 901 San Antonio Road, Palo Alto, Californie 94303-4900 U.S.A. Tous droits réservés.

Ce produit ou document est protégé par un copyright et distribué avec des licences qui en restreignent l'utilisation, la copie, la distribution, et la décompilation. Aucune partie de ce produit ou document ne peut être reproduite sous aucune forme, par quelque moyen que ce soit, sans l'autorisation préalable et écrite de Sun et de ses bailleurs de licence, s'il y en a. Le logiciel détenu par des tiers, et qui comprend la technologie relative aux polices de caractères, est protégé par un copyright et licencié par des fournisseurs de Sun.

Des parties de ce produit pourront être dérivées des systèmes Berkeley BSD licenciés par l'Université de Californie. UNIX est une marque déposée aux Etats-Unis et dans d'autres pays et licenciée exclusivement par X/Open Company, Ltd. La notice suivante est applicable à Netscape Communicator™ : Copyright 1995 Netscape Communications Corporation. All rights reserved.

Sun, Sun Microsystems, le logo Sun, AnswerBook2, docs.sun.com, et Solaris sont des marques de fabrique ou des marques déposées, ou marques de service, de Sun Microsystems, Inc. aux Etats-Unis et dans d'autres pays. Toutes les marques SPARC sont utilisées sous licence et sont des marques de fabrique ou des marques déposées de SPARC International, Inc. aux Etats-Unis et dans d'autres pays. Les produits portant les marques SPARC sont basés sur une architecture développée par Sun Microsystems, Inc.

L'interface d'utilisation graphique OPEN LOOK et Sun™ a été développée par Sun Microsystems, Inc. pour ses utilisateurs et licenciés. Sun reconnaît les efforts de pionniers de Xerox pour la recherche et le développement du concept des interfaces d'utilisation visuelle ou graphique pour l'industrie de l'informatique. Sun détient une licence non exclusive de Xerox sur l'interface d'utilisation graphique Xerox, cette licence couvrant également les licenciés de Sun qui mettent en place l'interface d'utilisation graphique OPEN LOOK et qui en outre se conforment aux licences écrites de Sun.

CETTE PUBLICATION EST FOURNIE "EN L'ETAT" ET AUCUNE GARANTIE, EXPRESSE OU IMPLICITE, N'EST ACCORDEE, Y COMPRIS DES GARANTIES CONCERNANT LA VALEUR MARCHANDE, L'APTITUDE DE LA PUBLICATION A REpondre A UNE UTILISATION PARTICULIERE, OU LE FAIT QU'ELLE NE SOIT PAS CONTREFAISANTE DE PRODUIT DE TIERS. CE DENI DE GARANTIE NE S'APPLIQUERAIT PAS, DANS LA MESURE OU IL SERAIT TENU JURIDIQUEMENT NUL ET NON AVENU.



**command:** intro  
**man vol number:** 1M  
**rev date:** 24 Jan 2000  
**category:** Sun Ray Commands  
**software:** Sun Ray 1.1  
**architecture:** generic  
**copyright:** Copyright (c) 2000, Sun Microsystems,  
Inc., All Rights Reserved

NAME	Intro - these man pages are for the Sun Ray Enterprise Server Software 1.1.
DESCRIPTION	This book contains all of the Sun Ray 1.1 administration commands, user commands, files, and device drivers.
LIST OF MAN PAGES	The following man pages are supported.
auth.props	Sun Ray enterprise appliance authentication daemon configuration file
sunray	Sun Ray enterprise virtual device driver
utaction	Sun Ray enterprise connect/disconnect action
utadem	Sun Ray Audio Driver Emulator
utadm	Sun Ray network and DHCP configuration utility
utadmin.conf	Sun Ray administration configuration file
utaudio	connect to Sun Ray audio services
utauthd	Sun Ray appliance authentication daemon
utcard	Sun Ray enterprise server software configuration utility for an administered group of servers
utconfig	Sun Ray enterprise server software configuration utility
utdesktop	administer Sun Ray enterprise appliance desktop units
utfostatus	display failover group status
utfwadm	Sun Ray firmware version management
utglpolicy	used to get or set the global utpolicy options
utgroupsig	sets the group signature for a group of Sun Ray enterprise servers
utinstall	Sun Ray enterprise server software installation, upgrade and removal utility
utload	Sun Ray appliance firmware download utility
utpolicy	Sun Ray Authentication Manger Policy Management Command
utpw	change Sun Ray enterprise server administration password
utrcmd	Sun Ray enterprise appliance remote administration
utreplica	Sun Ray enterprise server software configuration utility for an administered group of servers

<code>utselect</code>	provides a GUI-based interface to <code>utswitch</code> (a Sun Ray software command)
<code>utsessiond</code>	Sun Ray enterprise session manager daemon
<code>utsettings</code>	view and/or change the settings for a Sun Ray enterprise appliance
<code>utsettings.properties</code>	defaults for the Sun Ray Settings GUI application
<code>utslaunch</code>	Sun Ray enterprise appliance settings launch program
<code>utswitch</code>	Sun Ray server selection and session listing
<code>utuser</code>	administer Sun Ray users
<code>utxconfig</code>	Sun Ray enterprise appliance X server configuration
<code>utxset</code>	update Sun Ray mouse and blanking settings



**command:** auth.props  
**man vol number:** 4  
**rev date:** 19 Jan 2000  
**category:** Sun Ray Commands  
**software:** Sun Ray 1.1  
**architecture:** generic  
**copyright:** Copyright (c) 2000, Sun Microsystems, Inc.,  
All Rights Reserved

**Instructions for entering meta data:**

The fields above are meta data used by AnswerBook and the *man* command to track this information for searching. This information is not part of the printed book, so you should discard this page if printing the book. Some of the fields are stored using variables; update them as you would any other Frame variable.

Make sure to update the content of the index marker(s) to reflect the correct command name.

**Instructions for entering the Running H/F:**

FM+SGML is able to get all of the information for the running headers/footers *except* for the man vol number in the outside header; you will need to enter this number in the definition of the Running H/F 1 on the master page.

<b>NAME</b>	auth.props - Sun Ray enterprise appliance authentication daemon configuration file																				
<b>DESCRIPTION</b>	The <code>auth.props</code> file contains the Sun Ray authentication manager's configuration options. Many of these options are not supported and should not be set to values other than their default values.																				
<b>OPTIONS</b>	<p>The following options are supported:</p> <table border="0"> <tr> <td data-bbox="432 447 682 470">adminConfigFile=filename</td> <td data-bbox="775 447 1200 499">This file contains the administrative database configuration information.</td> </tr> <tr> <td data-bbox="432 522 682 545">allowAnnotations=boolean</td> <td data-bbox="775 522 1232 656">UNSUPPORTED If this option is true then any application can connect from any IP address and annotate a session. Annotations are restricted to keywords prefixed by "x_". Values are not restricted.</td> </tr> <tr> <td data-bbox="432 678 654 701">allowFWLoad=boolean</td> <td data-bbox="775 678 1232 782">This option specifies whether or not the <code>utload</code> command is allowed to download firmware to appliances connected to this authentication manager.</td> </tr> <tr> <td data-bbox="432 805 732 828">allowLANConnections=boolean</td> <td data-bbox="775 805 1186 909">UNSUPPORTED If this option is true then appliance connections will be allowed from localhost as well as from non-Sun Ray interconnect interfaces.</td> </tr> <tr> <td data-bbox="432 932 618 954">cbport=portNumber</td> <td data-bbox="775 932 1232 1041">UNSUPPORTED The authentication manager listens on this port for connections from the <code>utsessiond</code> daemon and other programs, such as <code>utload</code>.</td> </tr> <tr> <td data-bbox="432 1064 611 1086">cbtimeout=seconds</td> <td data-bbox="775 1064 1232 1142">UNSUPPORTED This option specifies the read timeout in seconds for programs that connect to the <code>cbport</code>.</td> </tr> <tr> <td data-bbox="432 1164 639 1187">controllers=maximum</td> <td data-bbox="775 1164 1196 1274">UNSUPPORTED This option specifies the maximum number of spare threads that are available for handling new connections from applications such as <code>utload(1M)</code>.</td> </tr> <tr> <td data-bbox="432 1296 718 1319">enableGroupManager=boolean</td> <td data-bbox="775 1296 1182 1348">UNSUPPORTED Flag to turn on the group manager function</td> </tr> <tr> <td data-bbox="432 1371 718 1394">enableLoadBalancing=boolean</td> <td data-bbox="775 1371 1210 1394">Flag to turn on group manager load balancing.</td> </tr> <tr> <td data-bbox="432 1416 668 1439">enableMulticast=boolean</td> <td data-bbox="775 1416 1218 1484">UNSUPPORTED Flag to enable/disable use of multicast in group manager. If disabled, group manager will use broadcast.</td> </tr> </table>	adminConfigFile=filename	This file contains the administrative database configuration information.	allowAnnotations=boolean	UNSUPPORTED If this option is true then any application can connect from any IP address and annotate a session. Annotations are restricted to keywords prefixed by "x_". Values are not restricted.	allowFWLoad=boolean	This option specifies whether or not the <code>utload</code> command is allowed to download firmware to appliances connected to this authentication manager.	allowLANConnections=boolean	UNSUPPORTED If this option is true then appliance connections will be allowed from localhost as well as from non-Sun Ray interconnect interfaces.	cbport=portNumber	UNSUPPORTED The authentication manager listens on this port for connections from the <code>utsessiond</code> daemon and other programs, such as <code>utload</code> .	cbtimeout=seconds	UNSUPPORTED This option specifies the read timeout in seconds for programs that connect to the <code>cbport</code> .	controllers=maximum	UNSUPPORTED This option specifies the maximum number of spare threads that are available for handling new connections from applications such as <code>utload(1M)</code> .	enableGroupManager=boolean	UNSUPPORTED Flag to turn on the group manager function	enableLoadBalancing=boolean	Flag to turn on group manager load balancing.	enableMulticast=boolean	UNSUPPORTED Flag to enable/disable use of multicast in group manager. If disabled, group manager will use broadcast.
adminConfigFile=filename	This file contains the administrative database configuration information.																				
allowAnnotations=boolean	UNSUPPORTED If this option is true then any application can connect from any IP address and annotate a session. Annotations are restricted to keywords prefixed by "x_". Values are not restricted.																				
allowFWLoad=boolean	This option specifies whether or not the <code>utload</code> command is allowed to download firmware to appliances connected to this authentication manager.																				
allowLANConnections=boolean	UNSUPPORTED If this option is true then appliance connections will be allowed from localhost as well as from non-Sun Ray interconnect interfaces.																				
cbport=portNumber	UNSUPPORTED The authentication manager listens on this port for connections from the <code>utsessiond</code> daemon and other programs, such as <code>utload</code> .																				
cbtimeout=seconds	UNSUPPORTED This option specifies the read timeout in seconds for programs that connect to the <code>cbport</code> .																				
controllers=maximum	UNSUPPORTED This option specifies the maximum number of spare threads that are available for handling new connections from applications such as <code>utload(1M)</code> .																				
enableGroupManager=boolean	UNSUPPORTED Flag to turn on the group manager function																				
enableLoadBalancing=boolean	Flag to turn on group manager load balancing.																				
enableMulticast=boolean	UNSUPPORTED Flag to enable/disable use of multicast in group manager. If disabled, group manager will use broadcast.																				



forceSessionLocation=boolean	UNSUPPORTED Flag to force use of sessionHost and sessionPort settings from this file regardless of the wishes of the various authentication modules.
gmDebug=level	UNSUPPORTED Group manager debugging level.
gmKeepAliveInterval=seconds	UNSUPPORTED The group manager uses this as the time in seconds between broadcast keepalive messages
gmport=port	UNSUPPORTED The group manager uses this port to send and receive keepalive/discovery messages from other auth managers.
gmSignatureFile=file	The group manager can "sign" messages to other group managers based on the contents of a signature file. Other group managers with the same signature file contents are "trusted". To be usable, the file must be owned by 'root' and must not be readable, writable, or executable by anyone else; it must contain at least 8 bytes, at least two of which are letters and at least one which is a non-letter printable character.
log=filename	UNSUPPORTED This option specifies a file that contains the log messages.
logAddTimeStamp=boolean	UNSUPPORTED Add our own timestamp to syslog messages. This may be appropriate for debugging or in cases where a remote syslog server is being used and higher resolution timestamps are required.
logFacility=value	The logFacility can be one of the following: kern, user, mail, daemon, auth, syslog, lpr, news, uucp, cron, local0, local1, local2, local3, local4, local5, local6, local7
Log files	Log priorities for different utauthd message classes can be one of the following: emerg, alert, crit, err, warning, notice, info, debug, OFF The message classes are: logPriClientError=value logPriDebug=value logPriNotice=value logPriWarning=value logPriConfigError=value logPriUnexpectedError=value

maxStarting=maximum	UNSUPPORTED This option specifies the maximum number of threads that can be simultaneously initiating a session. Additional threads wanting to start or verify a session will have to wait for some other thread to finish starting or verifying a session.
moduleDif=directorName	UNSUPPORTED This option specifies the location of the authentication modules.
multicastTTL=integer	UNSUPPORTED Time-to-live parameter for forwarding multicast packets. If set above one, keepalive messages can pass through routers.
noClaimSleepTime=seconds	UNSUPPORTED The amount of time in seconds to sleep after a token has been offered to all of the authentication modules and before notifying the appliance that the authentication failed.
policy=filename	This option specifies the location of the authentication policy specification.
port=portNumber	The <code>utauthd</code> daemon listens on this port for connections from Sun Ray appliances.
reportAllDesktopEvents=boolean	UNSUPPORTED If this option is true then all desktop events will reported instead of being filtered to just those events that change the "exists" state of the appliance.
restrictSunrayIps=boolean	UNSUPPORTED Flag to restrict communication between group managers on different hosts to travel over sunray network interfaces. If false, group managers will communicate over all interfaces.
sessionHost=hostname	UNSUPPORTED This option specifies the host name of the server that is running the default <code>utsessiond</code> for this authentication manager.
sessionPort=portNumber	UNSUPPORTED This option specifies the port number of the server that is running the default <code>utsessiond</code> for this authentication manager.
sessionTypesFile=filename	This option specifies a file that contains mappings from session types to the associated session startup and shutdown commands.
smttimeout=seconds	UNSUPPORTED This option specifies the read timeout in seconds for reading messages from the <code>utsessiond</code> daemon.
termAddrIsSecret=boolean	UNSUPPORTED If this option is true then the IP address and port of appliances will not be reported in the dynamic status information provided on port <code>cbport</code> in response to the string

terminateEnable=boolean	UNSUPPORTED This option enables some experimental code in utauthd.
timeout=seconds	UNSUPPORTED Appliances are required to send some sort of message to the authentication manager at least once every time period specified by <i>seconds</i> .
tokenDir=directory	UNSUPPORTED This option specifies a directory that contains the mappings from logical token names to session identifiers. The persistent storage of these mappings allows the utauthd daemon to recover its state after restarting. Note that this state is reset on reboot of the system.
token.equiv=filename	UNSUPPORTED This option specifies a file that contains mappings from one raw token name to another.
useLocalPolicy=boolean	In group environment this is set to false to provide a global group policy (which is extracted from the datastore). Default for a single system is true. When configured for a Group, the entry is false. If it is true, it indicates that only local policies will be used. The global Policy entry in LDAP database will be ignored. Checked by utpolicy -G.
workers=maximum	UNSUPPORTED This option specifies the maximum number of spare threads that are available for handling new connections from Sun Ray appliances.

**FILES**

The following files are used:

/etc/init.d/utsvc	This is the system startup script that invokes the daemon. /opt/SUNWut/utsessiond. The session manager performs the actual session switching function.
/etc/opt/SUNWut/auth.props	The authentication manager's configuration file.

