1 Integrating HP OpenView Reporter with Network Node Manager

Overview

NNM collects topology, trend, and event data that is used to troubleshoot, report on, and analyze the network. The NNM data warehouse provides a repository for this data. See the *Reporting and Data Analysis with HP OpenView Network Node Manager* online manual for more information about the data warehouse.

The NNM reports created for HP OpenView Reporter query the NNM data warehouse. These reports enable you to solve real network problems.

Each of the reports has been designed and formatted for a particular amount of data. The usability of the reports depends on the amount and type of data that you are collecting and storing in the NNM data warehouse.

If the amount of data in the data warehouse is very large, the reports may be difficult to read. You can use the Crystal Reports Designer product to reformat the reports to work better with your data.

One type of data that has restrictions is node names that appear on the vertical axis. If a node name is greater than 25 characters it is truncated on the left side. Also, long interface names and numbers may overlap and be difficult to read.

Contents of the Integration Patch

NOTE   The Crystal Reports templates included in this patch are only supported in English and Japanese.

The integration patch consists of a directory, that contains the following files:

HP OpenView Reporter templates

> Report templates based on the Crystal Reports 8.0 runtime engine. These files end with a `.rpt` extension. You can modify these files using the Seagate™ Crystal Report Professional Edition product. See "Report Descriptions" on page 12, for a description of each report.

repload_NNM.SRP file

> File that contains information about report templates. This file gives the repload command the information it needs to add the new NNM reports.

NNM/HP OpenView Reporter integration guide (PDF file of current document)

> Document that contains instructions on how to configure the templates for use with HP OpenView Reporter.

solid35ODBC.exe

> Executable file that loads the client-side SOLID ODBC drivers onto a Windows OS system. This allows ODBC access to a local or remote SOLID database. See the "Remote Connectivity" on page 8 for more information

Pre-Installation Assumptions

Before proceeding with the configuration of this integration patch, you should have a system configured as follows:

- You have installed Network Node Manager 6.2.

- If you are not using the NNM embedded database (SOLID) as the data warehouse, you must have configured any of the databases supported by NNM 6.2 to be the NNM data warehouse. See the Supported Configuration section of the NNM Release Notes for information on the databases that NNM supports.

- You have populated the database with the appropriate data. That is, you have recently run the following commands:

  — **ovdwtopo -export**

  — **ovdwtrend -export**

  — **ovdwtrend -export -sum**

- You have started HP OpenView Reporter and the Reporter Service is running.

- You have associated the ODBC Data Source Name with the NNM data warehouse. The data source name associated with the NNM embedded database is ovdbrun. The data source name associated with Oracle is OV_ORACLE and for Microsoft SQL Server it is OVSQL.

  Refer to the *Reporting and Data Analysis with HP OpenView Network Node Manager* manual for instructions on installing and configuring Oracle or Microsoft SQL Server.

Configuration Instructions

Use the following steps to configure your system to use the integration patch.

Step 1: Copy the Files to the HP OpenView Reporter System

You will see the following types of files on the system where you installed the patch.

Windows OS location:
`install_dir\conf\analysis\reportTemplates\`*`database_type`*`\`

- `NNMOVReporterIntegration.pdf` - **Current document.**

- `nnm\*.rpt` - **Crystal Reports templates.**

- `repload_NNM.SRP` – **Configuration file for the HP OpenView Reporter** `repload` **command.**

UNIX location:
`$OV_CONF/analysis/reportTemplates/`*`database_type`*`/`

- `NNMOVReporterIntegration.pdf` - **Current document.**

- `nnm/*.rpt` - **Crystal Reports templates.**

- `repload_NNM.SRP` – **Configuration file for the HP OpenView Reporter** `repload` **command.**

where *`database_type`* **is either** `Solid`, `Oracle`, **or** `SQLServer`.

Copy the files to the following locations on your Windows OS system.

