

HP Data Protector A.06.11

Integration guide for HP Performance Manager and HP Performance Agent

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About this guide

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

Intended audience

This guide is intended for users of HP Performance Manager (PM) and HP Performance Agent (PA), with knowledge of:

- 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 & 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 Virtual Infrastructure, Sybase, Network Node Manager, and Network Data Management Protocol Server.
- *HP Data Protector integration guide for HP SIP and HP Reporter*
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.06.11. 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 Media Operations.

- *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-ROM 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 for IBM applications: Informix, DB2, and Lotus Notes/Domino
IG-MS	Integration guide for Microsoft applications: SQL Server, SharePoint Portal Server, Exchange Server, and Volume Shadow Copy Service
IG-O/S	Integration guide for Oracle and SAP
IG-OMU	Integration guide for HP Operations Manager for UNIX
IG-OMW	Integration guide for HP Operations Manager for Windows
IG-PM/PA	Integration guide for HP Performance Manager and HP Performance Agent
IG-Report	Integration guide for HP Reporter
IG-SIP	Integration guide for HP Service Information Portal
IG-Var	Integration guide for VMware Virtual Infrastructure, Sybase, Network Node Manager, and Network Data Management Protocol Server
Install	Installation and licensing guide
MO GS	Media Operations getting started guide

Abbreviation	guide
MO RN	Media Operations product announcements, software notes, and references
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	Integration guides						ZDB			MO		MPE/iX	CLI			
								MS	O/S	IBM	Var	OV	OV/OU	OV/OW	Concept	Admin	IG	GS			User	PA	
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
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	
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			
Restore	X	X	X					X	X	X	X				X	X							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
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

Integration	Guide
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 14	Cross-reference links and e-mail addresses
Blue, underlined text: http://www.hp.com	website addresses
Bold text	<ul style="list-style-type: none"> • 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
<i>Italic text</i>	Text emphasis
Monospace text	<ul style="list-style-type: none"> • File and directory names • System output • Code • Commands, their arguments, and argument values
<i>Monospace, italic text</i>	<ul style="list-style-type: none"> • Code variables • Command variables
Monospace, bold text	Emphasized monospace text



NOTE:

Provides additional information.

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.

1 Introduction

This guide describes the integration of Data Protector with two other HP software products: HP Performance Agent and HP Performance Manager.

- **HP Data Protector** is a backup and recovery solution designed specifically for enterprise-wide and distributed environments. In addition the Data Protector media set contains software that integrates with other HP Software products. Through these integrations, information is provided to help you monitor and report the status of backup processes and Data Protector's status and health in general.
- **HP Performance Agent (PA)** collects, summarizes, time stamps, and detects alarm conditions on current and historical data across the system. It provides performance, resource, and end-to-end transaction response time measurements, and supports network and database measurement information. All of the data collected or received by HP Performance Agent can be analyzed using spreadsheet programs, HP analysis tools such as HP PerfView and its successor HP Performance Manager.
- **HP Performance Manager (PM)** is a web-based analysis tool designed to analyze and project system performance trends, and resource utilization. Using data from various data sources, Performance Manager helps you evaluate system performance, look at usage trends in-depth, and compare performance between systems. It enables you to draw and design graphs in various formats and use them for statistical analysis and forecasting. The preformatted graphs and drill-down reports can help you balance workloads, allocate resources and deliver a quality service.

The Data Protector integration with HP Performance Manager (PM) displays performance data from Data Protector nodes. This data is collected and transmitted by the Performance Agent (PA). The combination of PM for display and PA running on each Data Protector cell node in combination with DP's custom integrations offers comprehensive performance monitoring and analysis.

Software prerequisites

HP Data Protector integration for Performance Manager is supported by HP Performance Manager 6.0 and higher versions.

HP Data Protector integration for Performance Agent is supported by HP Performance Agent 4.5 and higher versions.



NOTE:

To use the HP Data Protector integration for PA, the PA should run at least on the Data Protector Cell Manager node. For monitoring Disk Agent and Media Agent nodes, these systems should also run PA and DP's customization.

The following matrix shows the versions of the applications and which operating systems they are supported on:

Table 2 Support matrix

Application	Supported versions	
HP Performance Manager	8.0, 8.1	HP-UX, Windows, Solaris
	6.00, 6.01	HP-UX, Windows, Solaris
HP Performance Agent	4.5, 4.6, 4.7	HP-UX, Windows, Linux, Solaris

You will find more detailed information about support for the applications on <http://h20229.www2.hp.com/products/ovperf/index.html>.