**ATTRIBUTES**

See attributes(5) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWutr

**SEE ALSO**

utauthd(1M), utpolicy(1M), utsessiond(1M)

**command:** sunray  
**man vol number:** 7D  
**rev date:** 29 Apr 1999  
**category:** Sun Ray Commands  
**software:** Sun Ray 1.1  
**architecture:** generic  
**copyright:** Copyright (c) 2000, Sun Microsystems, Inc.,  
All Rights Reserved

**Instructions for entering meta data:**

The fields above are meta data used by AnswerBook and the *man* command to track this information for searching. This information is not part of the printed book, so you should discard this page if printing the book. Some of the fields are stored using variables; update them as you would any other Frame variable.

Make sure to update the content of the index marker(s) to reflect the correct command name.

**Instructions for entering the Running H/F:**

FM+SGML is able to get all of the information for the running headers/footers *except* for the man vol number in the outside header; you will need to enter this number in the definition of the Running H/F 1 on the master page.

<b>NAME</b>	sunray - Sun Ray enterprise virtual device driver				
<b>SYNOPSIS</b>	<code>/dev/sunray</code>				
<b>DESCRIPTION</b>	The file <code>/dev/sunray</code> refers to a pseudo-device driver that provides frame-buffer compatible information for configuring the <code>Xsun(1)</code> X11-server. The <code>sunray</code> driver's only function is to properly respond to the <code>VIS_GETIDENTIFIER ioctl(2)</code> .				
<b>ATTRIBUTES</b>	See <code>attributes(5)</code> for descriptions of the following attributes: <table border="1"> <thead> <tr> <th>ATTRIBUTE TYPE</th> <th>ATTRIBUTE VALUE</th> </tr> </thead> <tbody> <tr> <td>Availability</td> <td>SUNWuto</td> </tr> </tbody> </table>	ATTRIBUTE TYPE	ATTRIBUTE VALUE	Availability	SUNWuto
ATTRIBUTE TYPE	ATTRIBUTE VALUE				
Availability	SUNWuto				
<b>SEE ALSO</b>	<code>visual_io(7I)</code>				

**command:** utaction  
**man vol number:** 1M  
**rev date:** 19 Jan 2000  
**category:** Sun Ray Commands  
**software:** Sun Ray 1.1  
**architecture:** generic  
**copyright:** Copyright (c) 2000, Sun Microsystems, Inc.,  
All Rights Reserved

**Instructions for entering meta data:**

The fields above are meta data used by AnswerBook and the *man* command to track this information for searching. This information is not part of the printed book, so you should discard this page if printing the book. Some of the fields are stored using variables; update them as you would any other Frame variable.

Make sure to update the content of the index marker(s) to reflect the correct command name.

**Instructions for entering the Running H/F:**

FM+SGML is able to get all of the information for the running headers/footers *except* for the man vol number in the outside header; you will need to enter this number in the definition of the Running H/F 1 on the master page.

<b>NAME</b>	utaction - Sun Ray enterprise connect/disconnect action
<b>SYNOPSIS</b>	<code>/opt/SUNWut/lib/utaction [-c <i>ccmd</i>] [-d <i>dcmd</i>] [-D <i>display</i>] [-i] [-t <i>sec</i>]</code>
<b>DESCRIPTION</b>	The <code>utaction</code> program provides a way to execute commands when a Sun Ray enterprise appliance session is connected or disconnected. The <i>ccmd</i> is invoked using <code>sh(1)</code> whenever the session is connected to an appliance. Similarly, The <i>dcmd</i> is invoked using <code>sh(1)</code> whenever the session is disconnected from an appliance. Normally, action is not taken on the initial state of the session (when <code>utaction</code> is first run) unless the <code>-i</code> option is used.
<b>OPTIONS</b>	The following options are supported: <ul style="list-style-type: none"> <li><code>-c <i>ccmd</i></code> Run this command when the current session is connected to an appliance.</li> <li><code>-d <i>dcmd</i></code> Run this command when the current session is disconnected to an appliance.</li> <li><code>-D <i>display</i></code> This option will set the X display variable that is to be used in determining the Sun Ray enterprise appliance session. Otherwise the <code>DISPLAY</code> environment variable is used.</li> <li><code>-i</code> Run the connect or disconnect command immediately, whichever is appropriate.</li> <li><code>-t <i>sec</i></code> This option specifies a time-delay in seconds for the actions. In that case, the <i>ccmd</i> or <i>dcmd</i> will not be invoked unless the session remains in the connected or disconnected state, respectively, for at least <i>sec</i> seconds.</li> </ul>

**EXAMPLES**

**EXAMPLE 1** To invoke the CDE screen lock whenever the session is disconnected, use:

```
utaction -d '/usr/dt/bin/dtaction LockDisplay' &
```

**ATTRIBUTES**

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWuto



**NOTES**

The *cmd* and *dcmd* are each only one argument to `utaction`. Quotes should be used if a command contains multiple words.



**command:** utadem  
**man vol number:** 7D  
**rev date:** 6 Jan 2000  
**category:** Sun Ray Commands  
**software:** Sun Ray 1.1  
**architecture:** generic  
**copyright:** Copyright (c) 2000, Sun Microsystems, Inc.,  
All Rights Reserved

**Instructions for entering meta data:**

The fields above are meta data used by AnswerBook and the *man* command to track this information for searching. This information is not part of the printed book, so you should discard this page if printing the book. Some of the fields are stored using variables; update them as you would any other Frame variable.

Make sure to update the content of the index marker(s) to reflect the correct command name.

**Instructions for entering the Running H/F:**

FM+SGML is able to get all of the information for the running headers/footers *except* for the man vol number in the outside header; you will need to enter this number in the definition of the Running H/F 1 on the master page.

<b>NAME</b>	utadem - Sun Ray Audio Driver Emulator		
<b>DESCRIPTION</b>	utadem is an audio interface that provides a generic virtual audio interface to Sun Ray appliances. The actual interface to the appliance is by network interconnect through a daemon that is session aware. The daemon is connected to utadem through a master port, and is responsible for creating the slave device nodes which connect to normal audio applications.		
<b>APPLICATION PROGRAM INTERFACE</b>	<p>Applications that normally open /dev/audio may use utadem as long as they have some way of selecting the audio device, such as through the -d &lt;device&gt; switch, or the AUDIODEV environment variable. The exact capabilities of the audio device emulated depend on the daemon. Compliance to the standard audio(7I) interface is handled in the following manner:</p> <table border="0"> <tr> <td data-bbox="411 598 785 633">Audio Data Formats</td> <td data-bbox="785 598 1255 683">The Data formats supported depend on the daemon. Please refer to the daemon documentation for its capabilities.</td> </tr> </table>	Audio Data Formats	The Data formats supported depend on the daemon. Please refer to the daemon documentation for its capabilities.
Audio Data Formats	The Data formats supported depend on the daemon. Please refer to the daemon documentation for its capabilities.		

Audio Ports	Input and output audio ports are directly dependent on the Sun Ray appliance and not on the daemon. The daemon is capable of discovering the type and quantity of input ports available and report them in the <code>record.avail_ports</code> and <code>play.avail_ports</code> fields of the <code>audio_info</code> structure. Although the ports can be controlled directly, the actual audio output is generally a mix of multiple services, so the <code>play.gain</code> setting is the contribution of this audio device to the total experience. Since recording is exclusive of a single service, the <code>record.gain</code> and <code>record.balance</code> controls directly affect the hardware gain.
Sample Granularity	Since the <code>utadem</code> driver is working through a daemon that is then transferring the audio data over an interconnect, there is likely to be larger granularities than normal, and some jitter in the reporting of sample counts. At any given time, the reported input and output sample counts will vary from the actual sample count by no more than the size of the buffers it is transferring. Programs should, in general, not rely on absolute accuracy of the <code>play.samples</code> and <code>record.samples</code> fields of the <code>audio_info</code> structure.
Audio Status Change Notification	As described in <code>audio(7I)</code> , it is possible to request asynchronous notification of changes in the state of an audio device.

## ERRORS

`utadem` errors are defined in the `audio(7I)`, man pages. Additionally, if the daemon has exited, further audio operations will no longer be possible on the slave ports. Audio programs must exit in order to clear this error. New opens will return `ENODEV`, `ioctl` operations and writes will return `ENXIO`. Data reads will complete normally, then return end-of-file.

## FILES

The following file is used:

`/dev/utadem`      master port for daemons

The logical device name of the slave port depends on the daemon.

**ATTRIBUTES**

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Architecture	SPARC
Availability	SUNWutu
MT-Level	Safe

**SEE ALSO**

`utaudio(1)`, `ioctl(2)`, `attributes(5)`, `audio(7I)`, `streamio(7I)`

**command:** utadm  
**man vol number:** 1M  
**rev date:** 8 Jan 2000  
**category:** Sun Ray Commands  
**software:** Sun Ray 1.1  
**architecture:** generic  
**copyright:** Copyright (c) 2000, Sun Microsystems, Inc.,  
All Rights Reserved

**Instructions for entering meta data:**

The fields above are meta data used by AnswerBook and the *man* command to track this information for searching. This information is not part of the printed book, so you should discard this page if printing the book. Some of the fields are stored using variables; update them as you would any other Frame variable.

Make sure to update the content of the index marker(s) to reflect the correct command name.

**Instructions for entering the Running H/F:**

FM+SGML is able to get all of the information for the running headers/footers *except* for the man vol number in the outside header; you will need to enter this number in the definition of the Running H/F 1 on the master page.

<b>NAME</b>	utadm - Sun Ray network and DHCP configuration utility
<b>SYNOPSIS</b>	<pre>/opt/SUNWut/sbin/utadm -a <i>interface-name</i> [-a <i>interface-name</i>]... /opt/SUNWut/sbin/utadm -c /opt/SUNWut/sbin/utadm -d <i>interface-name</i> [-d <i>interface-name</i>]... /opt/SUNWut/sbin/utadm -p /opt/SUNWut/sbin/utadm -r</pre>
<b>DESCRIPTION</b>	<p>The <code>utadm</code> command manages the private network and DHCP configuration for the Sun Ray interconnect. It configures the name lookup, host, network, netmask, and DHCP database files so that Sun Ray appliances can be connected to a central server host over one or more private subnets. One of the following option flags must be specified: <code>-c</code>, <code>-a</code>, <code>-d</code>, <code>-p</code>, or <code>-r</code>. The command must be run with super-user privileges.</p>



**OPTIONS**

The `utadm` command provides a way to manage the Sun Ray private interconnect.

- a      Configure the network interface specified by interface-name as an Sun Ray subnetwork. In the default case, an available private subnetwork address is selected from the range 192.168.128.0 to 192.168.254.0. If the subnet selected is 192.168.N.0, entries for the hosts, networks, and netmasks files are generated using the `hostname(1)` of the server as follows:  

File	Entry
<code>/etc/hosts:</code>	<code>192.168.N.1 hostname-N</code>
<code>/etc/networks:</code>	<code>SunRay-N 192.168.N.0 SunRay</code>
<code>/etc/netmasks:</code>	<code>192.168.N.0 255.255.255.0</code>

Once these entries are established, the network interface is activated as `hostname-N` using `ifconfig(1M)`. IP addresses on the Sun Ray subnets are managed using the DHCP protocol, which requires the addition of several macro entries to the `dhcptab(4)` table to control parameters on Sun Ray subnets. The `prntadm(1M)` command is also used to create the pool of available IP addresses for assignment to Sun Ray appliances. Once the interface is configured and activated, `utfwadm(1M)` is invoked to add the current version of the firmware to the DHCP macros for the new network. The user is prompted for approval of all the default options, and may change them as desired.

The `-a` option implies the `-c` option if the initial configuration has not yet been performed.
- c      Initialize the basic configuration files for an Sun Ray interconnect without setting up any subnetworks. This involves making sure that the network database files and framework for DHCP exist, and setting the `/etc/nsswitch.conf` file so that network information for the local Sun Ray subnets is obtained from local files.
- d      Delete the network interface specified by *interface-name* from the list of configured Sun Ray subnetworks. The specified interface must have been previously configured using the `-a` option.
- p      Print the current Sun Ray interconnect configuration, showing for each interface the hostname, network, netmask, and number of IP addresses assigned to Sun Ray appliances by DHCP.
- r      Unconfigure all active Sun Ray interfaces and remove all Sun Ray entries from the configuration databases.

**FILES**

The following files are used by this command:

```

/etc/nsswitch.conf  name service switch
/var/dhcp/dhcptab  file or NIS+ table
/etc/default/dhcp  DHCP service configuration file
/etc/inet/hosts    file or NIS+ table
/etc/inet/networks file or NIS+ table
/etc/inet/netmasks file or NIS+ table
/etc/hostname.*   hostname for each interface

```

**ATTRIBUTES**

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWuto

**SEE ALSO**

`ifconfig(1M)`, `dhtadm(1M)`, `pntadm(1M)`, `dhcpconfig(1M)`, `syslogd(1M)`, `syslog(3)`, `dhcp(4)`, `dhcp_network(4)`, `dhcptab(4)`, `nsswitch.conf(4)`, `hosts(4)`, `networks(4)`, `netmasks(4)`, `syslog.conf(4)`, `attributes(5)`, `utfwadm(1M)`

Alexander, S., and Droms, R., DHCP Options and BOOTP Vendor Extensions, RFC 1533, Lachman Technology, Inc., Bucknell University, October 1993.

Droms, R., Dynamic Host Configuration Protocol, RFC 1541, Bucknell University, October 1993.

**command:** utadmin.conf  
**man vol number:** 4  
**rev date:** 17 Jan 2000  
**category:** Sun Ray Commands  
**software:** Sun Ray 1.1  
**architecture:** generic  
**copyright:** Copyright (c) 2000, Sun Microsystems, Inc.,  
All Rights Reserved

### **Instructions for entering meta data:**

The fields above are meta data used by AnswerBook and the *man* command to track this information for searching. This information is not part of the printed book, so you should discard this page if printing the book. Some of the fields are stored using variables; update them as you would any other Frame variable.

Make sure to update the content of the index marker(s) to reflect the correct command name.

### **Instructions for entering the Running H/F:**

FM+SGML is able to get all of the information for the running headers/footers *except* for the man vol number in the outside header; you will need to enter this number in the definition of the Running H/F 1 on the master page.

