HP Data Protector A.06.10

Integration guide for HP Reporter

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About this guide

This guide describes how to install, configure, and use the integration of Data Protector with HP Reporter. It discusses how to use the application for Data Protector service management.

Intended audience

This guide is intended for backup administrators, with knowledge of:

- HP Reporter
- Data Protector concepts

Documentation set

Other documents and online Help provide related information.

Guides

Data Protector guides are available in printed format and in PDF format. Install the PDF files during the Data Protector setup procedure by selecting the `English documentation and Help` component on Windows or the `OB2-DOCS` component on UNIX. Once installed, the guides reside in the `Data_Protector_home\docs` directory on Windows and in the `/opt/omni/doc/C/` directory on UNIX.

You can find these documents from the Manuals page of the HP Business Support Center website:

> http://www.hp.com/support/manuals

In the Storage section, click **Storage Software** and then select your product.

- *HP Data Protector concepts guide*

  This guide describes Data Protector concepts and provides background information on how Data Protector works. It is intended to be used with the task-oriented online Help.

- *HP Data Protector installation and licensing guide*

  This guide describes how to install the Data Protector software, taking into account the operating system and architecture of your environment. This guide also gives details on how to upgrade Data Protector, as well as how to obtain the proper licenses for your environment.

- *HP Data Protector troubleshooting guide*

  This guide describes how to troubleshoot problems you may encounter when using Data Protector.

- *HP Data Protector disaster recovery guide*

  This guide describes how to plan, prepare for, test and perform a disaster recovery.

- *HP Data Protector integration guides*

  These guides describe how to configure and use Data Protector to back up and restore various databases and applications. It is intended for backup administrators or operators. There are four guides:

  - *HP Data Protector integration guide for Microsoft applications: SQL Server, SharePoint Portal Server, Exchange Server, and Volume Shadow Copy Service*

    This guide describes the integrations of Data Protector with the following Microsoft applications: Microsoft Exchange Server, Microsoft SQL Server, and Volume Shadow Copy Service.

  - *HP Data Protector integration guide for Oracle and SAP*

    This guide describes the integrations of Data Protector with Oracle, SAP R3, and SAP DB/MaxDB.

  - *HP Data Protector integration guide for IBM applications: Informix, DB2, and Lotus Notes/Domino*

    This guide describes the integrations of Data Protector with the following IBM applications: Informix Server, IBM DB2, and Lotus Notes/Domino Server.

  - *HP Data Protector integration guide for VMWare, Sybase, Network Node Manager, and Network Data Management Protocol Server*

    This guide describes the integrations of Data Protector with VMware, Network Node Manager, and Network Data Management Protocol Server.

- *HP Data Protector integration guide for HP Service Information Portal*

  This guide describes how to install, configure, and use the integration of Data Protector with HP Service Information Portal. It is intended for backup administrators. It discusses how to use the applications for Data Protector service management.

- *HP Data Protector integration guide for HP Reporter*

  This guide describes how to install, configure, and use the integration of Data Protector with HP Reporter. It is intended for backup administrators. It discusses how to use the applications for Data Protector service management.

- *HP Data Protector integration guide for HP Operations Manager for UNIX*

  This guide describes how to monitor and manage the health and performance of the Data Protector environment with HP Operations Manager and HP Service Navigator on UNIX.

- *HP Data Protector integration guide for HP Operations Manager for Windows*

  This guide describes how to monitor and manage the health and performance of the Data Protector environment with HP Operations Manager and HP Service Navigator on Windows.

- *HP Data Protector integration guide for HP Performance Manager and HP Performance Agent*

  This guide provides information about how to monitor and manage the health and performance of the Data Protector environment with HP Performance Manager (PM) and HP Performance Agent (PA) on Windows, HP-UX, Solaris and Linux

- *HP Data Protector zero downtime backup concepts guide*

  This guide describes Data Protector zero downtime backup and instant recovery concepts and provides background information on how Data Protector works in a zero downtime backup environment. It is intended to be used with the task-oriented *HP Data Protector zero downtime backup administrator's guide* and the *HP Data Protector zero downtime backup integration guide*.

- *HP Data Protector zero downtime backup administrator's guide*

  This guide describes how to configure and use the integration of Data Protector with HP StorageWorks Virtual Array, HP StorageWorks Enterprise Virtual Array, EMC Symmetrix Remote Data Facility and TimeFinder, and HP StorageWorks Disk Array XP. It is intended for backup administrators or operators. It covers the zero downtime backup, instant recovery, and the restore of filesystems and disk images.

- *HP Data Protector zero downtime backup integration guide*

  This guide describes how to configure and use Data Protector to perform zero downtime backup, instant recovery, and standard restore of Oracle, SAP R/3, Microsoft Exchange Server, and Microsoft SQL Server databases. The guide also describes how to configure and use Data Protector to perform backup and restore using the Microsoft Volume Shadow Copy Service.

- *HP Data Protector MPE/iX System user guide*

This guide describes how to configure MPE/iX clients and how to back up and restore MPE/iX data.

- *HP Data Protector Media Operations user guide*

  This guide provides information for network administrators responsible for maintaining and backing up systems on the tracking and management of offline storage media. It describes the tasks of installing and configuring the application, performing daily media operations and producing reports.

- *HP Data Protector product announcements, software notes, and references*

  This guide gives a description of new features of HP Data Protector A.06.10. It also provides information on supported configurations (devices, platforms and online database integrations, SAN, and ZDB), required patches, and limitations, as well as known problems and workarounds. An updated version of the supported configurations is available at http://www.hp.com/support/manuals

- *HP Data Protector product announcements, software notes, and references for integrations to HP Operations Manager, HP Reporter, HP Performance Manager, HP Performance Agent, and HP Service Information Portal*

  This guide fulfills a similar function for the listed integrations.

- *HP Data Protector Media Operations product announcements, software notes, and references*

  This guide fulfills a similar function for the listed integrations.

- *HP Data Protector Command Line Interface Reference*

  This guide describes the Data Protector Command Line Interface commands, their options and usage as well as providing some basic command line examples.

Online help

Data Protector provides context-sensitive (F1) Help and Help Topics for Windows and UNIX platforms.

You can access the online help from the top-level directory on the installation DVD without installing Data Protector:

- *Windows:* Unzip DP_help.zip and open DP_help.chm.
- *UNIX:* Unpack the zipped tar file DP_help.tar.gz, and access the online help system through DP_help.htm.

Documentation map

Abbreviations

Abbreviations in the documentation map that follows are explained below. The guide titles are all preceded by the words "HP Data Protector."