2 Data Protector-Performance Agent integration

The Data Protector Integration with HP Performance Agent (PA) configures the PA to gather performance data from Data Protector. The data can be displayed graphically by the HP Performance Manager.

By default, the PA collects many metrics from the operating environment, such as I/O, network, and processes, and stores them in data logfiles. It collects the durations of transactions, measured through the ARM interface. Collected data can be viewed centrally by the PM console to show trends, and can be combined with the OS and system data to find correlations with, for example, CPU use or disk I/O use.

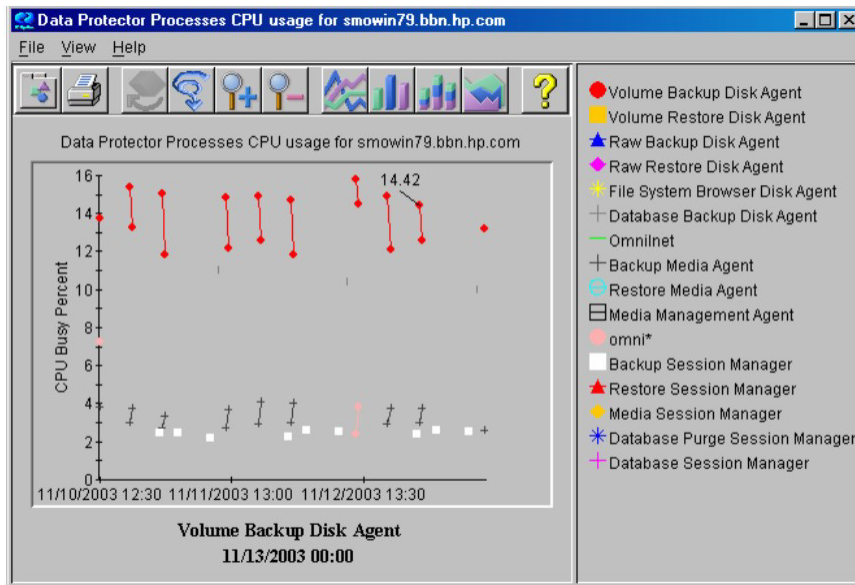


Figure 1 HP Performance Manager console

Performance measurement forms the basis for evaluating what corrective actions are needed to optimize performance and resource utilization of the Data Protector

environment. Typically, this is an off-line operation where you select a window of time for detailed analysis of system performance, behavior and resource utilization.

Installing Performance integration components

Installing on Window nodes

The Data Protector Performance integration binaries and files for Windows nodes are in the file `obspi_vpp.zip`. The zip file is in the `/HP_Software` folder on one of the Data Protector CDs/DVDs.

The file `obspi_vpp.zip` contains all configuration files for Windows. You need to distribute the archive file manually as follows:

1. Transfer the zip file to the managed node using FTP.
2. Install the files in the PA directory, ensuring files are extracted to the appropriate directories:
 - a. Open `obspi_vpp.zip` with WinZip.
 - b. Select the parent directory of the PA Installation (usually `C:\`) as the extraction directory.
 - c. Ensure the "Use folder names" box is checked.
 - d. Click the extract button to unzip the files.

The following files are installed:

- `ob_spi\vpp\DPInteg_PA\x86\configurePA_32Bit.exe`
- `ob_spi\vpp\DPInteg_PA\x64\configurePA_64Bit.exe`
- `ob_spi\vpp\Data Protector-Performance Manager Integration.exe`
- `ob_spi\vpp\bin\OmniSpiDsiLogger.exe`
- `ob_spi\vpp\bin\Omni_Spi_Dsi_Service.exe`
- `ob_spi\vpp\datafiles\obdsi.spec`

Installation Steps for UNIX Nodes

The Data Protector Performance integration binaries and files for UNIX nodes are in the file `obspi_vpp.tar`. This tar file is in the `/HP_Software` folder on one of the Data Protector CDs/DVDs.