<b>NAME</b>	utadmin.conf - Sun Ray administration configuration file																
<b>SYNOPSIS</b>	<code>/etc/opt/SUNWut/utadmin.conf</code>																
<b>DESCRIPTION</b>	<p>The <code>utadmin.conf</code> file is a standard Java properties file that contains configuration parameters for the Sun Ray enterprise server administration database. It is usually installed by <code>utinstall(1M)</code> and configured by <code>utconfig(1M)</code>.</p> <p>The "admin.defaultlocale" parameter (see below) is the only parameter that should be changed once the Sun Ray enterprise server is configured and in use. All other parameters are reserved.</p>																
<b>PROPERTIES</b>	<p>The supported configuration parameters are listed below. For each one, the name, description and an example are given.</p> <table border="1"> <thead> <tr> <th>Name</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>admin.defaultlocale</td> <td>The default locale for the Web-based administration tools. Supported values are "en_US" (US English), "fr" (French), "ja" (Japanese) and "zh" (Simplified Chinese). Example: en_US</td> </tr> <tr> <td>admin.dstatus.dbfile</td> <td>The name of the NDBM data files where the desktop status is stored. Example: <code>/var/opt/SUNWut/ndbm/dstatus.dir</code> <code>/var/opt/SUNWut/ndbm/dstatus.pag</code></td> </tr> <tr> <td>admin.http.cfile</td> <td>Configuration file for the Sun Ray administration webserver. Default is the <code>/etc/http/utadmin.http.conf</code> file.</td> </tr> <tr> <td>admin.http.port</td> <td>The webserver port used by the admin tool. Default is 1660.</td> </tr> <tr> <td>admin.server.name</td> <td>The name of the server where the administration database LDAP server process is running. This is usually the name of the Sun Ray enterprise server. Example: yoyodyne</td> </tr> <tr> <td>admin.server.port</td> <td>The administration database LDAP server port. This is usually port 389. Example: 389</td> </tr> <tr> <td>admin.ssl.enable</td> <td>Secure connection between browser and server using SSL. Value: yes - SSL is running no - SSL is not running</td> </tr> </tbody> </table>	Name	Description	admin.defaultlocale	The default locale for the Web-based administration tools. Supported values are "en_US" (US English), "fr" (French), "ja" (Japanese) and "zh" (Simplified Chinese). Example: en_US	admin.dstatus.dbfile	The name of the NDBM data files where the desktop status is stored. Example: <code>/var/opt/SUNWut/ndbm/dstatus.dir</code> <code>/var/opt/SUNWut/ndbm/dstatus.pag</code>	admin.http.cfile	Configuration file for the Sun Ray administration webserver. Default is the <code>/etc/http/utadmin.http.conf</code> file.	admin.http.port	The webserver port used by the admin tool. Default is 1660.	admin.server.name	The name of the server where the administration database LDAP server process is running. This is usually the name of the Sun Ray enterprise server. Example: yoyodyne	admin.server.port	The administration database LDAP server port. This is usually port 389. Example: 389	admin.ssl.enable	Secure connection between browser and server using SSL. Value: yes - SSL is running no - SSL is not running
Name	Description																
admin.defaultlocale	The default locale for the Web-based administration tools. Supported values are "en_US" (US English), "fr" (French), "ja" (Japanese) and "zh" (Simplified Chinese). Example: en_US																
admin.dstatus.dbfile	The name of the NDBM data files where the desktop status is stored. Example: <code>/var/opt/SUNWut/ndbm/dstatus.dir</code> <code>/var/opt/SUNWut/ndbm/dstatus.pag</code>																
admin.http.cfile	Configuration file for the Sun Ray administration webserver. Default is the <code>/etc/http/utadmin.http.conf</code> file.																
admin.http.port	The webserver port used by the admin tool. Default is 1660.																
admin.server.name	The name of the server where the administration database LDAP server process is running. This is usually the name of the Sun Ray enterprise server. Example: yoyodyne																
admin.server.port	The administration database LDAP server port. This is usually port 389. Example: 389																
admin.ssl.enable	Secure connection between browser and server using SSL. Value: yes - SSL is running no - SSL is not running																

---

admin.subtree	The subtree within the LDAP hierarchy where Sun Ray administration data for this server reside. This is an entry under the UT root entry that was specified when the Sun Ray software was configured. Example: utname=yoyodyne,o=v1,o=utdata
admin.user.name	The LDAP user that the administration clients should bind as to perform privileged operations. Example: cn=utadmin,utname=yoyodyne,o=v1,o=utdata
admin.ustatus.dbfile	The name of the NDBM data files where the user status is stored. Example: /var/opt/SUNWut/ndbm/ustatus.dir /var/opt/SUNWut/ndbm/ustatus.pag

---

**EXAMPLES**

**EXAMPLE 2** Configuration parameters for the LDAP and NDBM databases:

```

admin.server.name      = sray-139
admin.server.port     = 389
admin.user.name       = cn=utadmin,utname=sray-
139,o=v1,o=utdata
admin.subtree         = utname=sray-139,o=v1,o=utdata
admin.defaultlocale   = en_US
admin.dstatus.dbfile  = /var/opt/SUNWut/ndbm/dstatus
admin.ustatus.dbfile  = /var/opt/SUNWut/ndbm/ustatus
admin.http.cfile      = /etc/http/utadmin.httpd.conf
admin.http.port       = 1660
admin.ssl.enable      = no

```

**ATTRIBUTES**

See attributes(5) for descriptions of the following attributes:

---

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWutr

---

**SEE ALSO**

utinstall(1M), utconfig(1M), utuser(1M), utdesktop(1M).

Sun Ray Enterprise Server Software Administrator's Guide



**command:** utaudio  
**man vol number:** 1  
**rev date:** 19 Jan 2000  
**category:** Sun Ray Commands  
**software:** Sun Ray 1.1  
**architecture:** generic  
**copyright:** Copyright (c) 2000, Sun Microsystems, Inc.,  
All Rights Reserved

**Instructions for entering meta data:**

The fields above are meta data used by AnswerBook and the *man* command to track this information for searching. This information is not part of the printed book, so you should discard this page if printing the book. Some of the fields are stored using variables; update them as you would any other Frame variable.

Make sure to update the content of the index marker(s) to reflect the correct command name.

**Instructions for entering the Running H/F:**

FM+SGML is able to get all of the information for the running headers/footers *except* for the man vol number in the outside header; you will need to enter this number in the definition of the Running H/F 1 on the master page.

<b>NAME</b>	utaudio - connect to Sun Ray audio services
<b>SYNOPSIS</b>	<code>/opt/SUNWut/bin/utaudio</code>
<b>cs</b>	<code>setenv AUDIODEV 'utaudio'</code>
<b>ksh</b>	<code>export AUDIODEV='utaudio'</code>
<b>sh</b>	<code>AUDIODEV='utaudio';export AUDIODEV</code>
<b>DESCRIPTION</b>	<p>utaudio enables standard Solaris audio services using the utadem(7D) audio device emulator driver. After connecting to a Sun Ray session, utadem(7D) is asked to create a new audio device. From this device, utaudio creates device files in the /tmp/SUNWut/dev directory. It then echoes the root device name to standard output, for the purposes of setting the AUDIODEV environment variable. Standard audio applications can then open the new audio pseudo-device and perform audio play and record operations.</p>
<b>APPLICATION PROGRAM INTERFACE</b>	<p>Applications that use the /dev/audio interface may open the device pointed to by the AUDIODEV environment variable and use the AUDIO_GETDEV ioctl to determine which audio device is being used. The utaudio driver will return the string "SUNW,CS4231" in the name field of the audio_device structure to indicate compatibility with other Ultra platforms. The version field will contain "a" and the config field will contain "pseudo."</p>



The `AUDIO_SETINFO ioctl` controls device configuration parameters. When an application modifies the `record.buffer_size` field using the `AUDIO_SETINFO ioctl`, the daemon will constrain it to be non-zero and up to a maximum of 8180 bytes.

**Audio Data Formats** The `utaudio` daemon supports u-law and A-law with 8-bit precision, or 16-bit linear PCM at any sample rate from 8000 Hz to 48 kHz for one or two channels. The Sun Ray standard for sampling rate is 48 kHz, so using that rate will yield the best quality. The input and output data formats for playing and recording do not have to match. Some input devices do not support 2-channel capture, but two channels will be reproduced by duplication in the case where two channels are requested and the device supports only one.

**Audio Ports** The `record.avail_ports` and `play.avail_ports` fields of the `audio_info` structure report the available input and output ports for the currently connected Sun Ray appliance. Currently only `AUDIO_MICROPHONE` and `AUDIO_LINE_IN` are supported, and most devices will have both inputs. The Sun Ray audio model supports individual volume controls for the two, so it is possible that the volume setting will change with input changes. This has the feature of always maintaining the correct level for each input. For output, `AUDIO_LINE_OUT` is always selected and does not have variable gain. `AUDIO_SPEAKER` and `AUDIO_HEADPHONE` are supported normally, and they share a level control, but in general, comfortable settings for the speaker will also be comfortable for headphone use. Either one or both outputs can be selected simultaneously. The Sun Ray specification supports a third, automatic switching mode that can be accessed by deselecting both speaker and headphone, or by selecting only line out. The `utsettings(1)` command may also be used to control the device's outputs. In automatic mode, the settings track the physical connection of the headphone.

**EXIT STATUS**

The following exit values are returned:

- |   |  |
|---|--|
| 0 | Normal completion -- daemon back grounded  |
| 1 | Either the X11 server, or the session could not be contacted, or there was a problem creating the new pseudo audio device. |

**ENVIRONMENT**

`utaudio` requires that the `DISPLAY` environment variable be set to an `X11(7)` display to which the user has access to rendezvous with the Sun Ray session. This is usually set-up automatically in the Sun Ray environment.

An alternate driver emulator, or different unit number can be specified in the `UT_ADEM` environment variable.

The results of `utaudio` should be placed in the `AUDIODEV` environment variable.

**FILES**

The following files are used:

- |   |  |
|---|--|
| <code>/tmp/SUNWut/dev/utaudio/&lt;n&gt;</code>    | numbered audio data pseudo-device file nodes |
| <code>/tmp/SUNWut/dev/utaudio/&lt;n&gt;ctl</code> | matching control pseudo-device file nodes    |

**ATTRIBUTES**

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Architecture	SPARC
Availability	SUNWuto

**SEE ALSO**

`utsettings(1)`, `X11(7)`, `utadem(7D)`, `audio(7I)`, `steamio(7I)`, `ioctl(2)`, `priocntl(2)`, `attributes(5)`, `environ(5)`

**NOTES**

The `audio(7I)` interface does not have an interface for dynamically changing audio devices such as that offered by Sun Ray. It is not possible to track the comings and goings of sessions, or changes in audio hardware using this device interface. The `utaudio` daemon makes a best-effort attempt to report changes in device control ability and to make the device appear as flexible as possible, then match that ability to the actual Sun Ray hardware being run.

If a session is disconnected or moving, audio output will continue as if there were actual hardware connection, even though no samples are actually being transmitted or played. On the other hand, audio input will stop for lack of a connected device.



**command:** utauthd  
**man vol number:** 1M  
**rev date:** 10 Jan 2000  
**category:** Sun Ray Commands  
**software:** Sun Ray 1.1  
**architecture:** generic  
**copyright:** Copyright (c) 2000, Sun Microsystems, Inc.,  
All Rights Reserved

**Instructions for entering meta data:**

The fields above are meta data used by AnswerBook and the *man* command to track this information for searching. This information is not part of the printed book, so you should discard this page if printing the book. Some of the fields are stored using variables; update them as you would any other Frame variable.

Make sure to update the content of the index marker(s) to reflect the correct command name.

**Instructions for entering the Running H/F:**

FM+SGML is able to get all of the information for the running headers/footers *except* for the man vol number in the outside header; you will need to enter this number in the definition of the Running H/F 1 on the master page.

**NAME** | utauthd - Sun Ray appliance authentication daemon

**SYNOPSIS** | `/opt/SUNWut/lib/utauthd -b | -e [-d]`

**DESCRIPTION** | The `utauthd` is responsible for authentication and access control for the Sun Ray appliances attached to a server. This command should not be executed directly. It is invoked by a system startup script.

**OPTIONS** | The following options are supported:

- b           Begin execution of the daemon
- e           End execution of the daemon
- d           UNSUPPORTED Enable debug log messages. These messages can reveal authentication secrets. This option should not be used in a production environment.

              Without arguments, the default is -b.

**FILES**

The following files are used by this daemon:

<code>/etc/init.d/utsvc</code>	This is the system startup script that invokes the daemon. <code>/opt/SUNWut/utsessiond</code> , the session manager, performs the actual session switching function.
<code>/etc/opt/SUNWut/auth.props</code>	The authentication manager's configuration file.
<code>/etc/opt/SUNWut/policy/utpolicy</code>	This file determines what policy is used by the Sun Ray server.

---

**Note** – The authentication manger is normally started by running `utsvc` with the start or restart argument. The start argument starts both the session manger and the authentication manager, so all of the sessions are lost. The restart argument only starts the authentication manager, so all the sessions are continued.

---

**ATTRIBUTES**

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWuto

**SEE ALSO** | `auth.props(4)`, `utpolicy(1M)`





**command:** utcard  
**man vol number:** 1M  
**rev date:** 19 Jan 2000  
**category:** Sun Ray Commands  
**software:** Sun Ray 1.1  
**architecture:** generic  
**copyright:** Copyright (c) 2000, Sun Microsystems, Inc.,  
All Rights Reserved

### **Instructions for entering meta data:**

The fields above are meta data used by AnswerBook and the *man* command to track this information for searching. This information is not part of the printed book, so you should discard this page if printing the book. Some of the fields are stored using variables; update them as you would any other Frame variable.

Make sure to update the content of the index marker(s) to reflect the correct command name.

### **Instructions for entering the Running H/F:**

FM+SGML is able to get all of the information for the running headers/footers *except* for the man vol number in the outside header; you will need to enter this number in the definition of the Running H/F 1 on the master page.

<b>NAME</b>	utcard - Sun Ray enterprise server software configuration utility for an administered group of servers														
<b>SYNOPSIS</b>	<pre> /opt/SUNWut/sbin/utcard -a <i>filename</i> /opt/SUNWut/sbin/utcard -d " <i>name,version</i>" /opt/SUNWut/sbin/utcard -h /opt/SUNWut/sbin/utcard -l /opt/SUNWut/sbin/utcard -p " <i>name,version</i>" /opt/SUNWut/sbin/utcard -r " <i>name,version,new-position</i>" /opt/SUNWut/sbin/utcard -u </pre>														
<b>DESCRIPTION</b>	<p>The <code>utcard</code> command allows configuration of different types of smartcards in the Sun Ray administration database.</p> <p>The administrator must first place a configuration file for a specific smartcard in the <code>/var/opt/SUNWut/smartcard</code> directory. This file must have a <code>.cfg</code> extension. The smartcard definition in the <code>.cfg</code> file is added to the LDAP datastore by using the <code>-a</code> option. When a smartcard definition is added, it is automatically assigned the last position in the probe order. To modify the probe order, use the <code>-r</code> option.</p>														
<b>OPTIONS</b>	<p>The following options are supported:</p> <table border="0" style="margin-left: 20px;"> <tr> <td style="padding-right: 20px;"><code>-a <i>filename</i></code></td> <td>Add the card specified within <i>filename</i> that is in <code>/var/opt/SUNWut/smartcard</code> directory</td> </tr> <tr> <td><code>-d</code></td> <td>Delete the card specified with <i>name, version</i>. Values must be enclosed in quotes.</td> </tr> <tr> <td><code>-h</code></td> <td>Show usage information</td> </tr> <tr> <td><code>-l</code></td> <td>List all configured cards</td> </tr> <tr> <td><code>-p</code></td> <td>Show the standard properties for the card specified with <i>name, version</i>. Values must be enclosed in quotes.</td> </tr> <tr> <td><code>-r</code></td> <td>Reorder the card specified with <i>name, version, to new-position</i>. Values must be enclosed in quotes.</td> </tr> <tr> <td><code>-u</code></td> <td>List unconfigured cards available for configuration as determined by the <code>.cfg</code> files in <code>/var/opt/SUNWut/smartcard</code></td> </tr> </table>	<code>-a <i>filename</i></code>	Add the card specified within <i>filename</i> that is in <code>/var/opt/SUNWut/smartcard</code> directory	<code>-d</code>	Delete the card specified with <i>name, version</i> . Values must be enclosed in quotes.	<code>-h</code>	Show usage information	<code>-l</code>	List all configured cards	<code>-p</code>	Show the standard properties for the card specified with <i>name, version</i> . Values must be enclosed in quotes.	<code>-r</code>	Reorder the card specified with <i>name, version, to new-position</i> . Values must be enclosed in quotes.	<code>-u</code>	List unconfigured cards available for configuration as determined by the <code>.cfg</code> files in <code>/var/opt/SUNWut/smartcard</code>
<code>-a <i>filename</i></code>	Add the card specified within <i>filename</i> that is in <code>/var/opt/SUNWut/smartcard</code> directory														
<code>-d</code>	Delete the card specified with <i>name, version</i> . Values must be enclosed in quotes.														
<code>-h</code>	Show usage information														
<code>-l</code>	List all configured cards														
<code>-p</code>	Show the standard properties for the card specified with <i>name, version</i> . Values must be enclosed in quotes.														
<code>-r</code>	Reorder the card specified with <i>name, version, to new-position</i> . Values must be enclosed in quotes.														
<code>-u</code>	List unconfigured cards available for configuration as determined by the <code>.cfg</code> files in <code>/var/opt/SUNWut/smartcard</code>														

**USAGE**

Only use this command on a Sun Ray server that has been configured for administration by the `utconfig` command.