Abbreviation	guide
CLI	Command line interface reference guide
Concepts	Concepts guide
DR	Disaster recovery guide
GS	Getting started guide
Help	Online help
IG-IBM	Integration guide—IBM applications
IG-MS	Integration guide—Microsoft applications
IG-O/S	Integration guide—Oracle, SAP R/3, and SAP DB/MaxDB
IG-OMU	Integration guide—HP Operations Manager, UNIX
IG-OMW	Integration guide—HP Operations Manager, Windows
IG-PM/PA	Integration guide—HP Performance Manager and HP Performance Agent
IG-Report	Integration guide—HP Reporter
IG-SIP	Integration guide—HP Service Information Portal
IG-Var	Integration guide—VMware, Sybase, Network Node Manager, and NDMP Server
Install	Installation and licensing guide
MO GS	Media Operations getting started guide
MO RN	Media Operations product announcements, software notes, and references

Abbreviation	guide
MO UG	Media Operations user guide
MPE/iX	MPE/iX system user guide
PA	Product announcements, software notes, and references
Trouble	Troubleshooting guide
ZDB Admin	ZDB administrator's guide
ZDB Concpt	ZDB concepts guide
ZDB IG	ZDB integration guide

Map

The following table shows where to find information of different kinds. Shaded squares are a good place to look first.

	Help	GS	Concepts	Install	Trouble	DR	PA	MS	O/S	IBM	Var	SIP	Report	OMU	OMW	Concept (ZDB)	Admin (ZDB)	IG	GS (MO)	User (MO)	PA	MPE/iX	CLI
Backup	X	X	X					X	X	X	X					X	X	X				X	
CLI																							X
Concepts/Techniques	X		X					X	X	X	X	X		X	X	X	X	X				X	
Disaster Recovery	X		X			X																	
Installation/Upgrade	X	X		X			X					X		X	X				X	X		X	
Instant Recovery	X		X													X	X	X					
Licensing	X		X			X														X			
Limitations	X				X		X	X	X	X	X			X						X		X	
New features	X						X																
Planning strategy	X		X									X				X							
Procedures/Tasks	X			X	X	X		X	X	X	X	X		X	X				X	X	X		
Recommendations			X			X										X					X		
Requirements				X		X		X	X	X	X				X				X	X	X		
Restore	X	X	X					X	X	X	X								X	X		X	
Support matrices						X																	
Supported configurations																X							
Troubleshooting	X			X	X			X	X	X	X	X							X	X			

Integrations

Look in these guides for details of the following integrations:

Integration	Guide
HP Operations Manager for UNIX/for Windows	IG-OMU, IG-OMW
HP Performance Manager	IG-PM/PA
HP Performance Agent	IG-PM/PA
HP Reporter	IG-R
HP Service Information Portal	IG-SIP
HP StorageWorks Disk Array XP	all ZDB
HP StorageWorks Enterprise Virtual Array (EVA)	all ZDB

Integration	Guide
HP StorageWorks Virtual Array (VA)	all ZDB
IBM DB2 UDB	IG-IBM
Informix	IG-IBM
Lotus Notes/Domino	IG-IBM
MaxDB	IG-O/S
Media Operations	MO User
MPE/iX System	MPE/iX
Microsoft Exchange Servers	IG-MS, ZDB IG
Microsoft Exchange Single Mailbox	IG-MS
Microsoft SQL Servers	IG-MS, ZDB IG
Microsoft Volume Shadow Copy Service (VSS)	IG-MS, ZDB IG
NDMP Server	IG-Var
Network Node Manager (NNM)	IG-Var
Oracle	IG-O/S
Oracle ZDB	ZDB IG
SAP DB	IG-O/S
SAP R/3	IG-O/S, ZDB IG
Sybase	IG-Var
Symmetrix (EMC)	all ZDB
VMware	IG-Var

Document conventions and symbols

Table 1 Document conventions

Convention	Element
Blue text: Table 1 on page 15	Cross-reference links and e-mail addresses
Blue, underlined text: http://www.hp.com	website addresses
Bold text	• Keys that are pressed • Text typed into a GUI element, such as a box • GUI elements that are clicked or selected, such as menu and list items, buttons, tabs, and check boxes
Italic text	Text emphasis
`Monospace` text	• File and directory names • System output • Code • Commands, their arguments, and argument values
`Monospace, italic` text	• Code variables • Command variables
`Monospace, bold` text	Emphasized monospace text

△ CAUTION:
Indicates that failure to follow directions could result in damage to equipment or data.

① IMPORTANT:
Provides clarifying information or specific instructions.

NOTE:

Provides additional information.

TIP:

Provides helpful hints and shortcuts.

General Information

General information about Operations Manager can be found at http://www.hp.com/go/dataprotector

HP technical support

For worldwide technical support information, see the HP support website:

http://www.hp.com/support

Before contacting HP, collect the following information:

- Product model names and numbers
- Technical support registration number (if applicable)
- Product serial numbers
- Error messages
- Operating system type and revision level
- Detailed questions

Subscription service

HP recommends that you register your product at the Subscriber's Choice for Business website:

http://www.hp.com/go/e-updates

After registering, you will receive e-mail notification of product enhancements, new driver versions, firmware updates, and other product resources.

HP websites

For additional information, see the following HP websites:

- http://www.hp.com
- http://www.hp.com/go/storage
- http://www.hp.com/support/manuals
- http://www.hp.com/support/downloads

Documentation feedback

HP welcomes your feedback.

To make comments and suggestions about product documentation, please send a message to DP.DocFeedback@hp.com. All submissions become the property of HP.

About this guide

1 Introduction

Overview

This guide describes the integration of Data Protector with HP Reporter.

- **HP Data Protector** is a backup and recovery solution designed specifically for enterprise-wide and distributed environments.

  Data Protector provides information that can be used, through reports and messaging tools, to help you monitor the status of processes, in addition to providing backup and recovery functionality.

- **HP Reporter** is a management reporting tool that transforms data captured by Operations Manager agents into management information, including real-time and historical availability and performance reports. Reporter can also generate reports on systems managed by HP Operations Manager.

  After collecting information based on pre-defined and user-specified lists of metrics, Reporter formats the collected data into Web page reports.

The integration allows information from Data Protector to be used by Reporter for its reporting capabilities.

Data Protector also integrates with:

- **HP Service Information Portal (SIP)**, which creates a "portal" view into a customer's services for a service provider. It allows you to present data from your internal applications such as Data Protector, OVIS, HP Reporter, and HP Operations Manager as reports on custom web pages for each of your clients. See *HP Data Protector integration guide for HP Service Information Portal* for more information.

- **HP Operations Manager**, an operations management solution that gives you control over the IT infrastructure. It monitors, controls and reports on network, systems, storage, databases and applications. The integration is covered in two guides:

  - *HP Data Protector integration guide for HP Operations Manager for UNIX*
  - *HP Data Protector integration guide for HP Operations Manager for Windows*

2 Data Protector-Reporter integration

Introduction

The integration of Reporter with Data Protector, via Operations Manager, provides detailed and in-depth information concerning the health and status of Data Protector's data protection services.

The integration provides the following benefits:

- Enterprise-level data is presented in easy-to-read charts, tables, and graphs, making it simpler to review and analyze.
- Critical information concerning Data Protector services is available through any compatible web browser on your network, so administrators are not tied to a single location for accessing the Data Protector or Operations machines.
- Additional reports can be generated, customized, or modified using Crystal Reports. This product is not included with Operations Manager, Reporter, or Data Protector. Refer to the Crystal Reports documentation for template and configuration information.
- The reports provide a high-level view of the data protection services for the whole enterprise.

