

HP OpenView Performance Insight

For the HP-UX, Linux, Solaris, and Windows operating systems

Software Version: 5.20

Installation and Upgrade Guide for Oracle Databases

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1 Introduction to OVPI Installation

This guide describes how to install HP OpenView Performance Insight (OVPI) 5.2 in an operating environment that best serves your users.

OVPI 5.2 supports only Oracle version 10g. If you are using an older version, you must upgrade. You can find the upgrade instructions in [Chapter 9, Upgrading to Oracle 10g Enterprise Edition](#).

Operating Environments

You can install OVPI as either a standalone operating environment or as a distributed operating environment. This section contains information about both implementations and about how to choose between them.

OVPI uses a modular client-server architecture that enables you to start with a single standalone system and add to it as needed. You can install multiple remote clients and place them under the control of a single database server, or you can install multiple database servers around the network as necessary to create a distributed OVPI environment.

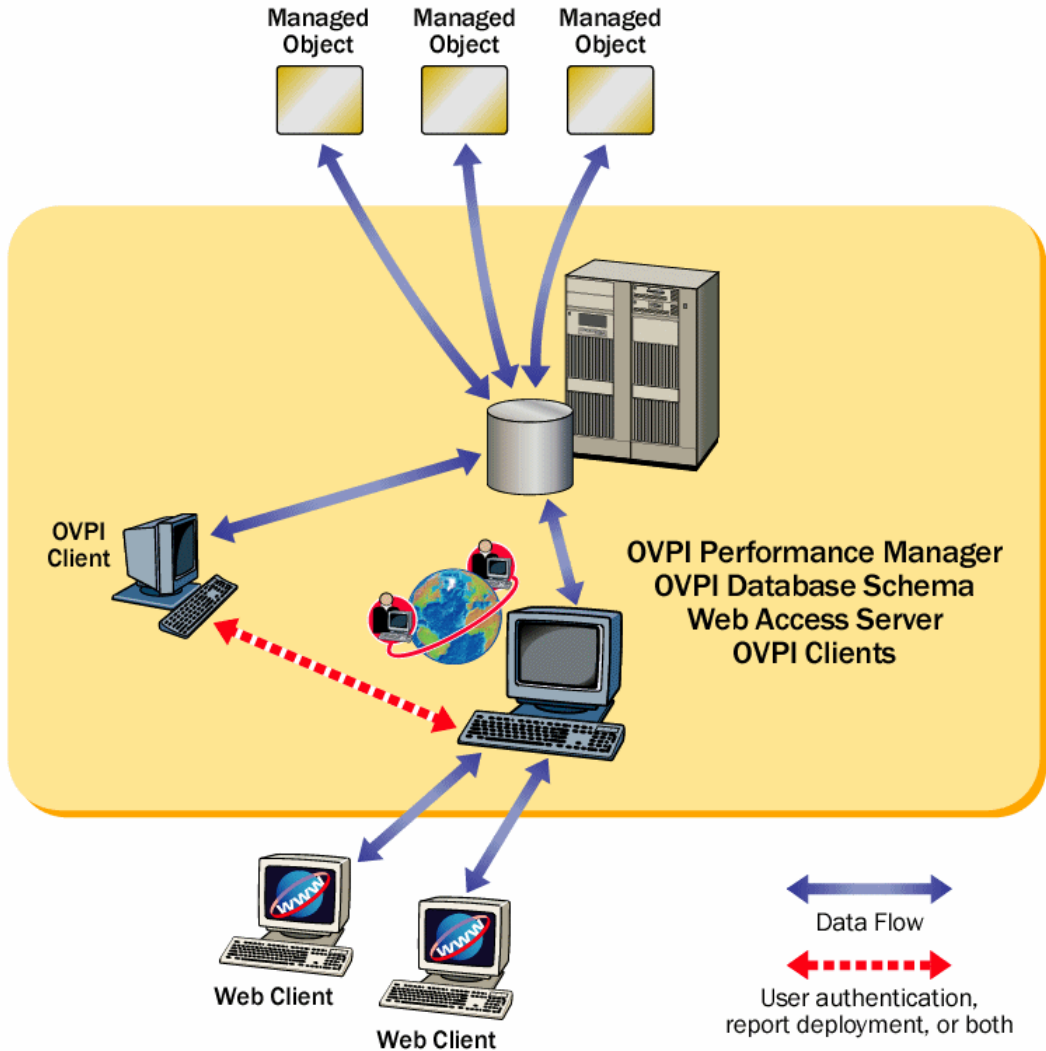
Standalone OVPI Environment

To monitor network performance in a single building or for a single group of users, or if your network contains fewer than approximately 20,000 managed objects, implement a standalone OVPI environment.