**ATTRIBUTES**

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWuto

**SEE ALSO**

`utconfig(1M)`



**command:** utconfig  
**man vol number:** 1M  
**rev date:** 28 Feb 2000  
**category:** Sun Ray Commands  
**software:** Sun Ray 1.1  
**architecture:** generic  
**copyright:** Copyright (c) 2000, Sun Microsystems, Inc.,  
All Rights Reserved

**Instructions for entering meta data:**

The fields above are meta data used by AnswerBook and the *man* command to track this information for searching. This information is not part of the printed book, so you should discard this page if printing the book. Some of the fields are stored using variables; update them as you would any other Frame variable.

Make sure to update the content of the index marker(s) to reflect the correct command name.

**Instructions for entering the Running H/F:**

FM+SGML is able to get all of the information for the running headers/footers *except* for the man vol number in the outside header; you will need to enter this number in the definition of the Running H/F 1 on the master page.

<b>NAME</b>	utconfig - Sun Ray enterprise server software configuration utility				
<b>SYNOPSIS</b>	<code>/opt/SUNWut/sbin/utconfig [-u]</code>				
<b>DESCRIPTION</b>	The <code>utconfig</code> command performs initial configuration of Sun Ray enterprise server and supporting administration framework software. Before taking any actions the command prompts the user for configuration parameters for each of the supporting software packages. The command must be run with super-user privileges.				
<b>OPTIONS</b>	The following option is supported by <code>utconfig</code> : <ul style="list-style-type: none"> <li>-u           Unconfigure Sun Ray enterprise server and administration software.</li> </ul>				
<b>ATTRIBUTES</b>	See <code>attributes(5)</code> for descriptions of the following attributes: <table border="1" style="margin-left: 40px; border-collapse: collapse; width: 50%;"> <thead> <tr> <th style="text-align: left;">ATTRIBUTE TYPE</th> <th style="text-align: left;">ATTRIBUTE VALUE</th> </tr> </thead> <tbody> <tr> <td>Availability</td> <td>SUNWuto</td> </tr> </tbody> </table>	ATTRIBUTE TYPE	ATTRIBUTE VALUE	Availability	SUNWuto
ATTRIBUTE TYPE	ATTRIBUTE VALUE				
Availability	SUNWuto				
<b>SEE ALSO</b>	<code>patchadd(1M)</code> , <code>pkgadd(1M)</code> , <code>pkgrm(1M)</code> , <code>admin(4)</code> , <code>utinstall(1M)</code>				

**command:** utdesktop  
**man vol number:** 1M  
**rev date:** 17 Jan 2000  
**category:** Sun Ray Commands  
**software:** Sun Ray 1.1  
**architecture:** generic  
**copyright:** Copyright (c) 2000, Sun Microsystems, Inc.,  
All Rights Reserved

**Instructions for entering meta data:**

The fields above are meta data used by AnswerBook and the *man* command to track this information for searching. This information is not part of the printed book, so you should discard this page if printing the book. Some of the fields are stored using variables; update them as you would any other Frame variable.

Make sure to update the content of the index marker(s) to reflect the correct command name.

**Instructions for entering the Running H/F:**

FM+SGML is able to get all of the information for the running headers/footers *except* for the man vol number in the outside header; you will need to enter this number in the definition of the Running H/F 1 on the master page.

<b>NAME</b>	utdesktop - administer Sun Ray enterprise appliance desktop units
<b>SYNOPSIS</b>	<pre> /opt/SUNWut/sbin/utdesktop -e " <i>desktop-id,location,other-info</i>" /opt/SUNWut/sbin/utdesktop -ef <i>filename</i> /opt/SUNWut/sbin/utdesktop -G /opt/SUNWut/sbin/utdesktop -h /opt/SUNWut/sbin/utdesktop -l /opt/SUNWut/sbin/utdesktop -lc /opt/SUNWut/sbin/utdesktop -Lc /opt/SUNWut/sbin/utdesktop -li <i>substring</i> /opt/SUNWut/sbin/utdesktop -o /opt/SUNWut/sbin/utdesktop -p <i>desktop-id</i> </pre>
<b>DESCRIPTION</b>	<p>The <code>utdesktop</code> command allows the user to manage Sun Ray enterprise appliance desktop units connected to the Sun Ray enterprise server the command is run on. The information that <code>utdesktop</code> displays and allows the user to edit is stored in the Sun Ray administration database. Other information is obtained from the Sun Ray Authentication Manager.</p> <p><code>utdesktop</code> operations that only display information may be run by any user. Operations that change data must be run by super-user root.</p>
<b>OPTIONS</b>	<p>The following options are supported:</p> <ul style="list-style-type: none"> <li>-e Edit properties for the specified appliance by changing the location and other information properties to the specified values. Note that the 3 comma-delimited values should be enclosed within quotes. You must be root to use this option.</li> <li>-ef Batch edit properties for multiple appliances using input from the specified filename. The format of each line in the input file is: <code>desktop-id,location,other-info</code> You must be root to use this option.</li> <li>-G List all currently connected appliances and the servers they are connected to.</li> <li>-h Show usage information (this message).</li> </ul>



- l List all appliances
- lc List all appliances that are currently connected.
- Lc List all appliances that are currently connected (long format).
- li List all appliances with desktop IDs that contain the specified substring.
- o Dump appliance list in comma-delimited format. The format of each line output by this option is: desktop-id,location,other-info
- p Show desktop properties for the appliance with the specified ID.

## EXAMPLES

**EXAMPLE 3** To display all appliances that contain "a851" in their desktop IDs:

```
$ utdesktop -li a851
```

**EXAMPLE 4** To display the current properties for appliance 080020a85112:

```
$ utdesktop -p 080020a85112
```

**EXAMPLE 5** To change the location and other information properties for appliance 080020a85112 to "SFO12-2103" and "John's Office", respectively:

```
$ utdesktop -e "080020a85112,SFO12-2103,John's Office"
```

**EXAMPLE 6** To clear the location and other information properties for appliance 080020a85112:

```
$ utdesktop -e "080020a85112,,,"
```

**EXAMPLE 7** To edit the properties of multiple appliances using input from the file /tmp/desktops:

```
$ utdesktop -ef /tmp/desktops
```

## FILES

The following file is used:

/etc/opt/SUNWut/utadmin.conf

## ATTRIBUTES

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWuta

## SEE ALSO

`utuser(1M)`, `utadmin.conf(4)`

Sun Ray Enterprise Server Software Administrator's Guide

**name:** utfostatus  
**man vol number:** 1M  
**rev date:** 17 Jan 2000  
**category:** Sun Ray Commands  
**software:** Sun Ray 1.1  
**architecture:** generic  
**copyright:** Copyright (c) 2000, Sun Microsystems,  
Inc., All Rights Reserved

**Instructions for entering meta data:**

The fields above are meta data used by AnswerBook and the *man* command to track this information for searching. This information is not part of the printed book, so you should discard this page if printing the book. Some of the fields are stored using variables; update them as you would any other Frame variable.

Make sure to update the content of the index marker(s) to reflect the correct command name.

**Instructions for entering the Running H/F:**

FM+SGML is able to get all of the information for the running headers/footers *except* for the man vol number in the outside header. If you are creating a subdivision (for example, 1b, 1c, 1f, 1g, or 1f) man page, you need to enter this number in the definition of the Running H/F 1 on the master page and to change the category description above.

**NAME** utfostatus - display failover group status

**SYNOPSIS** /opt/SUNWut/sbin/utfostatus -s *server-name*

**DESCRIPTION** The `utfostatus` command allows the user to view the failover group status information for the given server. The information that the command displays is specific to that server at the time the command is run.

`utfostatus` displays information only and so can be run by any user.

**OPTIONS** The following option is supported:

`-s server-name` Display all the failover group status information for the specified *server-name*.

**EXAMPLES** **EXAMPLE 8** To display the failover group status for server named Server5:

```
$ utfostatus -s Server5
```

Information returned from this command looks similar to the following (To view this correctly make the terminal window very wide.):

<pre>Server: Server5 -----           129.144.167.0/24 ----- Server5  129.144.167.5(UP) Server11 129.144.167.11(C) Server55 129.144.167.55(C)</pre>	<pre>Network/Netmask 192.168.128.0/24   192.168.140.0/24   192.168.129.0/24 ----- 192.168.128.2(PrU) 192.168.140.1(PrU) 192.168.128.1(PrU)           192.168.129.1(NR) 192.168.128.2(NR)</pre>
--	--

Explanation of `utfostatus` information:

The Network/Netmask values are denoted in CIDR (Classless Inter Domain Routing) network address notation, where the initial value (129.144.167.0) is the network address itself and the '/24' part signifies the number of bits that are the network part of the address, leaving the last 8 bits for specific host addresses.

Connected (C)

The failover status given for Server 5 in the table above indicates that Server11 and Server55 are members of Server5's failover group and both servers are up and connected (C).

Not Reachable (NR)

The interface on Server11 (192.168.129.1) is not reachable (NR) by Server5.

Private Interconnect (PrU/PrD)

All other IP addresses in the table are those of the private interconnect interfaces on the failover group servers. PrU signifies that the private interconnect is up and available; PrD signifies that it is not.

## ATTRIBUTES

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWuta



**command:** utfwadm  
**man vol number:** 1M  
**rev date:** 10 Jan 2000  
**category:** Sun Ray Commands  
**software:** Sun Ray 1.1  
**architecture:** generic  
**copyright:** Copyright (c) 2000, Sun Microsystems, Inc.,  
All Rights Reserved

**Instructions for entering meta data:**

The fields above are meta data used by AnswerBook and the *man* command to track this information for searching. This information is not part of the printed book, so you should discard this page if printing the book. Some of the fields are stored using variables; update them as you would any other Frame variable.

Make sure to update the content of the index marker(s) to reflect the correct command name.

**Instructions for entering the Running H/F:**

FM+SGML is able to get all of the information for the running headers/footers *except* for the man vol number in the outside header; you will need to enter this number in the definition of the Running H/F 1 on the master page.

<b>NAME</b>	utfwadm - Sun Ray firmware version management
<b>SYNOPSIS</b>	<pre> /opt/SUNWut/lib/utfwadm -A   -D -a   -s <i>enetSuffix</i>   -e <i>enetAddr</i> -n <i>interf</i> [-n <i>interf</i>]... [-f <i>firmware</i>]  /opt/SUNWut/lib/utfwadm -P  /opt/SUNWut/lib/utfwadm -R </pre>
<b>DESCRIPTION</b>	<p>The <code>utfwadm</code> command manages firmware upgrades to Sun Ray appliances. The appliances are capable of loading firmware upgrades and programming new firmware into their flash PROM memory.</p> <p>The firmware file contains a version string which can be extracted from the file using the <code>what(1)</code> command. When an appliance is powered on, the firmware obtains an IP address and other configuration information using the DHCP protocol. Part of the configuration information is a DHCP variable, <code>NewTVer</code>. If this variable is defined, the firmware compares it with its own version string. If it is not the same, the firmware initiates an upgrade which replaces the current firmware with the new version.</p> <p>The <code>utfwadm</code> command must be run when a new firmware version is installed to set the <code>NewTVer</code> variable and force the appliances to load the new version on their next power cycle. The DHCP facility allows variables such as <code>NewTVer</code> to be set on either a per-network or per-unit basis in the <code>dhcptab(4)</code> file, and <code>utfwadm</code> allows firmware upgrades to be targeted either to entire Sun Ray subnetworks or individual appliances. The Sun Ray subnetworks must have been previously set up using the <code>utadm(1M)</code> command. The command must be run with super-user privileges.</p>
<b>OPTIONS</b>	<p>The following options are supported</p> <ul style="list-style-type: none"> <li>-a This causes the given operation to be applied to all units attached to the given interfaces.</li> <li>-A Add the defined appliances to the list of units to be upgraded with a new firmware version. The following options determine which subset of the units should be upgraded. This option sets the <code>NewTVer</code> variable in the appropriate context. It also copies files from the firmware install directory into the boot directory, renaming them to contain their version strings.</li> <li>-D Remove the defined appliances from the list of units to be upgraded. This option causes the <code>NewTVer</code> variable to be unset.</li> </ul>



- e *enetAddr* This causes the operation to be applied to only the specified unit with ethernet address given by *enetAddr*, where all six hex bytes of the address are specified.
- f *firmware* This option gives the pathname for the firmware to be downloaded to the appliances. If *firmware* refers to a file, the hardware version is extracted from the version string within the file, and the file is copied to the /tftpboot directory to be downloaded only to that version of the hardware. If *firmware* refers to a directory, then all files named "Corona\*" in the directory are copied to the /tftpboot directory with their version strings appended. If the -f option is not given, a default location is used.
- n *interface* Apply the given operation to units connected to the ethernet interface *interface*. Multiple interfaces may be given, or the special keyword all, which applies the operation to all configured Sun Ray interfaces.
- P This variant of the command prints out the version to which each domain should be upgraded on the next power cycle. A domain may be either an interconnect subnet or individual appliance. If it is a subnet, then the Intf column lists the interface device. If it is an individual appliance, then its ethernet address is given in the Domain column, and the Intf column contains the interface name.
- R Remove the firmware files that were copied into the boot directory.
- s *enetSuffix* This causes the operation to be applied to only the specified unit, where *enetSuffix* is given as the last three hex bytes of the ethernet address. The hex prefix "0x080020" is added to the address.

## FILES

These are the files used by this command:

- /var/dhcp/dhcptab file or NIS+ table
- /tftpboot default location of firmware boot files

**ATTRIBUTES**

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWuto

**SEE ALSO**

`dhtadm(1M)`, `dhcpconfig(1M)`, `what(1)`, `dhcp(4)`, `dhcp_network(4)`, `dhcptab(4)`, `attributes(5)`, `utadm(1M)`

**name:** utglpolicy  
**man vol number:** 1M  
**rev date:** 17 Jan 2000  
**category:** Sun Ray Commands  
**software:** Sun Ray 1.1  
**architecture:** generic  
**copyright:** Copyright (c) 2000, Sun Microsystems,  
Inc., All Rights Reserved

<b>NAME</b>	utglpolicy - used to get or set the global utpolicy options				
<b>SYNOPSIS</b>	<code>/opt/SUNWut/sbin/utglpolicy -g   -s " utpolicy-options"</code>				
<b>DESCRIPTION</b>	<p>utglpolicy -g is used by the utpolicy script to get the global policy options.</p> <p>Setting global policies is normally accomplished using the Sun Ray administration tool. utglpolicy -s provides a command line alternative, the administrator can set a valid utpolicy option string in the database for subsequent processing via the utpolicy -G command.</p> <p>The valid <i>utpolicy-options</i> string must be enclosed in quotes to be processed correctly. You must be root to use this command.</p>				
<b>OPTIONS</b>	<p>The following options are supported:</p> <ul style="list-style-type: none"> <li>-g                   Get the global utpolicy options that are stored in the datastore (currently LDAP).</li> <li>-s                   Set the global utpolicy options that are stored in the datastore (currently LDAP). <i>utpolicy-options</i> must be enclosed in quotes.</li> </ul>				
<b>EXAMPLES</b>	<p><b>EXAMPLE 9</b> To set a global policy:</p> <div style="border: 1px solid black; padding: 5px; margin: 10px 0;"> <pre># utglpolicy -s "-a -r card -z pseudo -t clear -t add:080020a8e723"</pre> </div>				
<b>FILES</b>	<p>The following file is used:</p> <p><code>/etc/opt/SUNWut/policy/utpolicy</code></p>				
<b>ATTRIBUTES</b>	<p>See <code>attributes(5)</code> for descriptions of the following attributes:</p> <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 10px;"> <thead> <tr> <th style="text-align: left;">ATTRIBUTE TYPE</th> <th style="text-align: left;">ATTRIBUTE VALUE</th> </tr> </thead> <tbody> <tr> <td>Availability</td> <td>SUNWuta</td> </tr> </tbody> </table>	ATTRIBUTE TYPE	ATTRIBUTE VALUE	Availability	SUNWuta
ATTRIBUTE TYPE	ATTRIBUTE VALUE				
Availability	SUNWuta				

**command:** utgroupsig  
**man vol number:** 1M  
**rev date:** 21 Jan 2000  
**category:** Sun Ray Commands  
**software:** Sun Ray 1.1  
**architecture:** generic  
**copyright:** Copyright (c) 2000, Sun Microsystems, Inc.,  
All Rights Reserved

**Instructions for entering meta data:**

The fields above are meta data used by AnswerBook and the *man* command to track this information for searching. This information is not part of the printed book, so you should discard this page if printing the book. Some of the fields are stored using variables; update them as you would any other Frame variable.