Prerequisites

The integration requires the following licensed components:
- HP Data Protector
- Operations Manager for UNIX
- HP Reporter
- Supported Oracle 8i, 9i, or 10g Database (third party software)
- Data Protector integration into Operations Manager for UNIX

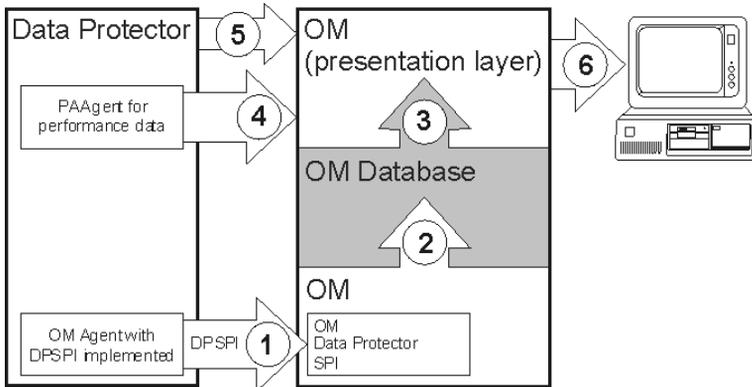## Product capabilities and integration benefits

This integration maximizes the potential of Operations Manager, Reporter, and Data Protector, providing all of the following benefits:

- Enterprise-level data is presented in easy to read charts, tables, and graphs, making it simpler to review and analyze.
- Critical information concerning Data Protector services is available through any compatible web browser on your network, so administrators are not tied to a single location for accessing the Data Protector or Operations machines.
- Additional reports can be generated, customized, or modified using Crystal Reports. This product is not included with Operations Manager, Reporter, or Data Protector. Refer to the Crystal Reports documentation for template and configuration information.
- The reports provide a high-level view of the data protection services for the whole enterprise.

Component list

HP Data Protector	A data protection service that handles data backup and recovery across various systems and media types.
HP Operations Manager for UNIX	A central management point for various remote Operations Manager applications. Collects and analyzes data, automates critical response, as well as forwarding messages to other services.
HP Reporter	A reporting service that further analyzes, inspects, and collects data gathered by Operations Manager and formats it into a web-based presentation.
Data Protector integration for HP Operations Manager for UNIX	Helps you monitor and manage the health and performance of your Data Protector environment with HP Operations Manager, HP Service Navigator, and the HP Performance (PA) Agent.

How Data Protector integrates with Reporter

1. Operations Manager receives information from Data Protector via the DP-Operations Manager integration.
2. The information is stored in the Operations Manager database.
3. Reporter extracts necessary Data Protector-specific data from the database.
4. Reporter also collects performance related data from the Data Protector server using the Performance Agent.
5. Cell Request Server serves skipped files data to Reporter via port 5555.
6. Reporter generates Data Protector reports using data collected in steps 3, 4, and 5.

Dependencies

- Operations Manager requires Oracle 8i or 9i. See the *Operations Manager Installation Guide*.
- Java Developers Kit 1.3 is required for Operations Manager
- Netscape Navigator 4.7 is listed as a required component at some points, but this is unnecessary if a web browser is available on another machine.

- The correct environment is required before installing the components of the integration. This may include installing various patches, software, and changing settings. Please refer to the corresponding installation guides for more information.

Table 2 Software requirements

Application	Version	Platform
Operations Manager UNIX	8.x	HP-UX 11.11, 11.23 IA & PA, 11.31 IA & PA Solaris 8, 9, 10
Data Protector	5.1	HP-UX 11.11 Solaris 7, 8, 9 Windows 2000, XP, 2003, 2003 32–bit
	5.5	HP-UX 11.11, 11.23 Parisc only Solaris 7, 8, 9 Windows 2000, XP, 2003 (32-bit)
	6.0	HP-UX 11.11, 11.23 IA & PA Solaris 7, 8, 9, 10 Windows 2000, XP, 2003 (32-bit), 2003 (64-bit) SUSE Linux Enterprise Server 9 (x64)
	6.1	HP-UX 11.11, 11.23 IA & PA, 11.31 IA & PA Solaris 8, 9, 10 Windows XP, 2003 (32-bit), 2003 (64-bit), 2008 (64-bit) SLeS 9, 10 RHEL 4, 5
Operations Manager Agent	8.x	HP-UX 11.11, 11.23 IA & PA, 11.31 IA & PA Windows XP, 2003 (32-bit) Solaris 8, 9, 10 SLeS 9, 10 RHEL 4, 5
Operations Manager DB	Oracle 8i/9i/10g	HP-UX 11.11, 11.23 IA & PA, 11.31 IA & PA Solaris 8, 9, 10

Application	Version	Platform
HP Reporter	3.7	Windows 2003 (32-bit), XP
	3.8	Windows 2003 (32-bit), XP

Table 3 Supported platforms

Application	Supported Version	Supported OS Platform
HP Reporter 3.7 and HP Operations Manager for UNIX 8.x on separate systems (Reporter is Windows, Operations Manager Server is UNIX)	Reporter 3.7	Windows 2003 (32-bit), XP
HP Reporter 3.8 and HP Operations Manager for UNIX 8.x on separate systems (Reporter is Windows, Operations Manager Server is UNIX)	Reporter 3.8	Windows 2003 (32-bit), XP

Data Protector/Reporter integration

The Data Protector/Reporter integration consists of three major elements:

- *DP/Operations Manager/Reporter integration* Populates Data Protector specific data into the Operations Manager database. To produce Data Protector specific reports, Reporter reads the Operations Manager database to retrieve data. An Oracle 8i/9i client should be installed on the Reporter server.
- *DP/PA/Reporter integration* Reporter gathers performance and transaction data from the Data Protector Management server based on a specified metric list and produces a report.
- *DP/Reporter integration* The final main element of the Data Protector-Reporter integration is the Cell Request Server (CRS) process in Data Protector cell manager. The CRS serves data to Reporter via the socket 5555. If any port other than 5555 is used, this part of integration will not work. The password for the user `Java` must be the default password.

Installing the integration

Prerequisites

- A working Data Protector-Operations Manager UNIX integration

- A working Reporter (3.7/3.8) installation

See the *HP Data Protector integration guide for HP Operations Manager* or the Reporter installation documents for more information.

Installation

To install the Data Protector–Reporter integration:

1. On the Reporter system, insert the Data Protector Windows DVD.
2. Change to the `HP_software_Integrations` directory.
3. Run: `Data Protector-Reporter Integration.exe`
4. If you are installing the integration package on Reporter version 3.7 or 3.8, you are prompted to select the version of the Operations Manager Server (Operations Manager 8.x). Select the version of the Management Server available in your environment. The installer will install the appropriate reports for the version.
5. Follow the on-screen instructions to complete the installation.