The file `obsapi_vpp.tar` contains all configuration files for UNIX. You need to distribute the PA configuration files manually as follows:

1. Transfer the tar file to the managed node by using ftp.
2. Copy the file to the root directory.
3. Use the tar command to decompress the archive:

```
tar -xf obsapi_vpp.tar
```

After decompression, the following files reside in the directory `/opt/OV/OpC/integration/obsapi/vpp/`:

- `obdsi.ksh`
- `obdsi.spec`
- `configurePM_PA.sh`

Collecting ARM transactions

Data Protector uses the ARM interface to measure the duration of Data Protector transactions. These can be collected by HP Performance Agent. The following transaction time metrics are forwarded to the PA via the ARM interface:

- Overall session duration
- Restore session duration
- Object backup duration
- Database purge duration
- Database check duration

To enable ARM Transaction Tracking, the following files are modified:

<i>Windows:</i>	<code>ttdconf.mmc</code>	modified by user starting <code>ConfigurePA_32Bit.exe</code> or <code>ConfigurePA_64Bit.exe</code>
<i>UNIX:</i>	<code>/var/opt/perf/ttd.conf</code>	modified by user starting <code>configurePM_PA.sh</code>

Collecting Data Protector process data

Data Protector runs processes dedicated to specific tasks handled by the Cell Manager, the Media Agent, the Disk Agent, and the Installation Server. By modifying the `parm` file, you can use the PA to collect process data from these tasks.

To enable Data Protector process data tracking, the following files are modified:

Windows: `parm.mwc`

UNIX: `/var/opt/perf/parm`

Modifying the `parm` file on a Data Protector Cell Manager

To enable PA to collect Data Protector Cell Manager process data, the following application groups are added to the `parm` file on the Data Protector Cell Manager node:

- `application CellManager_Daemon`
- `file crs mmd rds OmniInet`
- `application CellManager_Session`
- `file bsm rsm msm psm dbsm`

Modifying the `parm` file on a Data Protector Media Agent

To enable PA to collect Data Protector Media Agent process data, the following application groups are added to the `parm` file on the Data Protector Media Agent node:

- `application Media_Agent`
- `file bma rma mma`

Modifying the `parm` file on a Data Protector Installation Server

To enable PA to collect Data Protector Installation Server process data, the following application groups are added to the `parm` file on the Data Protector Installation Server node:

- `application Installation_Server`
- `file OmniInet bmsetup`

Configuring the integration to collect ARM transactions and Data Protector process data

Configuring PA on Windows Cell Manager

To configure PA on a Windows Cell Manager, run the tool `Configure_PA_32bit.exe` (for a Windows 32-bit machine), or `Configure_PA_64bit.exe` (for a Windows 64-bit machine) to modify the `parm` and `ttd.conf` files. The tool is `ob_spi\vpp\DPInteg_PA\x86` for a 32-bit machine, or `ob_spi\vpp\DPInteg_PA\x64` for a 64-bit machine.

Double-click `Configure_PA_32.exe` or `Configure_PA_64.exe` to run the tool. PA 4.5 or 4.6 or 4.7 should be running on the machine along with Data Protector Cell Manager.

- To view the current `parm` file:
Go to File -> view parm file
- To view the current `ttd.conf` file:
Go to File -> view ttdconf file

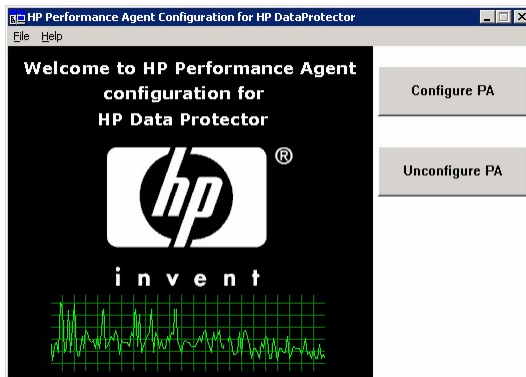


Figure 2 Configure PA tool

Click the **Configure PA** button to configure the Data Protector ARM transactions and process data for Performance Agent.

- For online help, select **Help->Read Admin Guide**.
- To find the version of the tool, select **Help->About**.

Configuring PA on a UNIX Cell Manager

The script `configurePM_PA.sh` is used to configure PA on a UNIX Cell Manager:

1. Change the dir to `cd /opt/OV/OpC/integration/obsapi/vpp/.`
2. Change the mode of the script `chmod a+x configurePM_PA.sh`.
3. Execute the script `./configurePM_PA.sh -configure PA`.


```
spihpux4.ind.hp.com - PuTTY
# ./configurePM_PA.sh -configure PA

*****
*****
***** /*****
***** /***** WELCOME TO
***** /***** HP DATA PROTECTOR
**** / / / / /*****
*** / / / / /***** INTEGRATION FOR
** / / / / /***** PERFORMANCE MANAGER
** / / / / /*****
**** /***** /
**** /***** PERFORMANCE AGENT
*****

/opt/perf/bin/mwa will be used to start/stop the PA services

INFO | Starting configuration for HP Performance Agent...

Performance Agent process will be stopped if it is running
Y|y -- To Stop the Performance Agent[PA] process
N|n -- To exit from the script
Enter your choice [Y|N]:
Y

INFO | Stopping the PA process

Shutting down Perf Agent collection software
Shutting down scopeux, pid(s) 20025
Waiting on 20025 (10 more tries)
The Perf Agent collector, scopeux has been shut down successfully.
NOTE: The ARM registration daemon ttd will be left running.

Shutting down the alarm generator perfalarm, pid(s) 20062
The perfalarm process has terminated

INFO | Configuring the parm file ...

INFO | Configuring the ttd config file ...

INFO | Configured HP Performance Agent successfully.Starting the PA process
HP-UX

The Perf Agent scope collector is being started.
The ARM registration daemon ttd is already running.
It will be signaled to reprocess its configuration file.

The Performance collection daemon
/opt/perf/bin/scopeux has been started.

The coda daemon /opt/OV/lbin/perf/coda has been started.
It will be fully operational in a few minutes.

The Perf Agent alarm generator is being started.
The alarm generator /opt/perf/bin/perfalarm
has been started.

INFO | Script completed successfully
#
```

Figure 3 Configuring PA on a UNIX Cell Manager

Performance Agent data source integration

Using `dsilog`, the DSI technology allows you to use PA to log data and access metrics from sources of data other than those logged by the PA collector. The `dsilog`

process stores the data in a format that allows offline viewing and analysis by HP software products such as HP Performance Manager.

Metrics collected are:

- Number of clients controlled by the Data Protector Cell Manager
- Size of the database used by the Data Protector Cell Manager

To collect these metrics:

1. Use the PA command `sdlcomp` to compile the `obdsi.spec` class specification file and acquire the logfile set for logging the data.
2. Collect the data and use the `dsilog` interface to store it in the PA database.

Compiling `obdsi.spec`

You must create a logfile set to store collected data in the PA database. To do this, compile the class specification file `obdsi.spec` with the PA command `sdlcomp`. The files are in the following directory after installing the Data Protector PA integration:

Windows: Performance Agent Root\Data\Datafiles

UNIX: /opt/OV/OpC/integration/obspi/vpp/

The `sdlcomp` command has the following syntax:

```
sdlcomp specification_file logfile_set
```

`specification_file` The class specification file. Qualify it fully if the file is not in the current directory.

`Logfile_set` The logfile set. For the Data Protector data source integration, the name must be `omniback`.

Unless you specify a path, the set is created in the current directory. You can choose to store logfiles anywhere during compilation, but you must not move them after they have been compiled.

Example: Using `sdlcomp` to compile the Data Protector Specification file:

Windows: `sdlcomp obdsi.spec C:\ob_spi\vpp\data\datafiles\omniback`

UNIX: `sdlcomp obdsi.spec /var/opt/perf/datafiles/omniback`

For further information see the *HP Performance Agent Data Source Integration Guide*.

Collecting data on Windows nodes

Installing the Data Protector DSI Log service

To collect Data Protector data and store it in the compiled logfile set on Windows systems, you must install the Data Protector DSI Log service. After installing the Data Protector PA integration, the service installation file `omni_spi_dsi_service.exe` resides in the directory:

```
Performance Agent Root \Bin
```

To install the service:

```
Omni_spi_dsi_service.exe -i
```

This registers the service in the Service Control Manager.

To check if the installation was successful, look for the service:

Start ->Settings ->Control Panel ->Administrative Tools ->Services

If you find the Data Protector DSI Log service listed, the installation was successful.

Starting the Data Protector DSI Log service

To start collecting data, start the Data Protector DSI Log service in one of the following ways:

- Enter the command: `Omni_Spi_Dsi_Service.exe -s`
- From the Service Control Manager GUI, go to:

Start ->Settings -> Control Panel ->Administrative Tools ->Services

Right-click the **Data Protector Dsi Log service** and select the start option in the context menu.

Specifying the frequency of data collection

The default data collection frequency is 12 minutes. This is the same time configured in the `obdsi.spec` file used to create the PA logfile set. To change the frequency, change the appropriate entry in `obdsi.spec` (see the *HP Performance Agent Data Source Integration Guide*), create a new logfile set using `sdlcomp`, and configure the Data Protector Dsi Log service accordingly.

To specify a new data collection frequency, do one of the following:

- Enter the command:
`Omni_Spi_Dsi_Service.exe -s -f minutes`
- From the Service Control Manager GUI, go to:
Start ->Settings ->Control Panel ->Administrative Tools->Services

Double-click the **Data Protector Dsi Log service**, select the General tab and input the start parameter `-f minutes` in the textbox.