Make sure to update the content of the index marker(s) to reflect the correct command name.

**Instructions for entering the Running H/F:**

FM+SGML is able to get all of the information for the running headers/footers *except* for the man vol number in the outside header; you will need to enter this number in the definition of the Running H/F 1 on the master page.

<b>NAME</b>	utgroupsig - sets the group signature for a group of Sun Ray enterprise servers						
<b>SYNOPSIS</b>	<code>/opt/SUNWut/sbin/utgroupsig</code>						
<b>DESCRIPTION</b>	<p>The <code>utgroupsig</code> command sets the failover group signature. It also sets the Sun Directory Services rootpw used by Sun Ray to a value based on the group signature.</p> <p>When used as root, <code>utgroupsig</code> prompts for the new signature twice.</p> <p>The group signature file is at least 8 bytes long and has similar content diversity characteristics as required by <code>passwd(1)</code></p> <p style="margin-left: 40px;">Security    The signature is stored in clear in the location specified in the <code>auth.props</code> file with the <code>gmSignatureFile</code> property. The group signature file will be created with owner root and mode 400 (read-only by root).</p>						
<b>EXIT STATUS</b>	<p>The following exit values are returned:</p> <table border="0" style="margin-left: 40px;"> <tr> <td style="padding-right: 20px;">0</td> <td>Success</td> </tr> <tr> <td>1</td> <td>Invalid UID. Run as root.</td> </tr> <tr> <td>2</td> <td>Unexpected failure. Signature file unchanged.</td> </tr> </table>	0	Success	1	Invalid UID. Run as root.	2	Unexpected failure. Signature file unchanged.
0	Success						
1	Invalid UID. Run as root.						
2	Unexpected failure. Signature file unchanged.						
<b>FILES</b>	<p>The following files are used:</p> <table border="0" style="margin-left: 40px;"> <tr> <td style="padding-right: 20px;"><code>/etc/opt/SUNWut/gmSignature</code></td> <td>Sun Ray group signature default file</td> </tr> <tr> <td><code>/etc/opt/SUNWut/auth.props</code></td> <td>Sun Ray authentication properties file</td> </tr> <tr> <td><code>/etc/opt/SUNWconn/ldap/current/dsserv.conf</code></td> <td>Sun Directory Services Server configuration file</td> </tr> </table>	<code>/etc/opt/SUNWut/gmSignature</code>	Sun Ray group signature default file	<code>/etc/opt/SUNWut/auth.props</code>	Sun Ray authentication properties file	<code>/etc/opt/SUNWconn/ldap/current/dsserv.conf</code>	Sun Directory Services Server configuration file
<code>/etc/opt/SUNWut/gmSignature</code>	Sun Ray group signature default file						
<code>/etc/opt/SUNWut/auth.props</code>	Sun Ray authentication properties file						
<code>/etc/opt/SUNWconn/ldap/current/dsserv.conf</code>	Sun Directory Services Server configuration file						
<b>ATTRIBUTES</b>	<p>See <code>attributes(5)</code> for descriptions of the following attributes:</p> <table border="1" style="margin-left: 40px; width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">ATTRIBUTE TYPE</th> <th style="text-align: left;">ATTRIBUTE VALUE</th> </tr> </thead> <tbody> <tr> <td>Availability</td> <td>SUNWuta</td> </tr> </tbody> </table>	ATTRIBUTE TYPE	ATTRIBUTE VALUE	Availability	SUNWuta		
ATTRIBUTE TYPE	ATTRIBUTE VALUE						
Availability	SUNWuta						
<b>SEE ALSO</b>	<code>utrcmd(1M)</code> , <code>passwd(1M)</code> , <code>auth.props(4)</code> , <code>dsserv.conf(4)</code>						

<b>name:</b>	utgstatus
<b>man vol number:</b>	1M
<b>rev date:</b>	28 Jan 2000
<b>category:</b>	Sun Ray Commands
<b>software:</b>	Sun Ray 1.1
<b>architecture:</b>	generic
<b>copyright:</b>	Copyright (c) 2000, Sun Microsystems, Inc., All Rights Reserved

**Instructions for entering meta data:**

The fields above are meta data used by AnswerBook and the *man* command to track this information for searching. This information is not part of the printed book, so you should discard this page if printing the book. Some of the fields are stored using variables; update them as you would any other Frame variable.

Make sure to update the content of the index marker(s) to reflect the correct command name.

**Instructions for entering the Running H/F:**

FM+SGML is able to get all of the information for the running headers/footers *except* for the man vol number in the outside header. If you are creating a subdivision (for example, 1b, 1c, 1f, 1g, or 1f) man page, you need to enter this number in the definition of the Running H/F 1 on the master page and to change the category description above.

**NAME** utgstatus - display failover group status

**SYNOPSIS** /opt/SUNWut/sbin/utgstatus [-s *server-name*]

**DESCRIPTION** The utgstatus command allows the user to view the failover group status information for the local server or for the named server. The information that the command displays is specific to that server at the time the command is run.

utgstatus displays information only and so can be run by any user.

**OPTIONS** The following option is supported:

`-s server-name` Display all the failover group status information for the specified *server-name*.

**EXAMPLES** **EXAMPLE 9** To display the failover group status for the local server

```
$ utgstatus
```

**EXAMPLE 10** To display the failover group status for server named Server5:

```
$ utgstatus -s Server5
```

Information returned from this command looks similar to the following (To view this correctly make the terminal window very wide.):

Server: Server5			
-----			
	129.144.167.0/24	Network/Netmask	192.168.128.0/24 192.168.140.0/24 192.168.129.0/24
-----			
Server5	129.144.167.5(UP)	192.168.128.2(PrU)	192.168.140.1(PrU)
Server11	129.144.167.11(C)	192.168.128.1(PrU)	192.168.129.1(NR)
Server55	129.144.167.55(C)	192.168.128.2(NR)	

Explanation of utgstatus information:

The Network/Netmask values are denoted in CIDR (Classless Inter Domain Routing) network address notation, where the initial value (129.144.167.0) is the network address itself and the '/24' part signifies the number of bits that are the network part of the address, leaving the last 8 bits for specific host addresses.



Connected (C)

The failover status given for Server 5 in the table above indicates that Server11 and Server55 are members of Server5's failover group and both servers are up and connected (C).

Not Reachable (NR)

The interface on Server11 (192.168.129.1) is not reachable (NR) by Server5.

Private Interconnect (PrU/PrD)

All other IP addresses in the table are those of the private interconnect interfaces on the failover group servers. PrU signifies that the private interconnect is up and available; PrD signifies that it is not.

**FILES**

None.

**ATTRIBUTES**

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWuta



**command:** utinstall  
**man vol number:** 1M  
**rev date:** 17 Jan 2000  
**category:** Sun Ray Commands  
**software:** Sun Ray 1.1  
**architecture:** generic  
**copyright:** Copyright (c) 2000, Sun Microsystems, Inc.,  
All Rights Reserved

**Instructions for entering meta data:**

The fields above are meta data used by AnswerBook and the *man* command to track this information for searching. This information is not part of the printed book, so you should discard this page if printing the book. Some of the fields are stored using variables; update them as you would any other Frame variable.

Make sure to update the content of the index marker(s) to reflect the correct command name.

**Instructions for entering the Running H/F:**

FM+SGML is able to get all of the information for the running headers/footers *except* for the man vol number in the outside header; you will need to enter this number in the definition of the Running H/F 1 on the master page.

**NAME** utinstall - Sun Ray enterprise server software installation, upgrade and removal utility

**SYNOPSIS** `/cdrom/cdrom0/utinstall [-a admin_file] [-d media-dir] [-u]`  
`/opt/SUNWut/sbin/utinstall [-a admin_file] [-d media-dir] [-u]`

**DESCRIPTION** The `utinstall` command installs, upgrades and removes Sun Ray enterprise server software. All software required to support Sun Ray enterprise server is installed. This includes: OS patches, administration framework and any patches required by the framework. All required data are saved and restored over the upgrade. The command prompts the user before taking any actions and must be run with super-user privileges.

**OPTIONS** The following options are supported:

`-a admin_file` Use `admin_file` as installation administration file for `pkgadd` operations (see `-a` option for `pkgadd(1M)`). The default installation administration file used by this command is `admin_default` located at installation media root.

`-d media-dir` Use `media-dir` as installation media root.

`-u` Remove previously installed Sun Ray enterprise server software.

Without arguments, install or upgrade of the Sun Ray enterprise server software is performed.

**FILES** The following files are used:

`/cdrom/cdrom0/admin_default`  
`/opt/SUNWut/etc/admin_default` Default installation administration file used by `pkgadd` operations.

**ATTRIBUTES** See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWuto

**SEE ALSO**

patchadd(1M), patchrm(1M), pkgadd(1M), pkgrm(1M), admin(4),  
utconfig(1M)



**command:** utload  
**man vol number:** 1M  
**rev date:** 28 Feb 2000  
**category:** Sun Ray Commands  
**software:** Sun Ray 1.1  
**architecture:** generic  
**copyright:** Copyright (c) 2000, Sun Microsystems, Inc.,  
All Rights Reserved

**Instructions for entering meta data:**

The fields above are meta data used by AnswerBook and the *man* command to track this information for searching. This information is not part of the printed book, so you should discard this page if printing the book. Some of the fields are stored using variables; update them as you would any other Frame variable.

Make sure to update the content of the index marker(s) to reflect the correct command name.

**Instructions for entering the Running H/F:**

FM+SGML is able to get all of the information for the running headers/footers *except* for the man vol number in the outside header; you will need to enter this number in the definition of the Running H/F 1 on the master page.

<b>NAME</b>	utload - Sun Ray appliance firmware download utility
<b>SYNOPSIS</b>	<code>/opt/SUNWut/sbin/utload [-f <i>firmwareFile</i>] [-h <i>hostName</i>] [-p <i>portNumber</i>] [-s <i>sessionID</i>] [-w]</code>
<b>DESCRIPTION</b>	The <code>utload</code> command sends a request to a Sun Ray appliance to initiate a firmware download. As an option, the downloaded firmware can be written to the appliance's flash memory.
<b>OPTIONS</b>	<p>The following options are supported:</p> <ul style="list-style-type: none"> <li><code>-f <i>firmwareFile</i></code> This option specifies the name of a file that must exist in the <code>/tftpboot</code> directory on the server. The default file name is "CoronaP1".</li> <li><code>-h <i>hostname</i></code> This option specifies the host running the Sun Ray authentication daemon (<code>utauthd</code>) that the appliance is connected to. The default is <code>localhost</code>.</li> <li><code>-p <i>portNumber</i></code> This option specifies the port number of the <code>utauthd</code> that manages the appliance. The default is port 7010.</li> <li><code>-s <i>sessionID</i></code> This option specifies the appliance's current <i>sessionID</i>. The default value is derived from the current session if the command is invoked from a Sun Ray appliance. Please note that the <i>sessionID</i> should be kept secret. It is not advisable to use this command line option except in cases where session security is not important.</li> <li><code>-w</code> Write the downloaded firmware to flash memory.</li> </ul> <p>If no options are specified, the command runs with the defaults.</p>
<b>FILES</b>	<p>The following files are used:</p> <ul style="list-style-type: none"> <li><code>/tftpboot/CoronaP1</code> Default firmware file</li> <li><code>/etc/inetd.conf</code> Inet configuration file used to enable TFTP services</li> <li><code>/etc/opt/SUNWut/auth.props</code> Sun Ray authentication daemon configuration file</li> </ul>



**ATTRIBUTES**

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWuto

**SEE ALSO**

`utadm(1M)`, `utfwadm(1M)`



**command:** utpolicy  
**man vol number:** 1M  
**rev date:** 28 Feb 2000  
**category:** Sun Ray Commands  
**software:** Sun Ray 1.1  
**architecture:** generic  
**copyright:** Copyright (c) 2000, Sun Microsystems, Inc.,  
All Rights Reserved

**Instructions for entering meta data:**

The fields above are meta data used by AnswerBook and the *man* command to track this information for searching. This information is not part of the printed book, so you should discard this page if printing the book. Some of the fields are stored using variables; update them as you would any other Frame variable.

Make sure to update the content of the index marker(s) to reflect the correct command name.

**Instructions for entering the Running H/F:**

FM+SGML is able to get all of the information for the running headers/footers *except* for the man vol number in the outside header; you will need to enter this number in the definition of the Running H/F 1 on the master page.

<b>NAME</b>	utpolicy - Sun Ray Authentication Manager Policy Management Command
<b>SYNOPSIS</b>	<pre> /opt/SUNWut/sbin/utpolicy -a [-g] [-p] [-r type] [-s type] [-z type] /opt/SUNWut/sbin/utpolicy -a [-t list] [-t clear] [-t add:tid] [-t del:tid] /opt/SUNWut/sbin/utpolicy -i {clear   soft} /opt/SUNWut/sbin/utpolicy </pre>
<b>DESCRIPTION</b>	<p>The <code>utpolicy</code> command writes the policy configuration of the Sun Ray authentication manager, <code>utauthd(1M)</code>.</p>
<b>OPTIONS</b>	<p>With no options, <code>utpolicy</code> prints out the policy in effect.</p> <p>Three categories of options are supported: Policy Setting, Card Reader Assignment, and Software Restart.</p> <p><code>-a</code> This option, followed by valid Policy Setting, or Card Reader Assignment arguments, applies these arguments to the active authentication policy for the system. This option is not valid by itself.</p>
	<p><b>POLICY SETTING</b></p>
	<p>The specified Policy Setting arguments completely replace the current active authentication policy. In other words, only arguments that are specified become active. Policy Setting and Card Reader Assignment arguments can be specified together.</p>
	<p><code>-g</code> Turn on session selection within a server group. Allows the user to select on which server the user's session is run.</p>
	<p><code>-p</code> This option changes the behavior of the self registration application so that it does not require the Solaris name and password before registering a token. Note that the self registration application only verifies the name and password. They are not stored.</p>

- r {card|pseudo|both} Specify the token types that must be registered in the administrative database in order to be granted access to a login screen. Policy will lookup and use token database entry.
- s {card|pseudo|both} Specify the token types that will be presented with a registration screen if they do not have an entry in the administrative database. Policy will allow self-registration of tokens.
- z {card|pseudo|both} Specify the token types that do not require an entry in the administrative database in order to be granted access to a login screen. Policy will grant access to tokens without database entry.

### CARD READER ASSIGNMENT

The Card Reader Assignment arguments are incremental in nature (a complete specification does not have to occur all at once). This means a card reader can be added today and another can be added next week. Both will then be active until explicitly deleted. Policy Setting and Card Reader Assignment arguments can be specified together.

- t add:*terminalId* Add a terminal (appliance) identification to the list of terminals being used as dedicated card readers. If a partial terminalId is specified, then the model will be assumed to be CoronaP1. If the terminalId is preceded by a backslash, then the terminalId will be used without any transformation.
- t clear Reset the list of Sun Ray appliances in dedicated card reader mode.
- t del:*terminalId* Remove a terminal (appliance) identification from the list of terminals being used as dedicated card readers.
- t list List the terminal IDs of the Sun Ray appliances that are currently being used as dedicated card readers for registration of tokens.

### SOFTWARE RESTART

Software Restart options CAN NOT be combined with Policy Setting or Card Reader Assignment arguments.