In a standalone environment, all OVPI components are installed on one system. The system is capable of polling the managed objects, gathering and processing performance data, hosting the OVPI web site, producing performance reports, and running the OVPI clients.

This type of environment is simpler and less costly to manage than one in which OVPI functionality is distributed because there are fewer components to implement, coordinate, and maintain.

The following figure shows a standalone OVPI environment.



Distributed OVPI Environment

In a large enterprise, a single system may not provide the processing power or space for OVPI to optimally monitor the network, which can make it necessary to distribute the load.

When OVPI components are installed across systems to create a network-wide configuration, it is called a distributed OVPI environment. Although the OVPI components are installed on physically discrete systems, they operate as a single system.

Because networks that require monitoring are often large and geographically dispersed, OVPI is designed to be distributed. Its various components can be positioned functionally throughout the environment to reduce network load and optimize system performance.



In a distributed OVPI environment, you must install the same version of OVPI, including service packs (patch levels), on all systems in the environment.

Distributing Functionality

The OVPI functions that can be located discretely are:

- Data collection
- Data management (processing and summarization)
- Data reporting

All three functions are integrated and their physical location does not affect their integration.

For the most cost-effective use of resources, you can use different platforms to run the different functions. For example, you can use PCs running the Windows operating system as remote polling systems to collect data, and UNIX machines as database servers to store and process data.

Distributing Servers

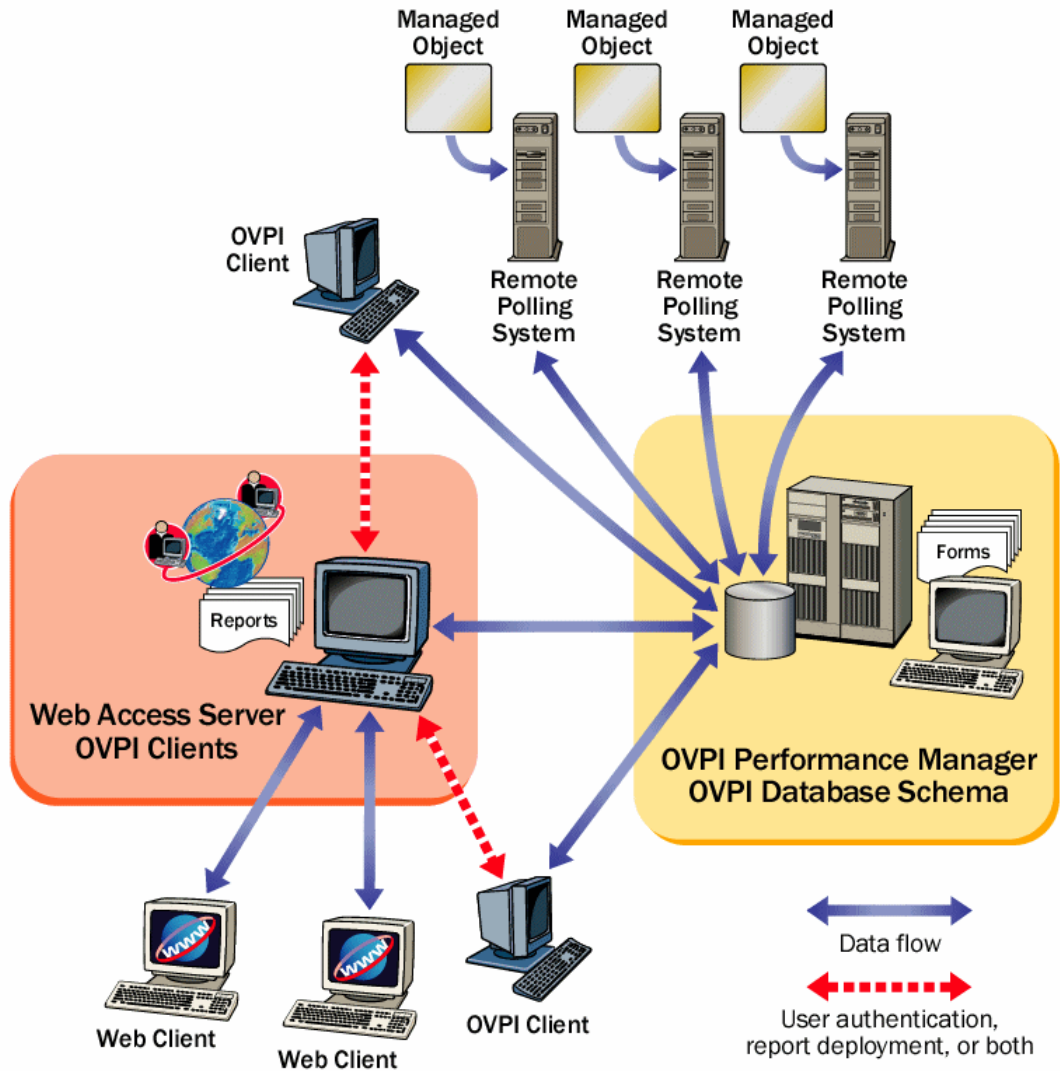
In a distributed OVPI environment, the main processing and reporting platform in the environment is the **central database server**, which is accessible by users throughout the network. Usually, there is only one central database server, and it requires a large amount of disk space, memory, and processing power.