Using the Reporter integration with Data Protector

Adding a DP 6.1 cell manager

1. On the Reporter GUI, select **File -> Configure -> Reporter Packages**
   Add Data Protector 6.1 to the Installed Packages list.
2. Use the executable utility `AddCell.exe` to register a Data Protector cell manager with the module:
   Go to **START -> Program Files -> HP -> DP-Reporter Integration -> AddCell**.
   You are asked to provide the following:
   - The hostname of the Data Protector Cell Manager
   - Java user password (*default:* no password)
   - The port number of the `omniInet` process (*default:*5555)
   - Whether the Data Protector Cell Manager is a manager of managers (MOM) system

AddCell options:

AddCell	Add a new DP Cell Manager.
RemoveCell	Remove a DP Cell Manager.
RemoveAll	Remove all the DP Cell Manager names that were added using **addcell** .
ShowCell	List all the DP Cell Managers that are present in the database.
Exit	Exit from the program.

Use this to register as many Data Protector Cell Managers as required.

3. Gather data from Data Protector.

Once Data Protector Cell Managers are registered to Reporter, the utility DPGather.exe collects data from them. It is launched automatically when required.
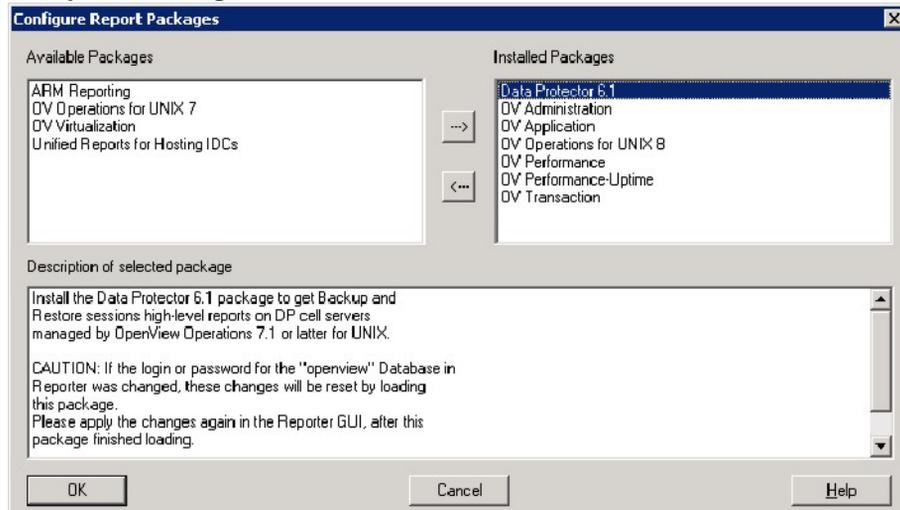
📝 NOTE:

If the Data Protector Cell Manager is a MOM, then the mom_info file must be present in *OmniBack dir*\Config\Server\cell dir. If the file is missing, DPGather will not populate the DPTrend table.

Configuring the integration

Configure the Operations Manager UNIX-DP Cell Manager integration:

1. Make sure that OMU 8.x is running with HP Data Protector SPI installed on it.

2. Add the Operations Manager 8.x package in the Reporter GUI: **File -> configure -> Reporter Packages**.

Move the package Operations Manager for UNIX 8 from Available Packages to Installed Packages.

3. Check that Net listener is installed

   On the Oracle database server for systems running Operations Manager 8, the Net listener should already be installed and running. Check to see if it is as follows. It is assumed you are logged on to the Oracle database server system for Operations Manager as root.

   - To see if the listener is configured, enter the command:

     `grep listener /etc/services`

   - If the output includes a line beginning with `listener`, such as

     `listener 1521/tcp #Oracle listener`

     the listener is already configured and you can proceed to **Task 3**.

     If the port number in the output is different from `1521/tcp`, consult with your Oracle database or Operations Manager administrator to see if the port number can be changed to 1521 and the listener restarted. If not, you can change the port number on the client side in two ways:

- Either select a different port in the Windows configuration in Step **f**, Task 2, to match the port specified on the UNIX Oracle server.
- Or modify the `\Oracle\Ora92\network\admin\tnsnames.ora` file to enter the port number you specified in Step **f**, Task 2, on the system.

If no output appears, the listener is not configured, and you must proceed to the next task.

4. If necessary, configure the Net listener.

   To configure the Net listener on the HP-UX Oracle database server system, run the `opcsqlnetconf` script. For Operations Manager 8 installations, this script is located on the Operations Manager server system in directory `/opt/OV/bin/OpC`.

NOTE:

If you run the script and receive the WARNING: "Above Net files already exist. Do you want to replace them?," respond "No" to end the script execution. Call your Operations Manager or database administrator for assistance.

The script assumes the Operations Manager Oracle database instance `openview` is on the same system as that on which Operations Manager is installed, and prompts you with the system name where the script is running as the default "listener" system. The script must be run on the system where the Operations Manager Oracle database instance `openview` resides.

To configure the Operations Manager UNIX server:

a. Log on to the UNIX server on which Operations Manager is installed as root.

b. Run the `opcsqlnetconf` script. For most responses, you only need to click **Enter**.

The script prompts and output are as follows:

```
Operations Manager Net configuration script opcsqlnetconf.
Verify/Set Variables:
Please enter ORACLE_SID [openview]: [Enter]
Please enter ORACLE_HOME [/opt/oracle/product/9.2.0.1.0]: [Enter]
Please enter the name of the database server node
(normally management server) [voyager]: [Enter]
Do you want to enable automatic startup of the Net listener at system boot (y/n) [y] ? [Enter]
Do you want to start the Net listener now (y/n) [y] ? [Enter]

LSNRCTL for HPUX: Version 2.3.4.0.0 - Production on 18-NOV-05 14:39:39
Copyright (c) Oracle Corporation 2002. All rights reserved.
Starting /opt/oracle/product/9.2x/bin/tnslsnr: please wait...
TNSLSNR for HPUX: Version 2.3.4.0.0 - Production
System parameter file is /etc/listener.ora
```

```
Log messages written to /opt/oracle/product/9.2.0.1.0/network/log/listener.log
Listening on: (ADDRESS=(PROTOCOL=ipc)(DEV=10)(KEY=openview))
Listening on: (ADDRESS=(PROTOCOL=tcp)(DEV=14)(HOST=15.8.153.173)(PORT=1521))
Connecting to (ADDRESS=(PROTOCOL=IPC)(KEY=openview))
STATUS of the LISTENER
-----------------------
Alias LISTENER
Version TNSLSNR for HPUX: Version 2.3.4.0.0 - Production
Start Date 18-NOV-05 14:39:46
Uptime 0 days 0 hr. 0 min. 1 sec
Trace Level off
Security OFF
SNMP OFF
Listener Parameter File /etc/listener.ora
Listener Log File /opt/oracle/product/9.2.0.1.0/network/log/listener.log
Services Summary...
openview has 1 service handler(s)
The command completed successfully
Operations Manager Net configuration script opcsqlnetconf finished.
#
```

5. Verify that the Listener is running.

   Enter the commands:

   export ORACLE_HOME= *pathname*

   (*pathname* is typically /opt/oracle/product/9.2.0.1.0)

   $ORACLE_HOME/bin/lsnrctl status

   Look in the resulting status summary for a **Services Summary** indicating that openview has *n* service handlers (where *n* is one or greater). If an error message appears, indicating "no listener," ask your Oracle database or Operations Manager administrator to start the listener.