- Copy `NNMOVReporterIntegration.pdf` to
  `C:\Program Files\HP OpenView\help`.

- Copy `repload_NNM.SRP` to
  `C:\Program Files\HP OpenView\newconfig\packages`.

- Copy `*.rpt` to
  `C:\Program Files\HP OpenView\data\reports\nnm`
  (you may need to create this directory).

  The source directory for the `.rpt` files depends on your database type
  (SOLID, Oracle, or SQLServer).

Step 2: Move the Report Package

a. Using the HP OpenView Reporter interface, select
   `File:Configure->Report Packages`.

b. Move report package (`NNM Solid`, `OV_ORACLE`, `OVSQL`) from the
   `Available Packages` list to the `Installed Packages` list.

c. Click `[OK]`.

Step 3: Configure a New Database Entry in HP OpenView Reporter

NOTE If the following items are true, then you do not need to perform this step.

- You have installed HP OpenView Reporter on the same system that
  NNM is installed on. If you have installed HP OpenView Reporter on
  a different system than NNM, see "Remote Connectivity" on page 8.

- You are using the default user ID, password, and server/data source
  name for the NNM embedded database.

a. Using the HP OpenView Reporter interface, select
   `File:Configure->Databases`.

b. From the `Configure Database` dialog box, click `[New]`.

c. At the `Database Name` prompt, type **NNM**.

d. Click `[OK]`.

e. In the `Configure Database` dialog box, `Other Databases`, section
   enter the following information about the Solid ODBC Data Source
   Name.

In the `Server or DSN` field, type **OV_ORACLE** or **OVSQL**, depending on the database that you are using. In the `User ID` field, type **ovdb**. In the `Password` field, type **ovdb**. If you configured your NNM data warehouse to use another user ID, password, or server/data source name, apply that information in place of the above defaults. If you change the defaults, you need to also change the user ID, password, and server/data source name in the report templates. Use the Seagate™ Crystal Report Professional Edition product to change these values in the report templates.

f. Click [OK].

Step 4: Load the Report Templates into HP OpenView Reporter Database

a. Make sure the `repload_NNM.SRP` file exists in the
`\Program Files\HP OpenView\newconfig\packages` **directory.**

If you did not use the default server/data source name, be sure to change the `DB_SERVER` value in the `repload_NNM.SRP` file to match the new value.

b. Using the [Start] button from the task bar, select `Run` and enter the following command:

`repload c:\Program Files\HP OpenView\newconfig\packages\repload_NNM.SRP`

The report templates are now loaded. You should see information similar to the following, in the status pane of the HP OpenView Reporter interface:

```
1999/07/13 03:00:28 Scheduler: Next scheduled action at 07/14/99 00:29:00
1999/09/09 23:22:55 RepLoad: Begin loading template file repload_NNM.txt
1999/09/09 23:22:58 RepLoad: Completed loading template file
```

When you expand the `Reports` category in the scoping pane, you will see a new report category called `NNM`. When you expand this category, you should see numerous NNM reports. The reports are registered in the HP OpenView Reporter database, and are ready to run.

Remote Connectivity

You can configure HP OpenView Reporter to read data from an NNM
embedded database running on a different system. To do this, change the
data source name to specify the remote embedded database when you
configure a new database entry in HP OpenView Reporter. You must also
make other configuration changes within HP OpenView Reporter. See
the online manual, *HP OpenView Reporter Concepts Guide*, for more
information. This topic is discussed in the "Reporting From other
Database" section of the "Customizing Reporter" chapter.

If you are remotely connecting to Oracle or Microsoft SQL Server, refer to
the *Reporting and Data Analysis with HP OpenView Network Node
Manager* manual.

WARNING   **You cannot have NNM and HP OpenView Reporter on the same
system if you have configured HP OpenView Reporter to read
data from an NNM embedded database running on a different
system.**

This procedure describes how to connect to the NNM embedded database
when HP OpenView Reporter is installed on a different system than the
NNM embedded database.