Conversely, there can be any number of **satellite database servers** in the distributed environment, each one responsible for data collection and initial data processing. The data from each satellite database server is uploaded to the central database server, where it is combined with other data.

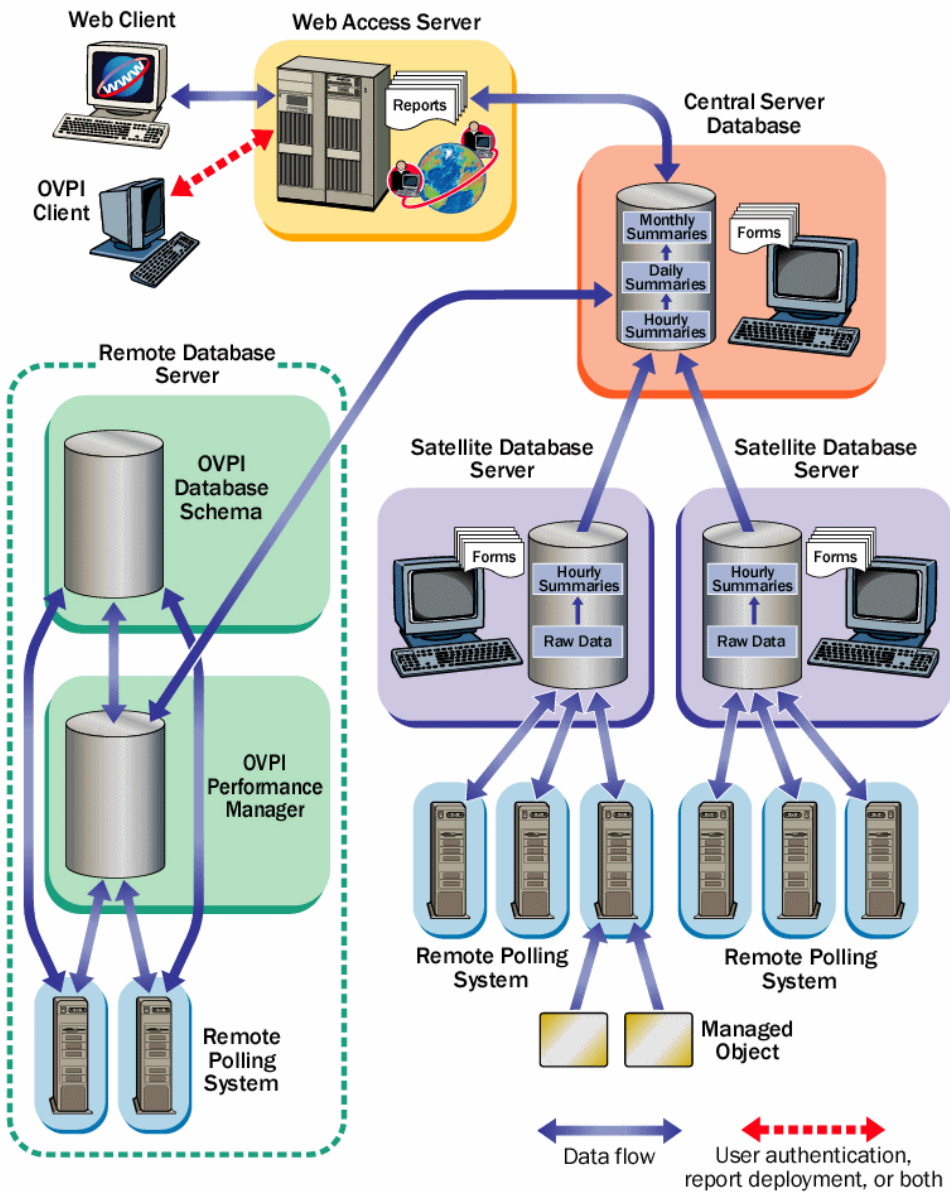
Data collection places a significant load on the network and is one of the few time-sensitive processes in OVPI. In a distributed environment, remote polling systems are usually located close to the target devices they poll to localize polling traffic and minimize delays. Each polling system polls multiple devices and communicates with its parent satellite database server, which is most likely regionally based.