6. Configure the Windows Client System (Running Reporter).

   This section covers the Windows client configuration. This configuration allows Reporter to connect to the UNIX system from which the Operations Manager database is accessed.

   Task 1: Install Oracle 9.2.0.1.0 Client software.

   You need Oracle 9i/10g Client, Release 2 (9.2.0.1.0). You also need administrator privileges on the Windows client where Reporter is installed.

   NOTE:

   If you have the Reporter main window open, close it before you begin the installation of Oracle 9.2.0.1.0 Client software.

a. If you have Oracle installed on your system, at your Windows system insert the *Oracle9i/10g Client CD* and in the dialog box that appears, select **Install/Deinstall Products**.

If you have no Oracle Products on your system skip this step.
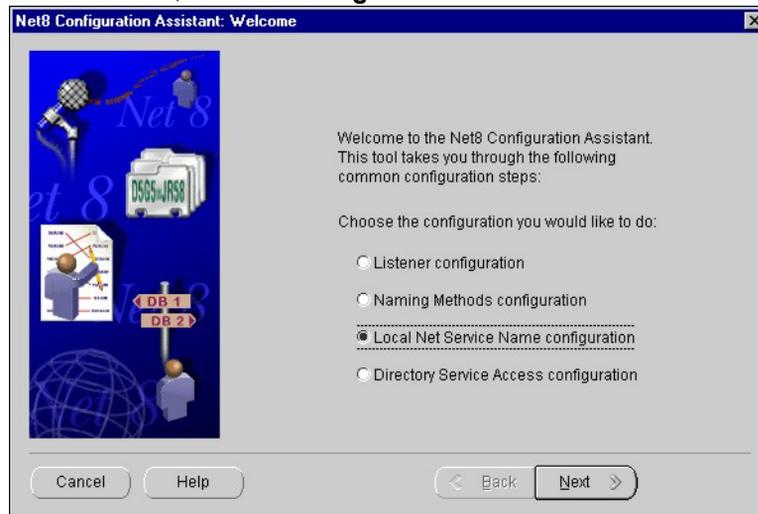
b. In the Oracle Universal Installer **Welcome** dialog, click **Next**

c. For File Locations enter the **Source** and **Destination** file locations for this product. Click **Next**.

d. For the Installation Types select **Administrator** and click **Next**.

e. Verify information in the **Summary** dialog that appears. Click **Install**.

The install process automatically starts the **Configuration Tools** dialog where you can choose to run the **Net Configuration Assistant**.

Task 2: Configure the Net connection to the Operations Manager database.

After you complete the installation of the Oracle client software (the Net Configuration is optionally part of the client install and dialog steps may differ slightly) on the Windows system running Reporter, complete the following steps on that same system:

a. From the **Start>Programs** menu, select **Oracle - *Oracle Home*, and Network Administration**, and **Net Configuration Assistant**.
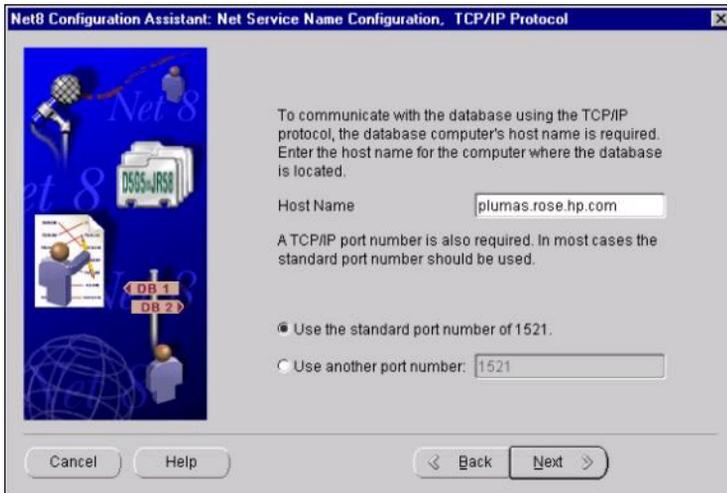

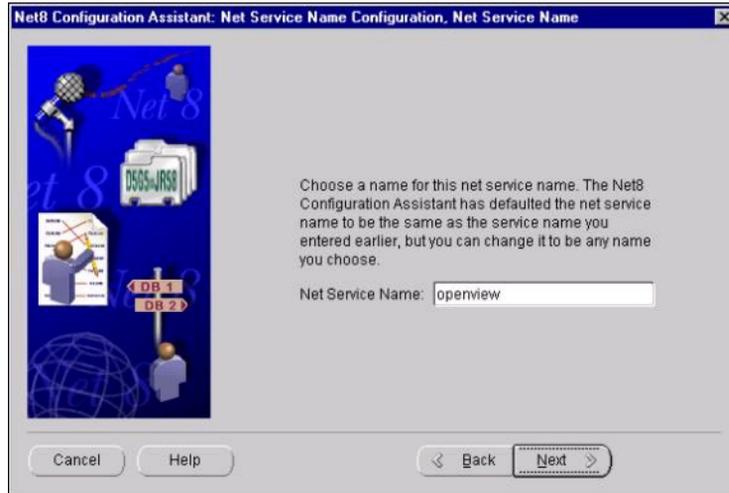At the Welcome dialog select **Local Net Service Name Configuration**, click **Next**.

b. In the Net Service Name Configuration dialog select **Add** and click **Next**.

c. In the Database Version dialog, select **Oracle9i/10g database or service** (select the other option if connecting to a previous Oracle version), click **Next**.

d. At the Service Name dialog, supply the global database name specified during database creation.

Click **Next**.

Rerun the Net assistant and select test to verify the actual, full Net Service Name.

> **NOTE:**
> The Net Service Name (that is, **openview**) may have the network domain appended to its name. (For example, `openview.rose.hp.com`, where "`rose.hp.com`" is the domain name. The domain name may or may not be necessary, depending on how your system is set up.)

e. At the Select Protocols dialog, select **TCP** and click **Next**.

f. At the TCP/IP Protocol dialog, supply the **Host Name** and **port number** (typically 1521). Click **Next**.

g. At the Test dialog, select **Yes, perform a test**, and click **Next**.

h. At the Connecting dialog, verify that the connection was successful (you may have to change the login credentials for the test to succeed; the login/password should match those set up for Operations Manager connecting to the database). Click **Next**.

i. At the Net Service Name dialog, supply a **Net Service Name**, (for example: `openview`) click **Next**.

j. At the **Another Net Service Name?** Dialog, select **No**, click **Next**.

k. At the **Done** dialog, click **Next**, then click **Finish**.

NOTE:

As in step **iv**, the Net Service Name (such as `openview`) may have the network domain appended to its name.

Rerun the Net assistant and select test to verify the actual, full Net Service Name.

Task 3: Verify the Net connection to the Operations Manager database.