`-i {clear | soft}`

This option restarts the SunRay services. When used with the clear argument, `utpolicy` will clear out all existing sessions before restarting SunRay services. The soft argument leaves sessions intact. Some sessions may be unreachable after restart.

The following options are RESERVED for use by the Sun Ray Server Software and should not be used:

`-G, -P, -Q, -b, -f, -l, -u, -x, +x`

## EXAMPLES

The `utpolicy` command is meant to simplify `utauthd(1M)` program's policy configuration.

**EXAMPLE 11** This command is equivalent to the default policy. It allows all appliances to be used with or without a smart card. Access will be granted to the normal Solaris login screen.

```
utpolicy -a -z both
```

**EXAMPLE 12** This command indicates that all access via smart card requires a valid administrative database entry before access is granted. If a database entry has not been created for a smart card, then a registration session will be presented on the appliance. If no smart card is used, then the normal Solaris login screen will be presented.

```
utpolicy -a -r card -s card -z pseudo
```

**EXAMPLE 13** This command is like the previous except that it does not allow for users to register their own smart cards. Instead it is assumed that the appliance specified in the `-t add:` option will be used along with the appropriate administrative tools to create the necessary database entries. In this example, the terminal id is expanded to `CoronaP1.080020a8e723`

```
utpolicy -a -r card -z pseudo -t clear -t add:080020a8e723
```

**FILES**

The following files are used by `utpolicy`:

- `/etc/opt/SUNWut/policy/utpolicy`      The policy configuration file
- `/etc/opt/SUNWut/terminals`      The list of appliances being used as dedicated card readers
- `/etc/opt/SUNWut/auth.props`      Sun Ray authentication manager's configuration file

**ATTRIBUTES**

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWuto

**SEE ALSO**

`utauthd(1M)`, `auth.props(4)`





**command:** utpw  
**man vol number:** 1M  
**rev date:** 10 Jan 2000  
**category:** Sun Ray Commands  
**software:** Sun Ray 1.1  
**architecture:** generic  
**copyright:** Copyright (c) 2000, Sun Microsystems, Inc.,  
All Rights Reserved

**Instructions for entering meta data:**

The fields above are meta data used by AnswerBook and the *man* command to track this information for searching. This information is not part of the printed book, so you should discard this page if printing the book. Some of the fields are stored using variables; update them as you would any other Frame variable.

Make sure to update the content of the index marker(s) to reflect the correct command name.

**Instructions for entering the Running H/F:**

FM+SGML is able to get all of the information for the running headers/footers *except* for the man vol number in the outside header; you will need to enter this number in the definition of the Running H/F 1 on the master page.

<b>NAME</b>	utpw - change Sun Ray enterprise server administration password				
<b>SYNOPSIS</b>	<code>/opt/SUNWut/sbin/utpw</code>				
<b>DESCRIPTION</b>	<p>The <code>utpw</code> command changes the Sun Ray administrator password (also known as the "UT admin" password) used by the Web-based and command-line administration applications provided with the Sun Ray enterprise software.</p> <p>This password is entered by the end user when logging into the Web-based administration application. The command-line administration applications, when run as super-user root, get this password from a protected, scrambled file on the file system. Both Web-based and command-line applications use this password to make a privileged connection to the LDAP server.</p> <p><code>utpw</code> changes the password both in the administration database (in the LDAP server), and the password file (<code>/etc/opt/SUNWut/utadmin.pw</code>) used by the command-line administration tools.</p> <p>This command must be run as root.</p>				
<b>EXAMPLES</b>	<p><b>EXAMPLE 13</b></p> <pre style="border: 1px solid black; padding: 5px;"># utpw Enter new UT admin password: Re-enter new UT admin password:</pre> <p>Changing LDAP password...</p> <p>Done.</p> <p>Changing password file...</p> <p>Done.</p>				
<b>FILES</b>	<p>The following files are used:</p> <p><code>/etc/opt/SUNWut/utadmin.pw</code></p> <p><code>/etc/opt/SUNWut/utadmin.conf</code></p>				
<b>ATTRIBUTES</b>	<p>See <code>attributes(5)</code> for descriptions of the following attributes:</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">ATTRIBUTE TYPE</th> <th style="text-align: left;">ATTRIBUTE VALUE</th> </tr> </thead> <tbody> <tr> <td>Availability</td> <td>SUNWuta</td> </tr> </tbody> </table>	ATTRIBUTE TYPE	ATTRIBUTE VALUE	Availability	SUNWuta
ATTRIBUTE TYPE	ATTRIBUTE VALUE				
Availability	SUNWuta				

**SEE ALSO**

`utdesktop(1M)`, `utuser(1M)`

Sun Ray Enterprise Server Software Administrator's Guide



**command:** utrcmd  
**man vol number:** 1M  
**rev date:** 19 Jan 2000  
**category:** Sun Ray Administration Commands  
**software:** Sun Ray 1.1  
**architecture:** generic  
**copyright:** Copyright (c) 2000, Sun Microsystems, Inc.,  
All Rights Reserved

### **Instructions for entering meta data:**

The fields above are meta data used by AnswerBook and the *man* command to track this information for searching. This information is not part of the printed book, so you should discard this page if printing the book. Some of the fields are stored using variables; update them as you would any other Frame variable.

Make sure to update the content of the index marker(s) to reflect the correct command name.

### **Instructions for entering the Running H/F:**

FM+SGML is able to get all of the information for the running headers/footers *except* for the man vol number in the outside header; you will need to enter this number in the definition of the Running H/F 1 on the master page.

<b>NAME</b>	utrcmd in.utrcmdd - Sun Ray enterprise appliance remote administration
<b>SYNOPSIS</b>	<code>/opt/SUNWut/lib/utrcmd [-n ] hostname command [ args]</code>
<b>DESCRIPTION</b>	<p>The <code>utrcmd</code> program provides a way to run Sun Ray administrative commands remotely. The <code>utrcmd</code> program contacts the <code>in.utrcmdd</code> daemon on the remote <i>hostname</i> and executes the specified <i>command</i> with the specified arguments <i>args</i> (if any).</p> <p><code>utrcmd</code> copies its standard input to the remote command, the standard output of the remote command to its standard output, and the standard error of the remote command to its standard error. Interrupt, quit, and terminate signals are propagated to the remote command; <code>utrcmd</code> normally terminates when the remote command does.</p>
<b>OPTIONS</b>	<p>The following option is supported.</p> <p style="margin-left: 40px;">-n            Redirect the input of <code>utrcmd</code> to <code>/dev/null</code>. You sometimes need this option to avoid unfortunate interactions between <code>utrcmd</code> and the shell which invokes it. For example, if you are running <code>utrcmd</code> and invoke a <code>utrcmd</code> in the background without redirecting its input away from the terminal, it will block even if no reads are posted by the remote command. The <code>-n</code> option will prevent this.</p>
<b>USAGE</b>	<p>Hostnames are given in the hosts database, which may be contained in the <code>/etc/hosts</code> file, the Internet domain name database, or both. Each host has one official name (the first name in the database entry) and optionally one or more nicknames. Official hostnames or nicknames may be given as <i>hostname</i>.</p> <p>The <code>utrcmd</code> and <code>in.utrcmdd</code> programs use the Sun Ray failover group configuration to perform a set of checks before allowing the command to proceed.</p> <p>The program <code>utrcmd</code> runs with set-user-ID permission for root or super-user. However, it will only proceed if all of the following are true (on the initiating system):</p> <ul style="list-style-type: none"> <li>■ The user's real user-ID is super-user, or the user has membership rights in the <code>utadmin</code> group.</li> <li>■ The <code>auth.props</code> file is owned by super-user and is not writable by anyone other than super-user.</li> <li>■ The <code>gmSignatureFile</code> property of <code>auth.props</code> specifies a group signature file.</li> <li>■ The group signature file exists and is owned by super-user and is not readable, writable, or executable by anyone other than super-user.</li> <li>■ The group signature file is at least 8 bytes long and has similar content diversity characteristics as required by <code>passwd(1)</code>.</li> </ul>

- The "utrcmd/tcp" service is enabled.

The `in.utrcmdd` program will accept the connection only if all of the following are true (on the remote system):

- The "utrcmd/tcp" service is enabled and matches the configuration on the initiating system.
- The `in.utrcmdd` program is enabled in `/etc/inetd.conf`.
- The `utadmin` group is configured on the system.
- The `auth.props` file is owned by super-user and is not writable by anyone other than super-user.
- The `gmSignatureFile` property of `auth.props` specifies a group signature file.
- The group signature file exists and is owned by super-user and is not readable, writable, or executable by anyone other than super-user.
- The group signature file is at least 8 bytes long and has similar content diversity characteristics as required by `passwd(1)`.

If the connection is accepted, the `utrcmd` program begins a challenge-response handshake with the `in.utrcmdd` program, using the contents of the group signature file to sign messages (without revealing the contents of the signature file). Either `utrcmd` or `in.utrcmdd` will reject the transaction if the handshake fails. Specifically, the command will not be run if the contents of the group signature files on the two systems differ.

Finally, the `in.utrcmdd` will reject the *command* if it is not in its preconfigured set of allowed commands or if the *command* or *args* contain disallowed characters (such as `'[:;']`), which may cause a security problems while interpreting the command. Commands always run in group `utadmin`.

The configured commands (and the user they run as) are:

Command	User
<code>/opt/SUNWut/sbin/utpolicy</code>	root
<code>/opt/SUNWut/sbin/utfwadm</code>	root
<code>/usr/sbin/dhtadm</code>	root
<code>/usr/sbin/pntadm</code>	root

## EXAMPLES

**EXAMPLE 14** To list the configured token readers on a remote host remhost use:

```
utrcmd remhost /opt/SUNWut/sbin/utpolicy -t list
```

**FILES**

/etc/hosts	Internet host table
/etc/group	Group file
/etc/inet/services	Internet services table
/etc/inetd.conf	Internet services daemon configuration table
/etc/opt/SUNWut/auth.props	Sun Ray authentication properties file

**ATTRIBUTES**

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWuto

**SEE ALSO**

`utauthd(1M)`, `inetd(1M)`, `group(4)`, `auth.props(4)`, `hosts(4)`, `nsswitch(4)`, `passwd(1)`, `rsh(1)`, `attributes(5)`

**NOTES**

`utrcmd` works in a manner similar to `rsh(1)`. However, it imposes multiple restrictions to maintain system security.



**command:** utreplica  
**man vol number:** 1M  
**rev date:** 14 Jan 2000  
**category:** Sun Ray Commands  
**software:** Sun Ray 1.1  
**architecture:** generic  
**copyright:** Copyright (c) 2000, Sun Microsystems, Inc.,  
All Rights Reserved

**Instructions for entering meta data:**

The fields above are meta data used by AnswerBook and the *man* command to track this information for searching. This information is not part of the printed book, so you should discard this page if printing the book. Some of the fields are stored using variables; update them as you would any other Frame variable.

Make sure to update the content of the index marker(s) to reflect the correct command name.

**Instructions for entering the Running H/F:**

FM+SGML is able to get all of the information for the running headers/footers *except* for the man vol number in the outside header; you will need to enter this number in the definition of the Running H/F 1 on the master page.

<b>NAME</b>	utreplica - Sun Ray enterprise server software configuration utility for an administered group of servers
<b>SYNOPSIS</b>	<pre> /opt/SUNWut/sbin/utreplica -p <i>secondary-server</i> [ <i>secondary-server</i>]... /opt/SUNWut/sbin/utreplica -s <i>primary-server</i> /opt/SUNWut/sbin/utreplica -l /opt/SUNWut/sbin/utreplica -u </pre>
<b>DESCRIPTION</b>	The <code>utreplica</code> command performs configuration of the Sun Ray LDAP server to enable replication of administered data from a designated Primary server to each Secondary server in a failover group. The command must be run with super-user privileges. The command version used depends on whether the Primary server or a Secondary server is being configured for administered group membership.
<b>OPTIONS</b>	<p>The following options are supported:</p> <ul style="list-style-type: none"> <li>-l Use this on any member of a group to list the current failover administration status.</li> <li>-p Configure the Primary Server. <i>secondary-server</i> is the hostname of the Secondary Server. If there is more than one Secondary Server, enter a list.</li> <li>-s Configure a Secondary Server. <i>primary-server</i> is the hostname of the Primary Server.</li> <li>-u Use this on any member of a group to unconfigure the replica.</li> </ul>
<b>USAGE</b>	<p>Only use this command on Sun Ray servers that have been configured for administration by the <code>utconfig</code> command.</p> <p>The command must be run on the Primary Server first and then on each Secondary Server.</p>
<b>FILES</b>	<p>The following files are used:</p> <pre> /etc/opt/SUNWconn/ldap/current/dsserv.conf /etc/opt/SUNWconn/ldap/current/dsserv.ini   on Primary Server Only /etc/opt/SUNWut/utadmin.conf               on Secondary Server Only </pre>

**ATTRIBUTES**

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWuto

**SEE ALSO**

`utconfig(1M)`

**NOTES**

For this command to work, all servers in the group must have been configured with the same Group Manager signature.



**command:** utselect  
**man vol number:** 1  
**rev date:** 15 Jan 2000  
**category:** Sun Ray Commands  
**software:** Sun Ray 1.1  
**architecture:** generic  
**copyright:** Copyright (c) 2000, Sun Microsystems, Inc.,  
All Rights Reserved

**Instructions for entering meta data:**

The fields above are meta data used by AnswerBook and the *man* command to track this information for searching. This information is not part of the printed book, so you should discard this page if printing the book. Some of the fields are stored using variables; update them as you would any other Frame variable.

Make sure to update the content of the index marker(s) to reflect the correct command name.

**Instructions for entering the Running H/F:**

FM+SGML is able to get all of the information for the running headers/footers *except* for the man vol number in the outside header; you will need to enter this number in the definition of the Running H/F 1 on the master page.

<b>NAME</b>	utselect - provides a GUI-based interface to utswitch (a Sun Ray software command)				
<b>SYNOPSIS</b>	<code>/opt/SUNWut/bin/utselect</code>				
<b>DESCRIPTION</b>	The <code>utselect</code> command presents the output of <code>utswitch -l</code> in a window and allows mouse-based selection of a Sun Ray server to which the Sun Ray appliance in use is reconnected. The sessions in the window are sorted in order of last connection time, with the latest first. The second line in the list is highlighted by default to allow easy switching between two servers. The Refresh button on the window causes the window contents to be updated by re-executing the <code>utswitch -l</code> command. When the Ok button is pressed, a <code>utswitch -h</code> command is executed with the hostname on the highlighted line.				
<b>ATTRIBUTES</b>	See <code>attributes(5)</code> for descriptions of the following attributes: <table border="1" data-bbox="474 730 1252 841"> <thead> <tr> <th>ATTRIBUTE TYPE</th> <th>ATTRIBUTE VALUE</th> </tr> </thead> <tbody> <tr> <td>Availability</td> <td>SUNWuto</td> </tr> </tbody> </table>	ATTRIBUTE TYPE	ATTRIBUTE VALUE	Availability	SUNWuto
ATTRIBUTE TYPE	ATTRIBUTE VALUE				
Availability	SUNWuto				
<b>SEE ALSO</b>	<code>utswitch(1)</code> , <code>attributes(5)</code>				

**command:** utsessiond  
**man vol number:** 1M  
**rev date:** 17 Jan 2000  
**category:** Sun Ray Commands  
**software:** Sun Ray 1.1  
**architecture:** generic  
**copyright:** Copyright (c) 2000, Sun Microsystems, Inc.,  
All Rights Reserved

**Instructions for entering meta data:**

The fields above are meta data used by AnswerBook and the *man* command to track this information for searching. This information is not part of the printed book, so you should discard this page if printing the book. Some of the fields are stored using variables; update them as you would any other Frame variable.

Make sure to update the content of the index marker(s) to reflect the correct command name.