Usually, there is only one Web Access Server in the distributed environment, and it is installed on a system dedicated to servicing incoming report requests from accessible web-based client workstations and OVPI client workstations.

The following figure shows an example of a simple distributed OVPI environment, where the central database server is performing all functions except web hosting and remote polling.



The following figure shows a more complex distributed OVPI environment that improves performance in a large, geographically dispersed network.



In this example, multiple satellite database servers serve individual regions. Collected performance data is compiled locally and uploaded to the central database server.

Each satellite runs as a complete standalone system performing full data aggregation and reporting. In addition, each satellite copies some of its data to the central database server. This allows regional reports to be displayed at the satellite, while network-wide reporting is available on the central database server.

Choosing Between Standalone or Distributed Environments

If you are wondering why or when you might implement a distributed OVPI environment, this section can help you decide.

A distributed OVPI environment can improve performance if one of the following is true:

- You have a large network that is geographically spread out and you want various regions to have reporting exclusively for their areas.
- You have more managed objects to be processed than one polling system can handle—typically 20,000 objects for polling and summarization. This limitation is affected by many factors, including the polling interval (more time to poll increases the number of instances that can be polled), number of child collectors spawned (the more that run at once, the faster the system works), network latency, device latency, and so on.

Questions to Ask

Apart from the sharing of processing load, there may be geographical, organizational, or functional reasons for considering a distributed environment. The following questions can help you determine your needs.

- How many managed objects are there? Do I have enough processing power?

The number of objects on which OVPI needs to report has a direct effect on the number of systems required, perhaps ruling out the need for a distributed environment completely, or requiring a minimum number of each type of system. Your HP sales representative can help you determine your system requirements.

- Where are the target devices? How fast is my network management infrastructure?

The geographical spread of the target devices affects the need for remote polling systems. If data collection is done using SNMP, as is most common, installing remote pollers close to the devices can reduce the distance the packets must travel. This increases polling response times and improves data collection reliability and performance.

- Will reports be required at the satellite database servers? Who are the users and what are their needs?

If the network is large enough to warrant multiple satellite database servers, consider whether the satellites each have a subset of devices assigned to them that is relevant to some subset of your users.

For example, if your network is spread across several regions, it may make sense to use one satellite database server per region. Consider whether users located in that region prefer to look at reports specific to their region, and if so, whether access to the reporting system should be local. In this case, each satellite must perform the full data-processing cycle, and it must also have a Web Access Server installed on it. This will place a higher processing load on the satellite database server, but it could possibly reduce network traffic between regionally located users and a centrally-located Web Access Server.

- Will near real time reports be required at the central database server? Who are the users and what are their needs?

Processing collected data to the hourly level at the satellite database server and then copying it to the central database server is the most efficient way to configure data aggregation and transfer.

The benefit is that it reduces both the processing load on the central database server and network traffic between the satellite and the central database server. However, it reduces the granularity of the reports available at the central database server. Some reports, such as near real time reports, rely on the most granular rate data for display. If the data is not present on the central database server, it may be necessary to remove those reports.

OVPI Components

OVPI components comprise the following.

OVPI Database

The OVPI database consists of the RDBMS and the OVPI database schema. To begin installing OVPI, you first create a **database server** for your OVPI operating environment. Creating a database server consists of the following:

- Installing an OVPI-supported RDBMS on your system, or upgrading an existing supported RDBMS to the version required by OVPI.

OVPI version 5.2 supports the Oracle RDBMS.

Installing the RDBMS creates an OVPI database instance—a named repository for the performance data that is collected, processed, and reported on by OVPI. The database instance is initially empty.

- Installing the OVPI database schema, which creates the tables that will contain performance data, as well as the indexes that determine data relationships. When you install the database schema, OVPI creates the tables and populates some of them immediately with data (for example, time period tables and informational tables about the database). OVPI also adds device files and tunes the OVPI database instance.

OVPI Performance Manager

OVPI Performance Manager, which is a different product from HP OpenView Performance Manager, provides tools for storing, processing, and reporting performance data that is collected. It aggregates, summarizes, and ages out data from the OVPI database. OVPI Performance Manager includes a full-function Management Console, which provides OVPI users with the tools to manage the OVPI environment. Also included is the OVPI Management Server, which is a web application that provides web services for OVPI clients.