After you complete the Net configuration, verify that you can contact the Operations Manager database from your system as follows:

a. From the Start/Programs menu, select **Oracle *Oracle Home*, Database Administration**, and **SQLPlus Worksheet**.

b. In the **Oracle Enterprise Manager Login** dialog, enter the database **User Name** (the recommend user name is `opc_report`) and **Password**. Enter the Service name (`openview[.domain name]`).

c. Click the **OK** button. The SQL*Plus Worksheet should appear. If error messages appear, you have an error in the connection from the system to the Oracle Operations Manager database. Review previous tasks in this section.

d. In the SQL*Plus Worksheet, enter the command to retrieve data from one of the Oracle database tables:

```
select node_group_name from opc_node_groups;
```

A response like the following indicates successful access to the Operations Manager database. If you receive errors, you need to correct them before proceeding. Contact your Oracle database administrator for assistance.

```
NODE_GROUP_NAME
-------------------------------
hp_ux
net_devices
NT40
```

e. From the **File** menu, select **Exit**.

Task 4: Configure the ODBC data source in the Control Panel.

After you have configured Net on the Windows system running Reporter, you must configure the ODBC data source.

On the Windows system where Reporter is (or will be) installed, complete the following steps:

a. Select **Control Panel** from the Windows **Start>Settings** menu.

b. Double-click **ODBC** in the Control Panel window.

c. Select the **System DSN** tabbed page.

   d. Click the **Add…** button and highlight the **Oracle ODBC** driver. Click **Finish**.

   e. In the dialog box that appears, enter the following:

   ```
   Data Source Name: ov_net8
   Description:     your_description
   Service Name:   openview[.domain.name]
   User ID:        (no entry necessary)
   ```

   f. Click **OK**.

   g. Close the **ODBC Data Source Administrator** window.

   h. Close the **Control Panel** window

7. Configure Operations Manager Database in Reporter.

   Now that you have configured the database connection to the Windows 2000 system and installed the Operations Manager for UNIX report package, you can configure Reporter to recognize the Operations database as the source for its data. With Reporter installed on the Windows system, follow these steps:

   a. In the Reporter main window, from the **File** menu, select **Configure**, then **Databases** from the submenu.

   b. In the Other Databases section (lower area) of the Configure Databases dialog box, select the down-arrow in the Database text box, and choose **openview**.

   (If **openview8** does not appear, you will need to review the steps of the previous sections to configure the ODBC setup.)

   c. Complete the remaining text boxes as follows:

   Server: ov_net8

   User ID: *your_Operations Manager_database_user_name*

   Password: *your_Operations Manager_database_password*

   📝 NOTE:

   Though asterisks appear for the password, you must enter the correct password for the Operations Manager user ID.

   ---

   d. Click **OK**.

   e. Reboot the system.

8. Discover Operations Manager systems and gather Operations Manager data.

a. Select **Schedule** in the left pane to display a list of all scheduled actions in the right pane.

b. In the right pane, right-click `Discover_ITO.exe` and select **Run Now**.

c. In the Status pane, check for messages such as:

```
2007/06/04 11:12:07 Discover_ITO: Begin Discovery of ITO database openview
2007/06/04 11:12:07 Discover_ITO: Found NEW ITO Agent on abc.xyz.domain.com
2007/06/04 11:12:07 Discover_ITO: Found NEW ITO Agent on zephram.rose.hp.com
2007/06/04 11:12:07 Discover_ITO: Found NEW ITO Agent on ros59102raw.rose.hp.com
2007/06/04 11:12:07 Discover_ITO: Found NEW ITO Agent on highbeam.rose.hp.com
2007/06/04 11:12:07 Discover_ITO: Examined 4 systems, found 4 new ITO Agents
for a total of 30 known
2007/06/04 11:12:07 Discover_ITO: Examined systems in groups for 3 systems, found
3 new
2007/06/04 11:12:07 Scheduler: Next scheduled action at 05/06/2007 00:15:00
```

If you see errors, return to Task 6 and make sure the password and other fields have been correctly filled in.

d. In the right pane, right-click `Gather_ITO.exe` and select **Run Now**.

e. In the Status pane, check for messages such as:

```
2007/06/04 11:12:07 Scheduler: Starting program "Gather_ITO.exe"
2007/06/04 11:12:07 Gather_ITO: Begin synchronizing with ITO database openview
2007/06/04 11:12:07 Gather_ITO: Processing Historical messages
2007/06/04 11:12:07 Gather_ITO: Processed 2775 Historical messages, Added 860
Summaries, 854 Operator Sums
2007/06/04 11:12:07 Gather_ITO: Processing Active messages
2007/06/04 11:12:07 Gather_ITO: Processed 755 Active messages, Added 9 Summaries,
6 Operator Sums
2007/06/04 11:12:07 Scheduler: Next scheduled action at 05/06/2007 00:15:00
```

Generating and reviewing reports

1. Generate reports.

The Reporter utility `Repcrys.exe` generates reports. It is launched automatically when required.

2. View the reports.

Use the following link to view generated reports:

```
http://OVR_SERVER:PortNumber/HPOV_Reports/
Family_Data_Protector_Service_Level_Reports.htm
```
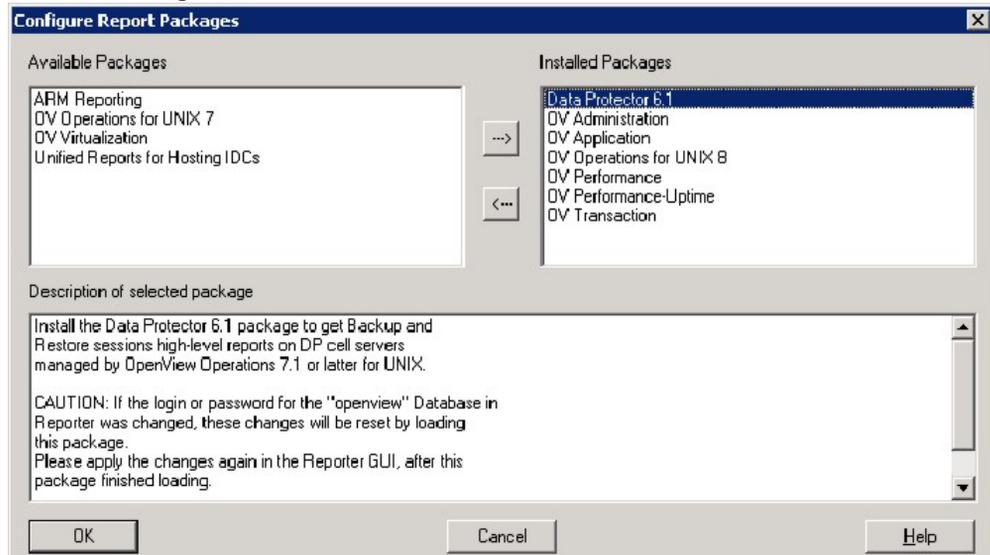
Troubleshooting

- `Not able to load Reporter Database!!`

  Description: The application cannot access the Reporter database.

  Action: Ensure that the reporter database is accessible.

- `Not able to Resolve the host name!!`
  `This cell information is not updated.`

  Description: The application cannot resolve the host name.

  Action: Ensure the host system exists and is accessible.

- `Cell information is not added into database now...!!`
  `Error Code: 42502`

  Description: The application cannot find the required database table.