Configuring the Data Protector DSI Log service

To enable tracing options for the Data Protector Dsi Log service, configure the service to provide the path of the trace file and the level of tracing information:

```
Omni_Spi_Dsi_Service.exe -t TracePath
```

TracePath is the fully qualified path of the trace file's destination directory, and is optional. By default, the temp directory from the system environment (usually `C:\Temp`) is used. If you omit the `-t` option, no trace files will be written. To specify the type of information that is written to the trace files, configure the trace level for the Data Protector Dsi Log service. There are four levels, containing the following information.

<i>Trace Level 1:</i>	Error Information
<i>Trace Level 2:</i>	Function calls (shows call of internal functions)
<i>Trace Level 3:</i>	Information about the current service activities.
<i>Trace Level 4:</i>	Important internal data to check for correct resources and configuration.

If you use the `-t` option to enable tracing, the default tracing level is 1. Change the level with the command:

```
Omni_Spi_Dsi_Service.exe -v tracelevel
```

where *tracelevel* must be between 1 and 4.

The Data Protector Dsi Log service uses `OmniSpiDsiLogger.exe` to collect the data. After installation, this executable resides in:

```
Performance Agent Root \Bin
```

If you have relocated this file, you must specify the new path to the file. Use the command:

```
Omni_Spi_Dsi_Service.exe -x path/name
```

where *path/name* contains the fully qualified path and name of the file. Configuration data is stored in the registry, where it can be modified manually. It is stored under the registry key:

```
HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\OmniDsi  
LogService
```

To disable tracing, remove the registry value `TraceFilePath` from the registry key.

Uninstalling the Data Protector DSI Log service

Before you can remove the files `Omni_Spi_Dsi_Service.exe` and `OmniSpiDsiLogger.exe`, you must uninstall the registered service:

```
Omni_Spi_Dsi_Service.exe -u
```

Collecting data on UNIX nodes

To collect Data Protector data and store it in the compiled logfile set on UNIX nodes, make the `obdsi.ksh` script run as a shell-independent daemon.

To do this, use the UNIX `at` command:

```
at now' /opt/OV/OpC/integration/obspi/vpp/obdsi.ksh |  
dsilog/var/opt/perf/datafiles/omniback OMNIBACKII' &
```

Performance Alarms for the Performance Agent

No alarms based on these new metrics are defined, but you can extend the `alarmdef` file to define alarms using these new metrics for the MeasureWare agent.

3 Data Protector-Performance Manager integration

Installation on Window Nodes

The Data Protector Performance integration binaries and files for Windows nodes are in the zip file `obspi_vpp.zip`. This is in the `/HP_Software` folder on one of the Data Protector CDs/DVDs.

The file contains all configuration files for Windows. You need to distribute it manually as follows.

1. Transfer the zip file to the PM Machine using FTP.
2. Install the files in the PM directory, ensuring files are extracted to the appropriate directories:
 - a. Open `obspi_vpp.zip` with WinZip.
 - b. Select the parent directory of the PM Installation (usually `C:\`) as the extraction directory.
 - c. Ensure the "Use folder names" box is checked.
 - d. Click the extract button to unzip the files.

The following files are installed:

- `ob_spi\vpp\DPInteg_PA\x86\configurePA_32Bit.exe`
- `ob_spi\vpp\DPInteg_PA\x64\configurePA_64Bit.exe`
- `ob_spi\vpp\Data Protector-Performance Manager Integration.exe`
- `ob_spi\vpp\bin\OmniSpiDsiLogger.exe`
- `ob_spi\vpp\bin\Omni_Spi_Dsi_Service.exe`
- `ob_spi\vpp\datafiles\obdsi.spec`

Double-click on the `Data Protector-Performance Manager Integration.exe` to install the Data Protector Performance Manager Integration.

If the PM and DP versions are supported this will install the integration successfully.

Installation on UNIX nodes

The Data Protector Performance integration binaries and files for UNIX nodes are in the tar file `obs_pi_vpp.tar`. This file is in the `/HP_Software` folder on one of the Data Protector CDs/DVDs.