1. Locate the `solid35ODBC.exe` file that you downloaded with the
   integration patch.

2. Verify that this file is on your HP OpenView Reporter system.

3. Run the `solid35ODBC.exe` file. Follow the default installation
   procedure.

4. From the Windows NT Control Panel, double-click `Data Sources
   (ODBC)`.

   If you are running Windows 2000, double-click `Administrative
   Tools` and then double-click `Data Sources (ODBC)`.

5. Select the `System DSN` tab from `ODBC Data Source Administrator`
   window.

6. Click `[Add]`.

7. **Select** SOLID ODBC Driver 3.50.

8. **Click** [Finish].

9. **In the** SOLID ODBC Driver Setup **dialog box:**
   type ovdbrun in the Data Source Name **field. Type in a description.**

   Type the following in the NetworkName **field:**
   tcpip <fully_qualified_remote_system_name> 2690. For
   example, if the remote system name is firestar.cnd.hp.com, **the**
   NetworkName **is:** tcpip firestar.cnd.hp.com 2690.

10. **Click** [OK]**in the** SOLID ODBC Driver Setup **dialog box.**

11. **Click** [OK] **in the** ODBC Data Source Administrator **window.**

Running the Reports

There are numerous ways to run the reports:

- Select `Action:Run->Generate Reports` command from the pull-down menu.

- Select the `Run Reports` icon from the task bar.

- Right-click on a specific report in the scoping pane.

- Wait for the scheduler to run reports again. By default, this will occur nightly around 2AM.

See the online manual, *HP OpenView Reporter Concepts Guide*, for more information.

Once the reports are generated, your index should have some additional hyperlinks and categories.

Viewing the Reports

You can view the generated reports from the following location:

`C:\Program Files\HP OpenView\data\webpages\Nnm`

Report Descriptions

This section provides a description of each report included in this patch.

NNM Events by Node Name (NNM EventsNodename)

This report illustrates the devices on your network (identified by nodename) that are generating the most alarms. The first graph shows the 10 nodes that have generated the most alarms. The scale is number of alarms. The remaining graphs show the most recent history of alarms for each of the top 10 nodes.

NNM Events by Severity (NNM EventSevTrend)

This report provides a summary of the alarms on your network, grouped by severity. The graph illustrates the percentage of alarms with a given severity. The table specifies the number of alarms of each severity type.

NNM Event Category Trend (past seven days) (NNM EventsCatTrend7Day)

This report illustrates the number of alarms in each alarm category over a period of seven days. This report analyzes the last seven days of alarms in the data warehouse.

NNM Event Severity Trend (past seven days) (NNM EventsSevTrend7Day)

This report illustrates the number of alarms of each alarm severity for the last seven days of alarms in the data warehouse.

NNM Event Trend

This report illustrates the number of alarms of each alarm severity subdivided by the date of the alarm.

NNM Topology Detail Report (DMI managed devices) (NNM TopologyDMIDetail)

This report displays topology details of every DMI (Desktop Management Interface) managed device in your topology. This report displays the DMI devices in alphabetical order by host name. Blank fields under the DMI Device Hostname column indicate additional interfaces for a given device. Blank fields in the SNMP System Description column indicate that this field was not configured on the SNMP agent.

NNM Topology Detail Report (network devices) (NNM TopologyNetDevices)

This report displays topology details of every network device in your topology. This report displays the network devices in alphabetical order by host name. Blank fields under the Device Hostname column indicate additional interfaces for a given device. Blank fields in the SNMP System Description column indicate that this field was not configured on the SNMP agent. Multihomed devices (devices with LAN cards attached to two or more subnets) are treated as routers.

NNM Topology Overview (NNM TopologySummary)

This report summarizes the number of interfaces and segments that exist on every network discovered by NNM. These numbers apply only to managed networks.