  Action: Ensure the database table `DPCELLS` is present.

  If the tables do not exist, create/recreate them as follows:

  `newdb -xml INSTALL_DIR\newconfig\Packages\DPCELLS.xml newdb`
  `-xml INSTALL_DIR\newconfig\Packages\DPTREND.xml newdb -xml`
  `INSTALL_DIR\newconfig\Packages\DPPool.xml`

- `Cell information already exists in the Reporter database!!`
  `Error Code: 23000`

  Description: A Data Protector Cell Manager is already registered with Reporter, and you cannot use this application to update the information.

  Action: To add the same Data Protector Cell Manager with different information, remove the existing information from the database and then add the new information. To remove (or de-register) a Cell Manager, use the `AddCell.exe` application, enter the relevant details and click **Remove Cell**.

  Once the Cell Manager is de-registered, data for reports can no longer be collected from it.
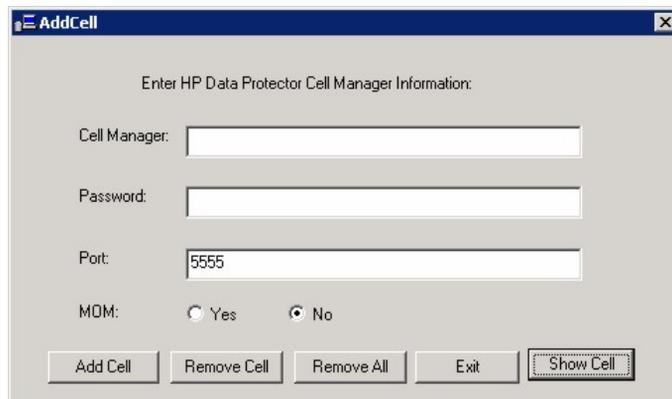
Uninstalling the Reporter integration
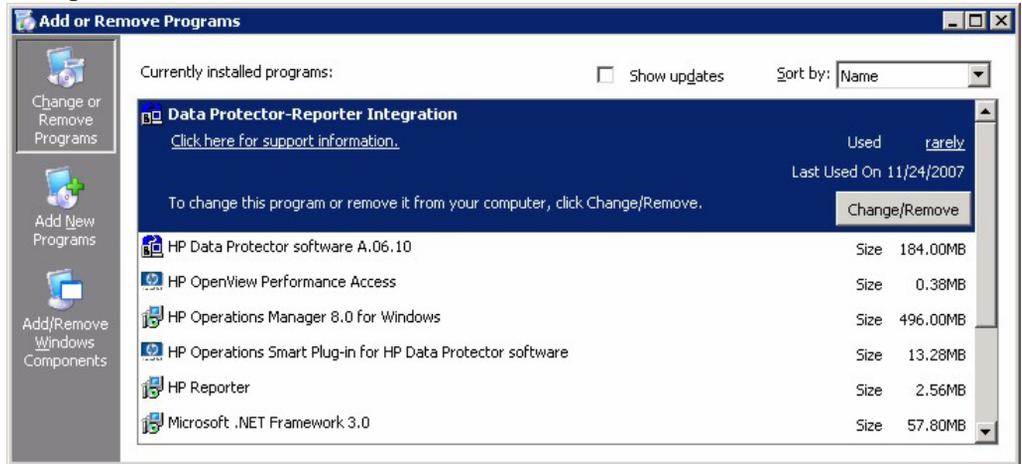
Uninstall the Reporter integration as follows:

1. Go to Reporter GUI. Click on **File -> Configure -> Reporter Packages**. Remove the Data Protector 6.1 and Operations Manager for UNIX packages from Installed Packages.

2. Delete the data from the database.

   Click on **START -> Program Files -> HP -> DP-Reporter Integration -> AddCell -> RemoveAll** to delete the data from the database.

3. Go to **Add or Remove Programs**, select Data-Reporter Integration and click on
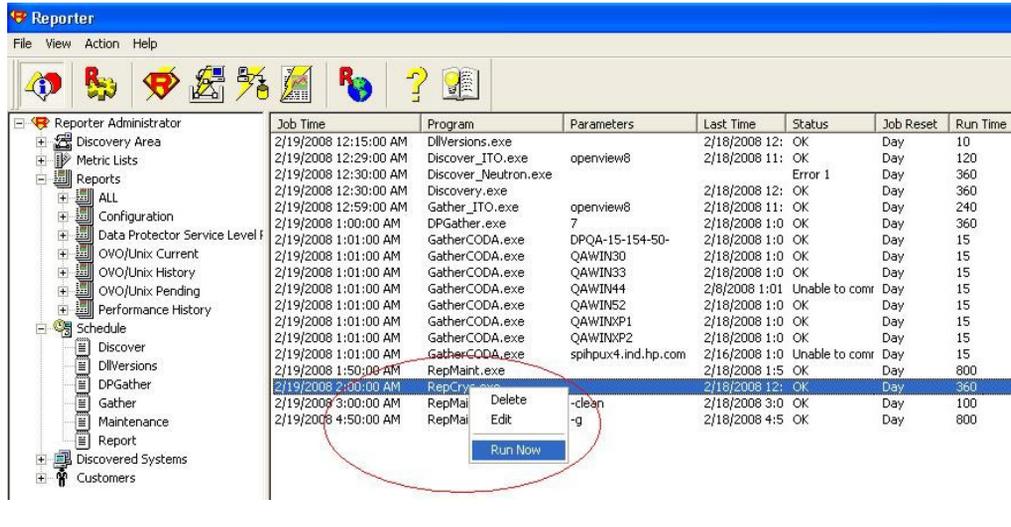   **Change/Remove**.

4. Select the **Remove** option, then click on **Next**.

5. Follow the on-screen instruction to complete the un-installation.

📝 NOTE:

After the Data Protector/Reporter integration is uninstalled, the links to the Data Protector SLA reports from the reports web page are not always removed immediately, as this link generation is performed by Repcrys, which is scheduled to run at 2 am by default. To remove these links, immediately after the removal of the integration, run Repcrys manually and wait for it to finish.

Creating custom reports

The Data Protector integration with Reporter includes a predefined set of reports on the general health of the backup system and overall backup statistics. You can modify these by changing the default report settings. However, if you want to report on data from new or modified metric lists, you must create new custom report templates. You can modify report templates and create new ones with Seagate Crystal Reports. (Crystal Reports Professional 10 was used to develop the default templates.) For instructions, see:

• Reporter online Help "Creating Your Own Reports" topics
• *HP Reporter Concepts Guide*
• *Customizing HP Reporter With Seagate Crystal Reports* (found on the Reporter product CD)

Creating Data Protector custom reports

When creating a new Data Protector report template in Crystal Reports, you must select a data source that defines where the data for each metric list is stored. You also need to understand the data format in order to retrieve appropriate performance data and use it to the best effect.

This section provides an overview of the main database tables and data format used for Data Protector-specific messages.

Data source

Data Protector-Operations Manager generates messages to help you monitor and manage the health and performance of your Data Protector environment with Operations Manager.