The file contains all configuration files for UNIX. You need to distribute it manually as follows:

1. Transfer the tar file to the PM Machine by using ftp.
2. Copy the file to the root directory.
3. Use the `tar` command to decompress the archive:

```
tar -xf obs_pi_vpp.tar
```

After decompression, the following files reside in the directory `/opt/OV/OpC/integration/obs_pi/vpp/`:

- `obdsi.ksh`
- `obdsi.spec`
- `configurePM_PA.sh`

To configure PM

1. Change the mode of the script

```
chmod a+x configurePM_PA.sh
```
2. Execute the script

```
./configurePM_PA.sh -configure PM
```



```
spihpux4.ind.hp.com - PuTTY
# ./configurePM_PA.sh -configure PM

*****
*****
***** /*****
***** /***** WELCOME TO
***** /***** HP DATA PROTECTOR
***** /***** INTEGRATION FOR
***** /***** PERFORMANCE MANAGER
***** /*****
***** /***** PERFORMANCE AGENT
*****

INFO | Starting configuration for HP Performance Manager Software ...
INFO | Configured HP Performance Manager Software successfully
INFO | Script completed successfully
#
```

Figure 4 Configuring PM

Using the PM Integration for Data Protector

When PM has been configured successfully, a new tab for HP Data Protector Performance Graph appears in the PM web page when you log in there:

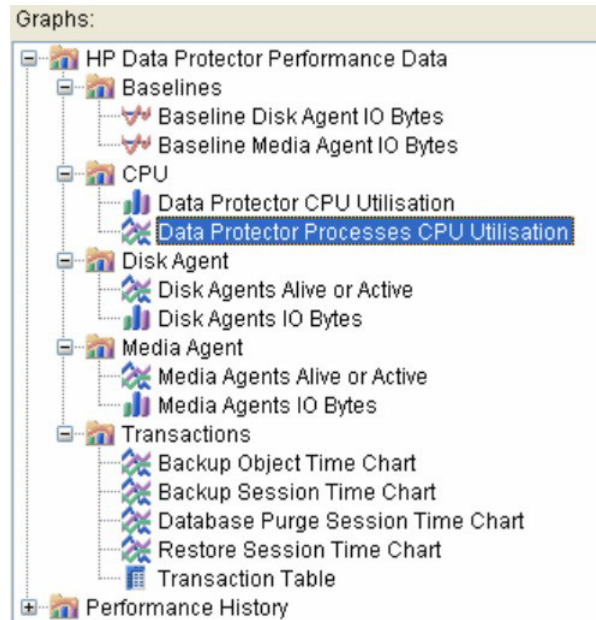


Figure 5 PM Graph tab

Five types of graphs are available:

1. Baselines
2. CPU
3. Disk Agent
4. Media Agent
5. Transactions

You can view various different graphs in each of these types for the selected Data Protector Cell Manager system.

Adding a Data Protector Cell Manager node in PM

You need to add the DP Cell Manager system to the PM GUI.

For PM 6.x, you have a choice of two types of datasource in the Add System window, MWA and CODA. In systems where PA 4.x is running, the default datasource is CODA.

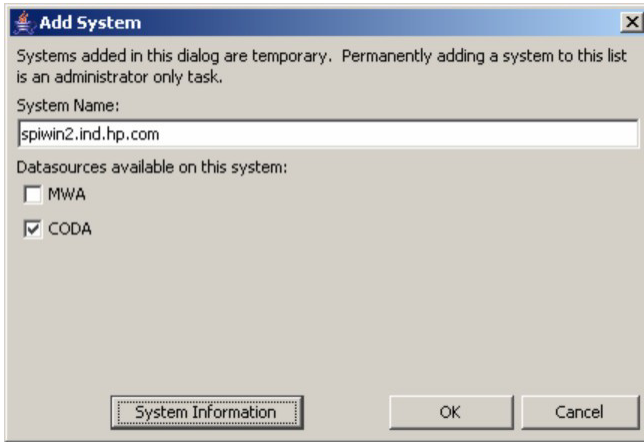


Figure 6 Add Node window (PM 6.0)

For PM 8.0, the Add a Node window gives no choice of datasource. PM 8.0 determines the datasource itself and add the node.