**Instructions for entering the Running H/F:**

FM+SGML is able to get all of the information for the running headers/footers *except* for the man vol number in the outside header; you will need to enter this number in the definition of the Running H/F 1 on the master page.

<b>NAME</b>	utsessiond - Sun Ray enterprise session manager daemon
<b>SYNOPSIS</b>	<code>/opt/SUNWut/lib/utsessiond [-a <i>authlist</i>] [-c <i>authfile</i>] [-d] [-h <i>hostname</i>] [-p <i>port</i>] [-P <i>nport</i>] [-r] [-t]</code>
<b>DESCRIPTION</b>	<p>The <code>utsessiond</code> daemon provides a reliable rendezvous point for services in a Sun Ray enterprise appliance session. It acts as an intermediary to forward session connection and disconnection messages from the Sun Ray enterprise authentication manager to the services and provides facilities for supporting distributed synchronization of clip-lists for the services.</p> <p>If either the <code>-a</code> or the <code>-c</code> options are specified, the session manager daemon operates exclusively in call-back mode. In this mode, the session manager only takes session connect and disconnect commands from authentication managers that are explicitly enabled by <i>authlist</i> or <i>authfile</i> and that have requested a call-back. The call-back feature provides a mechanism by which the session manager and the authentication manager may establish each other's identity.</p> <p>Error messages from <code>utsessiond</code> are logged using <code>syslog(3)</code> with a facility value of <code>LOG_DAEMON</code>.</p>
<b>OPTIONS</b>	<p>The following options are supported by <code>utsessiond</code>:</p> <ul style="list-style-type: none"> <li><code>-a <i>authlist</i></code>      Add the host and port pairs specified in <i>authlist</i> to the list of allowed authentication managers. The format of <i>authlist</i> is a comma separated list of <i>hostname:port</i> pairs.</li> <li><code>-c <i>authfile</i></code>      Add the host and port pairs specified in the ASCII file <i>authfile</i> to the list of allowed authentication managers. The file contains a list of authentication manager specifications, one per line. The specifications take the form of <i>hostname</i> followed by <i>port</i> number, separated by white-space. Blank lines and any line whose first printable character is “#” are ignored.</li> <li><code>-d</code>                    Enable debugging output.</li> <li><code>-h <i>hostname</i></code>        Set the session <i>hostname</i> portion of the session IDs generated by the session manager to the specified <i>hostname</i> value. By default this is set to the machine's node name. This option can be used to handle servers supporting multiple IP addresses as part of a clustering solution.</li> </ul>



- p** *port* Set the session manager's listen port to the specified *port* value. The session manager defaults to port 7007. This is the port by which session services and authentication managers contact the session manager.
- P** *nport* This option is no longer used. Retained only for backward compataibility.
- r** Automatically restart the session manager daemon if it exits. With this option the session manager daemon will create two processes: a child that performs all the actual work and parent monitoring process. The parent process will restart a child if the previous one exits. This can enable existing services to reattach to their sessions by re-connecting with new child session manager.
- t** Test mode. Use is beyond the scope of this document.

**FILES**

Files used by utsessiond:

<code>/etc/opt/SUNWut/auth.permit</code>	The customary location of the authfile for a system.
--	--

**ATTRIBUTES**See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWuto

**SEE ALSO**

`utauthd(1M)`, `syslog(3)`, `syslogd(1M)`, `syslog.conf(4)`



**command:** utsettings  
**man vol number:** 1  
**rev date:** 12 Jan 2000  
**category:** Sun Ray Commands  
**software:** Sun Ray 1.1  
**architecture:** generic  
**copyright:** Copyright (c) 2000, Sun Microsystems, Inc.,  
All Rights Reserved

### **Instructions for entering meta data:**

The fields above are meta data used by AnswerBook and the *man* command to track this information for searching. This information is not part of the printed book, so you should discard this page if printing the book. Some of the fields are stored using variables; update them as you would any other Frame variable.

Make sure to update the content of the index marker(s) to reflect the correct command name.

### **Instructions for entering the Running H/F:**

FM+SGML is able to get all of the information for the running headers/footers *except* for the man vol number in the outside header; you will need to enter this number in the definition of the Running H/F 1 on the master page.

<b>NAME</b>	utsettings - view and/or change the settings for a Sun Ray enterprise appliance
<b>SYNOPSIS</b>	<code>/opt/SUNWut/bin/utsettings [-H]</code>
<b>DESCRIPTION</b>	<p>The <code>utsettings</code> command brings up the interactive Sun Ray Settings GUI that allows the user to view and/or change the settings for a Sun Ray enterprise appliance desktop unit.</p> <p>Running <code>utsettings</code> with no arguments causes the application to display settings for the Sun Ray appliance the invoking user is currently logged into. It does this by connecting to the Sun Ray Session Manager, which tells the application which appliance is currently being used and notifies the application if this changes (i.e., if the user inserts the user's smart card into another appliance). If the user moves to another Sun Ray appliance, the Settings GUI "follows" the user by connecting to the new appliance and displaying the new appliance's current settings.</p> <p>By default, Sun Ray enterprise servers will start an instance of <code>utslaunch(1M)</code> for each session when the user logs into their Sun Ray appliance via <code>dtlogin</code>. This makes the Settings GUI available to users when they press a hot key. Subsequent hot key presses cause the GUI to hide itself or show itself again. Users can initiate similar functionality by running <code>utsettings</code> with the <code>-H</code> flag, although only one instance of <code>utsettings -H</code> or <code>utslaunch</code> can be running per session.</p>
<b>OPTIONS</b>	<p>The following option is supported :</p> <p><code>-H</code> Start the Settings GUI in "hot key" mode. In this mode, the application starts hidden and waits for the hot key to be pressed before displaying itself. Pressing the hot key again causes the application to hide itself again. The hot key can be user or site-defined, but defaults to Shift-Props (press the Props key while holding down the Shift key). See FILES, below for more details. Only one instance of <code>utsettings -H</code> or <code>utslaunch</code> can be running per session.</p>
<b>EXAMPLES</b>	<p><b>EXAMPLE 15</b> To display the settings for the enterprise appliance you are currently logged into:</p> <pre style="border: 1px solid black; padding: 5px; width: fit-content; margin: 10px auto;">\$ utsettings</pre> <p><b>EXAMPLE 16</b> To display the settings for the enterprise appliance you are current-</p>

ly logged into, but start it in "hot key" mode:

```
$ utsettings -H
```

**FILES**

The following files are used:

- ~/.utsettings.properties                      user's defaults
- /etc/opt/SUNWut/utsettings\_defaults.properties      sitewide defaults
- /etc/opt/SUNWut/utsettings\_mandatory.properties      sitewide mandatory defaults

**ATTRIBUTES**

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWuto

**SEE ALSO**

`utslaunch(1M)`, `dtlogin(1X)`, `dtsession(1X)`, `utsettings.properties(4)`



**command:** utsettings.properties  
**man vol number:** 4  
**rev date:** 12 Jan 2000  
**category:** Sun Ray Commands  
**software:** Sun Ray 1.1  
**architecture:** generic  
**copyright:** Copyright (c) 2000, Sun Microsystems, Inc.,  
All Rights Reserved

### **Instructions for entering meta data:**

The fields above are meta data used by AnswerBook and the *man* command to track this information for searching. This information is not part of the printed book, so you should discard this page if printing the book. Some of the fields are stored using variables; update them as you would any other Frame variable.

Make sure to update the content of the index marker(s) to reflect the correct command name.

### **Instructions for entering the Running H/F:**

FM+SGML is able to get all of the information for the running headers/footers *except* for the man vol number in the outside header; you will need to enter this number in the definition of the Running H/F 1 on the master page.

<b>NAME</b>	utsettings.properties - defaults for the Sun Ray Settings GUI application
<b>SYNOPSIS</b>	<p><b>/etc/opt/SUNWut/utsettings_defaults.properties</b></p> <p><b>~/utsettings.properties</b></p> <p><b>/etc/opt/SUNWut/utsettings_mandatory.properties</b></p>
<b>DESCRIPTION</b>	<p>The files listed above are standard Java properties files that can contain defaults that customize the operation of the Sun Ray Settings application. Each file contains entries in the format</p> <p>name=value</p> <p>where "name" is the property name and "value" is the value to set it to.</p> <p>None of these properties files are required for correct operation of the Sun Ray Settings GUI. If none are present, the application will use reasonable application defaults.</p> <p>When the application starts, it looks for and reads the files in the order listed below. Note that a property specified in a file can be overridden by files read later in the search order. The search order is:</p> <ol style="list-style-type: none"> <li>1. /etc/opt/SUNWut/utsettings_defaults.properties (site-wide defaults)</li> <li>2. ~/utsettings.properties (user's defaults)</li> <li>3. /etc/opt/SUNWut/utsettings_mandatory.properties (site-wide mandatory defaults)</li> </ol> <p>The site-wide defaults file is read in first and contains helpful default properties for the program to use as fall-backs if the user has not specified any. Any properties specified here override any application defaults.</p> <p>The user defaults file is read in next and contains the user's preferred values for the properties. Any properties specified here override any application or site-wide defaults.</p> <p>Finally, the site-wide mandatory properties file is read in. This file contains site-wide mandatory settings that cannot be overridden by the user. Any properties specified here override any application, site-wide or user defaults. For example, if a site wanted to mandate a specific Settings GUI hotkey for all Sun Ray enterprise appliances connected to a server, they would specify it in this file.</p>



**PROPERTIES**

The supported application properties are listed below. For each property, the name, description, application default and some examples are given. The application default is the property value that the application defaults to if not specified in any properties files.

Name	hotkey
Description	Specifies the hotkey that causes the Sun Ray Settings GUI (when started in -H "hot key" mode or via <code>utslaunch(1M)</code> ) to show itself or hide itself. The value is a valid X keysym name preceded by one or more of the supported modifiers (Ctrl, Shift, Alt, Meta), in any order.
Application Default	Shift SunProps (Hold down shift and press the Props key)
Examples	F3 Shift F4 Ctrl Shift Alt F5

---

**Note** – F11 and F12 are not valid for `utsettings.hotkey`.

---

**EXAMPLES**

**EXAMPLE 17** The following is the sample contents of a properties file. The values shown below are the application defaults that would be in effect if no properties files existed.

```
utsettings.hotkey=Shift SunProps
```

**ATTRIBUTES**

See `attributes(5)` for descriptions of the following attributes:

---

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWutr

---

**SEE ALSO**

`utsettings(1M)`, `utslaunch(1M)`



**command:** utslaunch  
**man vol number:** 1M  
**rev date:** 19 Jan 2000  
**category:** Sun Ray Commands  
**software:** Sun Ray 1.1  
**architecture:** generic  
**copyright:** Copyright (c) 2000, Sun Microsystems, Inc.,  
All Rights Reserved

### **Instructions for entering meta data:**

The fields above are meta data used by AnswerBook and the *man* command to track this information for searching. This information is not part of the printed book, so you should discard this page if printing the book. Some of the fields are stored using variables; update them as you would any other Frame variable.

Make sure to update the content of the index marker(s) to reflect the correct command name.

### **Instructions for entering the Running H/F:**

FM+SGML is able to get all of the information for the running headers/footers *except* for the man vol number in the outside header; you will need to enter this number in the definition of the Running H/F 1 on the master page.

<b>NAME</b>	utslaunch - Sun Ray enterprise appliance settings launch program				
<b>SYNOPSIS</b>	<b>/opt/SUNWut/lib/utslaunch</b>				
<b>DESCRIPTION</b>	<p>The utslaunch program is used to launch the utsettings(1) GUI program via a "hot key" sequence. When used this way, the utsettings program is only started when the hot key sequence is pressed.</p> <p>utslaunch can provide the hot key functionality for utsettings while consuming fewer system resources.</p> <p>The configuration of hot keys is documented in utsettings.properties(4).</p>				
<b>FILES</b>	<p>The following file is used:</p> <p>/usr/dt/config/Xsession.d/0100.SUNWut</p>				
<b>ATTRIBUTES</b>	<p>See attributes(5) for descriptions of the following attributes:</p> <table border="1"> <thead> <tr> <th>ATTRIBUTE TYPE</th> <th>ATTRIBUTE VALUE</th> </tr> </thead> <tbody> <tr> <td>Availability</td> <td>SUNWuto</td> </tr> </tbody> </table>	ATTRIBUTE TYPE	ATTRIBUTE VALUE	Availability	SUNWuto
ATTRIBUTE TYPE	ATTRIBUTE VALUE				
Availability	SUNWuto				
<b>SEE ALSO</b>	utsettings(1), utsettings.properties(4)				

**command:** utswitch  
**man vol number:** 1  
**rev date:** 15 Jan 2000  
**category:** Sun Ray Commands  
**software:** Sun Ray 1.1  
**architecture:** generic  
**copyright:** Copyright (c) 2000, Sun Microsystems, Inc.,  
All Rights Reserved

**Instructions for entering meta data:**

The fields above are meta data used by AnswerBook and the *man* command to track this information for searching. This information is not part of the printed book, so you should discard this page if printing the book. Some of the fields are stored using variables; update them as you would any other Frame variable.

Make sure to update the content of the index marker(s) to reflect the correct command name.

**Instructions for entering the Running H/F:**

FM+SGML is able to get all of the information for the running headers/footers *except* for the man vol number in the outside header; you will need to enter this number in the definition of the Running H/F 1 on the master page.

<b>NAME</b>	utswitch - Sun Ray server selection and session listing
<b>SYNOPSIS</b>	<code>/opt/SUNWut/bin/utswitch -l   -t   -h <i>host</i> [-k <i>token</i>] [-s <i>sid</i>]</code>
<b>DESCRIPTION</b>	The <code>utswitch</code> command allows switching a Sun Ray appliance among Sun Ray servers in a failover group. It can also list the existing sessions for the current token. One of the following option flags must be specified: <code>-l</code> , <code>-t</code> , or <code>-h</code> . The <code>utselect(1)</code> command implements a GUI-based interface to this command.
<b>OPTIONS</b>	The following options are supported by <code>utswitch</code> : <ul style="list-style-type: none"><li><code>-h <i>host</i></code> Force an explicit switch to the server with hostname <i>host</i>.</li><li><code>-k <i>token</i></code> Specify the token id <i>token</i> to be used in collecting session information from the servers in the failover group. The token normally used is the one connected to the current session.</li></ul>

- l List the servers accessible from the current Sun Ray appliance for the current token and show any existing sessions on those servers. The token is derived from the serial number and type of a smart card if there is one inserted. Otherwise, the token is derived from the Ethernet address of the Sun Ray appliance. The first field of the output is the server name, the second is the X display number or -1 if no session exists, and the third field is the last connection time to an existing session, as a time value from the time(2) system call. If there is no session, the third field indicates status from the host as:
- 1 Server is up, but there is no session.
  - 2 No response received from the server.
  - 3 No path from the Sun Ray to the server.
- s *sid* Specify the session id *sid* of a session connected to a Sun Ray appliance and perform the requested operation on that appliance. The default is to use the session id of the current session. Since session ids other than that of the current session are only available to userid root, this option is not useful for a general user.
- t Switch to the server whose session has the latest connection time among the existing sessions for the current token. Normally this would switch to the current session, so it has limited usefulness. However, it is useful in the case of logging out of an existing X session and back to the login screen. The connection time of a logged out session is biased back in time so that that session will not be selected if there is an existing logged-in X session on another server. From a CDE login screen, it is possible to force a call to `utswitch -t` by selecting Reset Login Screen from the Options menu. This allows switching back to a logged-in session from the login screen without having to log in.

## FILES

The following files are used:

`/var/opt/SUNWut/displays/*` X display files  
 X display files token-name links to display files

## ATTRIBUTES

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWuto

**SEE ALSO** | `utselect(1M), attributes(5)`



**command:** utuser  
**man vol number:** 1M  
**rev date:** 17 Jan 2000  
**category:** Sun Ray Commands  
**software:** Sun Ray 1.1  
**architecture:** generic  
**copyright:** Copyright (c) 2000, Sun Microsystems, Inc.,  
All Rights Reserved

**Instructions for entering meta data:**

The fields above are meta data used by AnswerBook and the *man* command to track this information for searching. This information is not part of the printed book, so you should discard this page if printing the book. Some of the fields are stored using variables; update them as you would any other Frame variable.