These messages are stored in two sets of Operations Manager message tables: active and history. Although these have the same attributes, the two message types are kept separate to improve performance when loading and inserting active messages. Acknowledged and unacknowledged messages are first marked and then moved in groups of 50 by an asynchronous process to reduce the impact on the GUI. The message text and original message text are also stored in separate text tables for performance reasons.

Operations Manager message tables include:

OPC_ANNO_TEXT	Annotation text for messages in OPC_ACT_MESSAGES.
OPC_ACT_MESSAGES	The main entry for messages that are currently in the **Message Browser** window. It can also contain up to 50 acknowledged messages. When more than 50 messages have the ackn_flag set to Yes, they are moved to the history table.
OPC_ANNOTATION	The main entry of message annotations for messages in OPC_ACT_MESSAGES.
OPC_ESCAL_ASSIGN_M	Message numbers of owned messages and messages escalated to or from another management server.
OPC_FORWARD_MSGS	Messages that have been forwarded to other management servers.

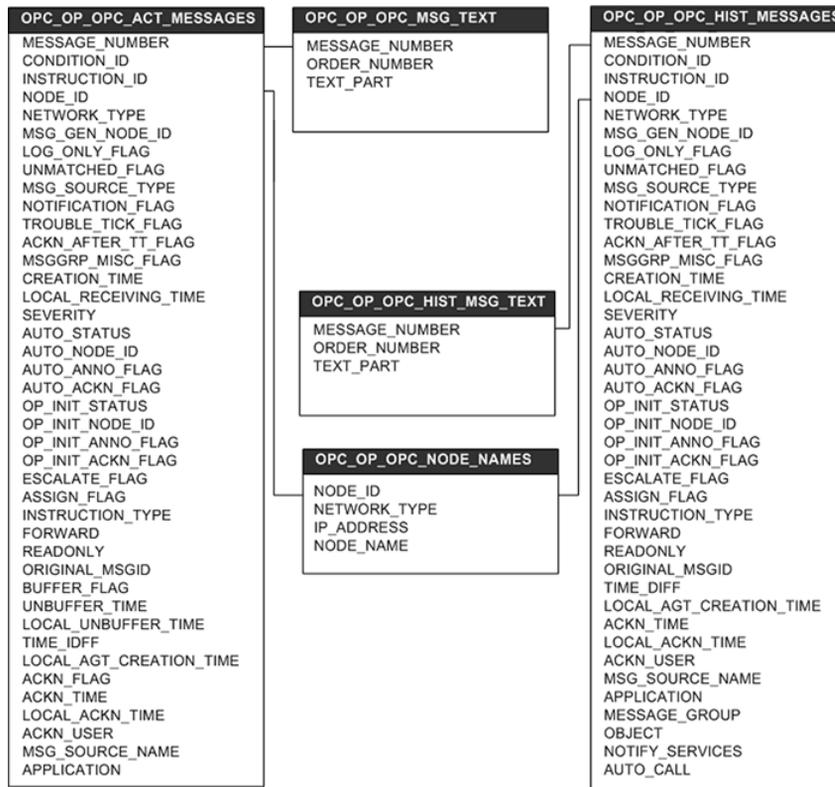|	
OPC_HIST_ANNO_TEXT	Annotation text for history messages in OPC_HIST_MESSAGES.
OPC_HIST_ANNOTATION	Annotations for a history message in OPC_HIST_MESSAGES.
OPC_HIST_MESSAGES	The main entry for history messages (messages that were acknowledged or are log-only). Some acknowledged messages may still be in OPC_ACT_MESSAGES.
OPC_HIST_MSG_TEXT	The message text, divided into 254-byte parts, for messages in OPC_HIST_MESSAGES table.
OPC_HIST_ORIG_TEXT	The original message text, divided into 254-byte parts, of a history message in OPC_HIST_MESSAGES.
OPC_INSTR_INTERF	The definition of instruction text interfaces.
OPC_INSTRUCTIONS	The text of normal instructions.
OPC_MSG_TEXT	Message text for messages in the OPC_ACT_MESSAGES table. To allow for various text lengths, the text is split into chunks of 254 characters.
OPC_ORIG_MSG_TEXT	The original (unprocessed) text of messages in OPC_ACT_MESSAGES.

NOTE:

For detailed definitions and contents of the Operations Manager database tables, see *HP Operations Manager for UNIX Reporting and Database Schema*.

Four Operations Manager message tables are among those most frequently used in the default report templates provided by this integration:

- OPC_ACT_MESSAGES
- OPC_MSG_TEXT
- OPC_HIST_MESSAGES
- OPC_HIST_MSG_TEXT

Most message tables contain the field `node_id`, which identifies the node where the event occurred. If the node is in an internet network, you can find each node's IP address and the identifying name from the table `OPC_NODE_NAMES`.

The relationship between these tables is illustrated in the following diagram:

Message format

The DP-Operations Manager integration installs six message groups specifically designed to handle messages generated by the templates and monitors started by the DP-Operations Manager integrations. The messages generated by Data Protector are assigned to the six message groups where appropriate:

DP_Backup	Backup session related messages
DP_Restore	Restore session related messages
DP_Mount	Mount request related messages

DP_Misc	All other important Data Protector related messages
DP_SPI	Messages from the DP-Operations Manager integration
DP_Interactive	Detailed messages normally displayed only in the Data Protector interface. This message group is disabled by default. Enable the group if you want to receive the most detail about Data Protector's operation.

An Operations Manager message includes the following parameters:

Message Group	The following groups are available:	
	DP_Backup	Backup session messages
	DP_Restore	Restore session messages
	DP_Mount	Mount request messages
	DP_Misc	All other important Data Protector messages
	DP_SPI	DP-Operations Manager integration messages
Applications	Set to Data Protector	
Node	The hostname of the Data Protector system where the event occurred.	
Severity	The impact that the event has on Data Protector. For messages derived from SNMP traps, the severity value of the SNMP trap is used.	
Service Name	Depends on the impact the event has on a service. Must map with a node in Data Protector's service tree.	
Object	Depends on the impact the event has on a service. Must map with a node in Data Protector's service tree. Data Protector SNMP traps set the object parameter to NOTIFICATION. Messages that originate from: • a monitored logfile set the Object parameter to the name of the logfile. • a monitor set the Object parameter to the name of the monitor.	

NOTE:

For details of different message formats based on `Message Group`, `Service Name`, and `Object`, see the *HP Data Protector integration guide for HP Operations Manager for UNIX* or *Windows* as appropriate.

Troubleshooting

Problem	Resolution
While attempting to install the report package, setup was unable to detect HP Reporter on the machine.	Make sure the machine on which you are installing has HP Reporter A.03.50 or higher or above. If it does not, install it.
HP Reporter was not installed properly on this machine.	Reinstall or repair HP Reporter A.03.50 or higher.
Installed HP Reporter version is not A.03.50 or higher.	Upgrade or install HP Reporter A.03.50 or higher or above.
Not enough free disk space on Drive *selected drive*. Available disk space on drive *selected drive* is *space* MB. Required disk space is 5 MB	Free 5 MB or more disk space on the selected drive and continue installing the Reporter Data Protector report package.

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