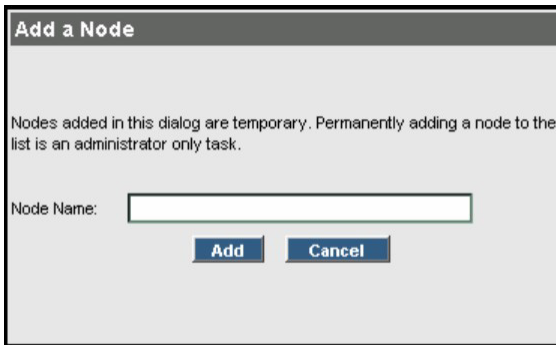


Figure 7 Add Node window (PM 8.0)

Pre-designed Data Protector graphs in PM

1. Data Protector backup object time chart on PM 6.0

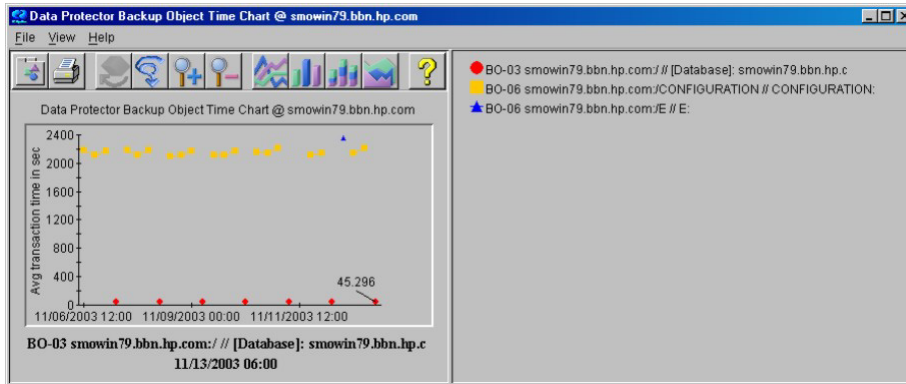


Figure 8 DP_BO time chart

2. DP processes CPU usage graph on PM 8.0

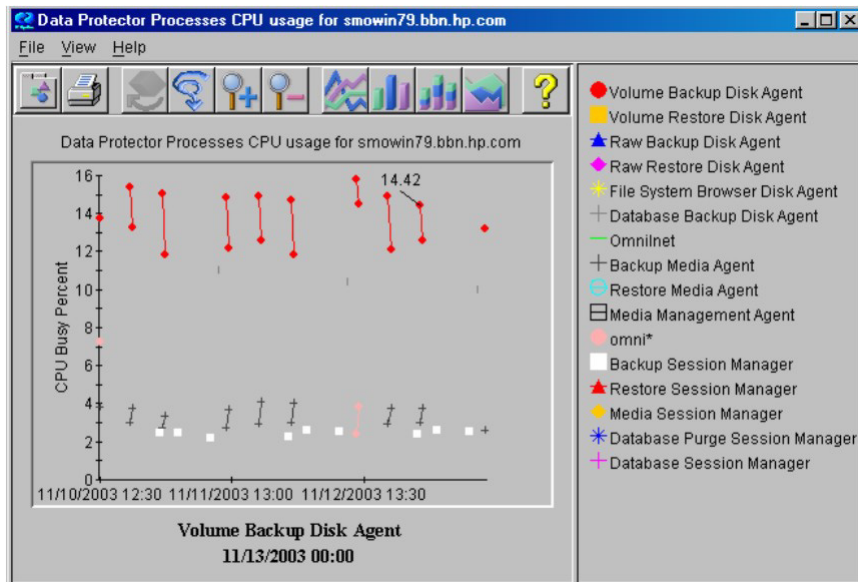


Figure 9 DP processes CPU usage graph

Synchronizing nodes between OMW 8.0 and PM 8.0

When it is started, Performance Manager 8.0 pulls the list of nodes configured in HP Operations Manager Windows 8.0. You can synchronize the node list anytime after startup.



NOTE:

This option is only available if PM is configured to pull the node list from HP OMW 8.0.

To synchronize the list, select **Click Nodes -> Reload from HPOM**. The node tree will be reloaded.

Any managed node newly added to the list of nodes managed by HP OMW will then appear in the Select Nodes window

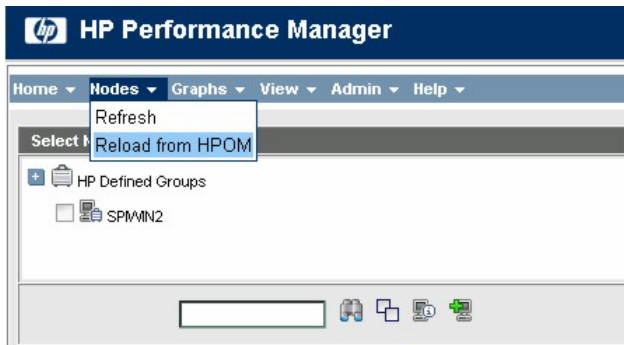


Figure 10 Select Nodes window

Uninstalling the Data Protector integration for PA

Uninstalling on Windows nodes

On a Windows Cell Manager, run the tool `Configure_PA_32bit.exe` (for Windows 32-bit machines), or `Configure_PA_64bit.exe` (for Windows 64-bit machines) to un-configure the `parm` and `ttd.conf` files. The location of the tool is `ob_spi\vpp\DPInteg_PA\x86` for a 32-bit machine, or `ob_spi\vpp\DPInteg_PA\x64` for a 64-bit machine.