Make sure to update the content of the index marker(s) to reflect the correct command name.

**Instructions for entering the Running H/F:**

FM+SGML is able to get all of the information for the running headers/footers *except* for the man vol number in the outside header; you will need to enter this number in the definition of the Running H/F 1 on the master page.

<b>NAME</b>	utuser - administer Sun Ray users
<b>SYNOPSIS</b>	<pre> /opt/SUNWut/sbin/utuser -a " token-id,server-name,server-port,name,other-info" [-r token-reader]  /opt/SUNWut/sbin/utuser -af filename [-r token-reader]  /opt/SUNWut/sbin/utuser -ai current-token-id new-token-id [-r token-reader]  /opt/SUNWut/sbin/utuser -d token-id  /opt/SUNWut/sbin/utuser -df filename  /opt/SUNWut/sbin/utuser -di current-token-id  /opt/SUNWut/sbin/utuser -e " token-id,server-name,server-port,name,other-info"  /opt/SUNWut/sbin/utuser -ef filename  /opt/SUNWut/sbin/utuser -ei current-token-id [enable   disable]  /opt/SUNWut/sbin/utuser -G  /opt/SUNWut/sbin/utuser -k {-xdisplay display   -tokenId token-id}  /opt/SUNWut/sbin/utuser -l  /opt/SUNWut/sbin/utuser -lc  /opt/SUNWut/sbin/utuser -li substring  /opt/SUNWut/sbin/utuser -ln substring  /opt/SUNWut/sbin/utuser -L  /opt/SUNWut/sbin/utuser -Lc  /opt/SUNWut/sbin/utuser -Li substring  /opt/SUNWut/sbin/utuser -Ln substring  /opt/SUNWut/sbin/utuser -h  /opt/SUNWut/sbin/utuser -o  /opt/SUNWut/sbin/utuser -p token-id  /opt/SUNWut/sbin/utuser -r token-reader </pre>

**DESCRIPTION**

The `utuser` command allows the user to manage Sun Ray users registered on the Sun Ray enterprise server that this command is run on. The information that `utuser` displays and allows the user to add, edit and delete is stored in the Sun Ray administration database. Other information is obtained from the Sun Ray Authentication Manager.

`utuser` operations that only display information may be run by any user. Operations that change or delete data must be run by super-user root.

**OPTIONS**

The following options are supported:

- a      Add user with the specified *token-id*, *server-name*, *server-port*, *name* and *other-information* properties.  
NOTE: The 5 comma-delimited values should be enclosed within quotes. The other-information property is optional. You must be root to use this option.
- af     Batch add multiple users using input from the specified filename. The format of each line in the input file is: *token-id,server-name,server-port,name,other-info* You must be root to use this option.
- ai     Add the specified *new-token-id* to the user that currently has token *current-token-id*. You must be root to use this option.
- d      Delete the user with the specified *token-id*. Note that this command deletes the user and all his tokens. (To delete a single token without deleting the user, use the `-di` option.) You must be root to use this option.
- df     Batch delete multiple users using input from the specified filename. The format of each line in the input file is: *token-id* However, you may use the output of the `-o` option to feed this option as all arguments after the first comma are ignored. Note that for each *token-id* specified in the filename, this command deletes the associated user and all his tokens. (To delete a single token without deleting the user, use the `-di` option.) You must be root to use this option.
- di     Delete token *current-token-id* from the user that currently has it. The token to be deleted must not be the user's only token. Note that this command does not delete the user or any of his other tokens. (To delete the user and all his tokens, use the `-d` option.) You must be root to use this option.
- e      Edit properties for the user with the specified *token-id* by changing the *server-name*, *server-port*, *name* and *other-information* properties to the specified values. Note that the 5 comma-delimited values should be enclosed within quotes. The other information property is optional. You must be root to use this option.

- ef Batch edit multiple users using input from the specified filename. The format of each line in the input file is: *token-id,server-name,server-port,name,other-info* You must be root to use this option.
- ei Enable or disable the specified token. You must be root to use this option.
- G List all currently logged in users and the servers they are logged into.
- k Kills user session associated with supplied *token-id* (-tokenid *token-id*) or *display* (-xdisplay *display*) value. You must be root to use this option.
- l List all users.
- lc List all users that are currently logged in.
- li List all users with token-ids that contain the specified substring.  
NOTE: The substring comparisons are case-insensitive
- ln List all users with names that contain the specified substring.  
NOTE: The substring comparisons are case-insensitive.
- L List all users (long format).
- Lc List all users that are currently logged in (long format).
- Li List all users with token-ids that contain the specified substring (long format).  
NOTE: The substring comparisons are case-insensitive.
- Ln List all users with names that contain the specified substring (long format).  
NOTE: The substring comparisons are case-insensitive.
- h Show usage information (this message).
- o Dump users list in comma-delimited format. The format of each line output by this option is: token-id, server-name, server-port, name, other-info
- p Show user properties for user with the specified *token-id*.
- r When specified alone, this option reads a token-id from the specified token reader. When specified with the -a, -af or -ai options, the -r flag instructs utuser to use the specified token reader to assist in adding users or tokens whenever the character "x" is used in place of a token-id. The command will prompt you to insert the token into the specified reader when its ready to read the token.

**EXAMPLES**

**EXAMPLE 18** To display all users that contain "parker" in their user

names:

```
$ utuser -ln parker
```

**EXAMPLE 19** To display all users that contain "9165" in their token-ids:

```
$ utuser -li 9165
```

**EXAMPLE 20** To display the current properties for the user with MicroPayflex.00004f9165000100 token-id:

```
$ utuser -p MicroPayflex.00004f9165000100
```

**EXAMPLE 21** To add a user with token-id "MicroPayflex.00004f9265000100", server-name "localhost", server-port "7007", user name "John Anderson" and other information "C987":

```
# utuser -a
"MicroPayflex.00004f9265000100,localhost,7007,John
Anderson,C987"
```

**EXAMPLE 22** To add a user with unknown token-id, server name "localhost", server port "7007", user name "John Anderson", and other information "C987" by using the token reader 08002086e18f to read the token-id:

```
# utuser -a "x,localhost,7007,John
Anderson,C987" -r 08002086e18f
```

**EXAMPLE 23** To add multiple users using input from the file /tmp/users:

```
# utuser -af /tmp/users
```

**EXAMPLE 24** To edit the user with token-id "MicroPayflex.00004f9165000100" and change its server name to "localhost", server port to "7007", user name to "John Parker" and other information to "D0001":

```
# utuser -e
"MicroPayflex.00004f9165000100,localhost,7007,John
Parker,D0001"
```

**EXAMPLE 25** To change the server name to "localhost", server port to "7007"

while clearing the user name and other information properties for the user with token-id "MicroPayflex.00004f9165000100":

```
# utuser -e
"MicroPayflex.00004f9165000100,localhost,7007,,,"
```

**EXAMPLE 26** To edit the properties of multiple users using input from the file /tmp/users:

```
# utuser -ef /tmp/users
```

**EXAMPLE 27** To delete the user with token-id "MicroPayflex.00004f8c65000100":

```
# utuser -d MicroPayflex.00004f8c65000100
```

**EXAMPLE 28** To delete multiple users using input from the file /tmp/users:

```
# utuser -df /tmp/users
```

**EXAMPLE 29** To add the token "MicroPayflex.00004f9165000101" to the user that currently has token "MicroPayflex.00004f9165000100":

```
# utuser -ai MicroPayflex.00004f9165000100
MicroPayflex.00004f9165000101
```

**EXAMPLE 30** To add the token currently inserted in token reader 08002086e18f to the user that currently has token "MicroPayflex.00004f9165000100":

```
# utuser -ai MicroPayflex.00004f9165000100 x -r
08002086e18f
```

**EXAMPLE 31** To delete the token "MicroPayflex.00004f9165000101" from the user that currently has it:

```
# utuser -di MicroPayflex.00004f9165000101
```

**EXAMPLE 32** To enable the token "MicroPayflex.00004f9165000100":

```
# utuser -ei MicroPayflex.00004f9165000100 enable
```

**EXAMPLE 33** To disable the token "MicroPayflex.00004f9165000100":

```
# utuser -ei MicroPayflex.00004f9165000100 disable
```

**EXAMPLE 34** To read a token from token reader 08002086e18f:

```
# utuser -r 08002086e18f
```

**FILES**

The /etc/opt/SUNWut/utadmin.conf file is used by this command.

**ATTRIBUTES**

See attributes(5) for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWuta

**SEE ALSO**

utdesktop(1M), utadmin.conf(4)





**command:** utxconfig  
**man vol number:** 1M  
**rev date:** 19 Jan 2000  
**category:** Sun Ray Commands  
**software:** Sun Ray 1.1  
**architecture:** generic  
**copyright:** Copyright (c) 2000, Sun Microsystems, Inc.,  
All Rights Reserved

### **Instructions for entering meta data:**

The fields above are meta data used by AnswerBook and the *man* command to track this information for searching. This information is not part of the printed book, so you should discard this page if printing the book. Some of the fields are stored using variables; update them as you would any other Frame variable.

Make sure to update the content of the index marker(s) to reflect the correct command name.

### **Instructions for entering the Running H/F:**

FM+SGML is able to get all of the information for the running headers/footers *except* for the man vol number in the outside header; you will need to enter this number in the definition of the Running H/F 1 on the master page.

<b>NAME</b>	utxconfig - Sun Ray enterprise appliance X server configuration
<b>SYNOPSIS</b>	<code>/opt/SUNWut/lib/utxconfig [-a] [-c <i>config-file</i>] [-d <i>display</i>] [-D] [-l] [-p <i>pcolor</i>] [-r <i>res</i>] [-t <i>token</i>]</code>
<b>DESCRIPTION</b>	<p>The <code>utxconfig</code> program provides a way configure X server parameters for users of Sun Ray enterprise appliance sessions.</p> <ul style="list-style-type: none"> <li>-a            Allows the setting or listing of the default values. Only "root" may change the default settings.</li> <li>-c <i>config-file</i> Sets a specific <i>config-file</i> to use. The usage of this option is beyond the scope of this manual.</li> <li>-d <i>display</i>    Will set the X display variable that is to be used in determining the Sun Ray enterprise appliance session. Otherwise the DISPLAY environment variable is used. Normal (in other words, non "root") users must have access to an X server attached to a Sun Ray enterprise appliance session before they are allowed to read or change the settings for that session.</li> <li>-D            Debug flag.</li> <li>-l            Lists out the current settings for the session. If no specific values have been set for the session, the default value is printed</li> </ul>

- `-p` *pcolor* Parameter that specifies the level of support for the PseudoColor (8-bit) visual in the X server. The PseudoColor visual is not enabled by default. The accepted values for *pcolor* are "off", "on", and "default". A *pcolor* value of "off" will disable the PseudoColor visual. A *pcolor* value of "on" will enable the PseudoColor visual, but the TrueColor visual (24-bit) will remain the default. A *pcolor* value of "default" will enable the PseudoColor visual and make it the default visual, although the TrueColor visual will still be available.
- `-r` *res* Parameter that specifies a resolution (number of pixels) that the X server should provide for the session. The format of *res* is "WIDTHxHEIGHT", for example "1280x1024". There are restrictions on the possible width and heights that can be specified which are enforced by `utxconfig`.
- `-t` Allows the setting of a specific token to use. The use of this option is beyond the scope of this manual.

**EXAMPLES**

**EXAMPLE 35** To enable the PseudoColor visual on a 1024x768 screen use:

```
utxconfig -r "1024x768" -p "on"
```

**ATTRIBUTES**

See `attributes(5)` for descriptions of the following attributes:

ATTRIBUTE TYPE	ATTRIBUTE VALUE
Availability	SUNWuto

**NOTES**

The settings are consulted only when an X server process is started. Therefore, it is necessary to log out and log in again for changes to take effect.

The settings are actually maintained on the basis of an authentication token and do not remain specific to a single X display number.



**command:** utxset  
**man vol number:** 1M  
**rev date:** 17 Jan 2000  
**category:** Sun Ray Commands  
**software:** Sun Ray 1.1  
**architecture:** generic  
**copyright:** Copyright (c) 2000, Sun Microsystems, Inc.,  
All Rights Reserved

### **Instructions for entering meta data:**

The fields above are meta data used by AnswerBook and the *man* command to track this information for searching. This information is not part of the printed book, so you should discard this page if printing the book. Some of the fields are stored using variables; update them as you would any other Frame variable.

Make sure to update the content of the index marker(s) to reflect the correct command name.

### **Instructions for entering the Running H/F:**

FM+SGML is able to get all of the information for the running headers/footers *except* for the man vol number in the outside header; you will need to enter this number in the definition of the Running H/F 1 on the master page.

<b>NAME</b>	utxset - update Sun Ray mouse and blanking settings						
<b>SYNOPSIS</b>	<code>/opt/SUNWut/lib/utxset [-a <i>accel</i>] [-b <i>blank</i>] [-d] [-f <i>file</i>] [-t <i>thresh</i>] [-v]</code>						
<b>DESCRIPTION</b>	The <code>utxset</code> command changes mouse acceleration and screen blank characteristics of the Sun Ray enterprise appliance. It is generally used internally by an X11 server to implement changes initiated by the <code>xset(1)</code> command.						
<b>OPTIONS</b>	<p>The following options are supported by <code>utxset</code>:</p> <ul style="list-style-type: none"> <li><code>-a <i>accel</i></code> Set the mouse acceleration to <i>accel</i>. The acceleration can be specified as an integer or floating point value.</li> <li><code>-b <i>blank</i></code> Set the Sun Ray Energy Star monitor blanking interval to <i>blank</i> minutes.</li> <li><code>-d</code> Run as a daemon process. With this option, <code>utxset</code> forks a copy of itself to run in the background which makes the settings changes, and waits for confirmation. The original command returns immediately.</li> <li><code>-f <i>file</i></code> Obtain the Session ID from the <i>file</i>. Ordinarily, the Session ID is obtained using the <code>DISPLAY</code> environment variable. With this option, the Session ID is found on a line in <i>file</i> that begins with "SESSION=".</li> <li><code>-t <i>thresh</i></code> Set the mouse threshold to <i>thresh</i>.</li> <li><code>-v</code> Verbose mode. Use is beyond the scope of this document.</li> </ul>						
<b>ATTRIBUTES</b>	<p>See <code>attributes(5)</code> for descriptions of the following attributes:</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">ATTRIBUTE TYPE</th> <th style="text-align: left;">ATTRIBUTE VALUE</th> </tr> </thead> <tbody> <tr> <td>Architecture</td> <td>SPARC</td> </tr> <tr> <td>Availability</td> <td>SUNWuto</td> </tr> </tbody> </table>	ATTRIBUTE TYPE	ATTRIBUTE VALUE	Architecture	SPARC	Availability	SUNWuto
ATTRIBUTE TYPE	ATTRIBUTE VALUE						
Architecture	SPARC						
Availability	SUNWuto						
<b>SEE ALSO</b>	<code>utsettings(1)</code> , <code>xset(1)</code> , <code>Xserver(1)</code> , <code>X11(1)</code>						

**NOTES**

An option is required for this command.

The `-a` and `-t` options specify the mouse acceleration parameters. The mouse, or whatever pointer the machine is connected to, will go *accel* times as fast when it travels more than *thresh* pixels in a short time. This way, the mouse can be used for precise alignment when it is moved slowly, yet it can be set to travel across the screen in a flick of the wrist when desired.

The Sun Ray Energy Star monitor blanking interval specifies how long the unit should wait (in minutes) after any user input before placing the monitor into an energy saving standby mode. User input, in this case, is defined as the movement of the mouse or the pressing of a key. A blanking value of zero disables the energy saving mode.