Click on the **UnConfigure PA** button to unconfigure the Data Protector Integration for Performance Agent.

Uninstalling on UNIX nodes

On a UNIX Cell Manager, use the `configurePM_PA.sh` script to unconfigure the `parm` and `ttd.conf` files as follows:

1. Change the dir to
`cd /opt/OV/OpC/integration/obspi/vpp/`
2. Execute the script
`./configurePM_PA.sh -unconfigure PA`

```
spihpux4.ind.hp.com - PuTTY
# ./configurePM_PA.sh -unconfigure PA
*****
*****
***** /*****
***** WELCOME TO
***** HP DATA PROTECTOR
***** INTEGRATION FOR
***** PERFORMANCE MANAGER
***** /
***** PERFORMANCE AGENT
*****

INFO | Starting Unconfiguration of DP integration for PA
/opt/perf/bin/mwa will be used to start/stop the PA services

Performance Agent process will be stopped if it is running
Y|y -- To Stop the Performance Agent[PA] process
N|n -- To exit from the script
Enter your choice [Y|N]:
y

INFO | Stopping the PA process

Shutting down Perf Agent collection software
Shutting down scopeux, pid(s) 7307
Waiting on 7307 (10 more tries)
The Perf Agent collector, scopeux has been shut down successfully.
NOTE: The ARM registration daemon ttd will be left running.

INFO | Modifying PARM

INFO | Modifying ttd
HP-UX

The Perf Agent scope collector is being started.
The ARM registration daemon ttd is already running.
It will be signaled to reprocess its configuration file.

The Performance collection daemon
/opt/perf/bin/scopeux has been started.

The coda daemon /opt/OV/lbin/perf/coda has been started.
It will be fully operational in a few minutes.

The Perf Agent alarm generator is being started.
The alarm generator /opt/perf/bin/perfalarm
has been started.

INFO | Script completed successfully
#
```

Figure 11 Uninstalling PA on UNIX nodes

Uninstalling the Data Protector integration for PM

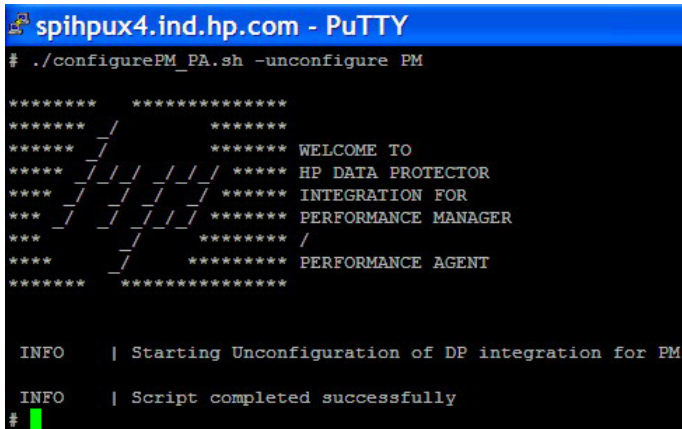
Uninstalling on Windows nodes

On a Windows Cell Manager, uninstall the DP integration for PM by selecting:
Control panel ->Add and Remove Programs -> Data Protector-Performance Manager Integration -> Remove

Uninstalling on UNIX nodes

On a UNIX Cell Manager, use the `configurePM_PA.sh` script to uninstall the DP integration for PM as follows:

1. Change the dir to
`cd /opt/OV/OpC/integration/obsapi/vpp/`
2. Execute the script
`./configurePM_PA.sh -unconfigure PM`



```
spihpux4.ind.hp.com - PuTTY
# ./configurePM_PA.sh -unconfigure PM

*****
***** /*****
***** /***** WELCOME TO
***** /***** HP DATA PROTECTOR
**** /***** /***** INTEGRATION FOR
*** /***** /***** PERFORMANCE MANAGER
*** /***** /*****
**** /***** /*****
**** /***** /***** PERFORMANCE AGENT
*****

INFO | Starting Unconfiguration of DP integration for PM
INFO | Script completed successfully
#
```

Figure 12 Uninstalling PM on UNIX nodes

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