You can install OVPI Performance Manager on multiple systems in your environment, but in each case the system onto which you install OVPI must be a database server or connect to an existing remote database server.

The most typical installation type is to install OVPI Performance Manager on the database server system. Because both the RDBMS and OVPI Performance Manager are CPU- and disk-intensive, it is best to install them on a system that is dedicated exclusively to them.

You could install the OVPI Performance Manager on a system that will access a database server remotely. This is beneficial if you want to maintain central administrative control over your databases and are using database farms, or for installations where database licensing is an issue (for example, you want to use an already purchased RDBMS). In this instance, you must set up the remote database to support OVPI before installing OVPI.

OVPI Web Access Server

Installing the OVPI Web Access Server on a system creates a host for an OVPI web site. This host provides authentication and configuration services, web-based reporting utilities, and user administration utilities through the OVPI client components. The OVPI Web Access Server requires significant memory and CPU resources and is usually not installed on a database server system, unless to provide regionalized reporting.

OVPI Clients

OVPI clients provide the interface between OVPI and its users for such functions as report building, viewing, and deployment, and administrative tasks. The OVPI clients are available through the OVPI graphical user interfaces. Most are also available as command line utilities.

OVPI clients are installed as a group, with or without other OVPI components, on any networked system that can connect to the OVPI Web Access Server.

OVPI clients give you the following functionality:

- **Report Builder:** Build and customize performance reports with multiple tables and graphs based on data from the OVPI database.
- **Report Viewer:** Interactively view, modify, save, and print performance reports.
- **Management Console:** Perform administrative tasks using the following components:

- Catalog Manager: Manage the OVPI Report and Link catalogs, based on data from the OVPI database.
- MIB Browser: Analyze, query, and troubleshoot SMI-compliant SNMP MIBs.
- SNMP Discovery: Determine whether a set of nodes is reachable from the OVPI system and whether or not those nodes support SNMP. The nodes discovered by SNMP Discovery are added to the OVPI node database.
- Type Discovery: Determine the device type of a discovered node; for example, router, hub, or switch.
- Package Manager: Install packages, deploy reports to the Web Access Server, run Type Discovery, and uninstall packages.
- Object Manager: View and change managed object properties on your system.
- System Manager: Add, modify, and delete references to OVPI installations on other systems.
- Group Manager: Create and manage polling groups.
- Polling Policy Manager: Manage polling policies, import and manage nodes, and manage polling groups.
- Table Manager: Monitor the database, view data and property tables, and set defaults for individual and global tables.

OVPI Client-Only Installation

You can install only the OVPI clients, independent of any other OVPI components. This is called a “client-only” install. A client-only install provides specific reporting and administrative capabilities to users who are working from their local workstations and remotely accessing the OVPI Web Access Server.

Be aware, however, that full Management Console functionality is not available in a client-only installation. The following components are *not* available from the Management Console Tools menu:

- Catalog Manager
- MIB Browser
- SNMP Discovery

- Type Discovery
- Package Manager
- Copy Policy Manager

In addition, users cannot register a new data table or property table, nor can they automatically add a collection to the database. To enable full Management Console functionality, you must install OVPI Performance Manager.

Remote Pollers

The process of collecting data from one or more nodes in the network and storing the data on an OVPI database server is termed polling. The OVPI polling function can handle about 20,000 managed objects—network devices or interfaces monitored for performance.

Software to handle the polling function is installed automatically with the OVPI Performance Manager, which automatically provides the ability to poll nodes directly from a database server.

For polling situations that exceed 20,000 managed objects, or for geographical reasons, you might decide to locate separate remote polling systems near target polled devices; for example, for a specified region or group of users.

In such cases, you must install the OVPI Remote Poller component on each remote polling system. The remote polling system is dedicated to the polling function. It does not have an installed OVPI database, and it does not perform any processing. It only collects and uploads performance data to a database server.

Each database server can support any number of remote polling systems.

OVPI Installation Overview

Installation and configuration of OVPI comprise the following major tasks:

- **Verify installation requirements**

Determine your hardware, software, and functional requirements before installing the RDBMS and OVPI (see [Introduction to OVPI Installation](#) on page 5).

To make sure that all prerequisite tasks are complete, see the [Installation Prerequisites Checklist](#) on page 30.

- **Install the Oracle RDBMS**

Complete the prerequisites tasks and install the RDBMS as explained in [Chapter 3, Installing Oracle 10g Enterprise Edition](#).

- **Install OVPI components**

In a standalone environment, follow the instructions in [Chapter 4, Installing OVPI on a Standalone Server](#).

In a distributed environment, follow the instructions in [Chapter 5, Installing OVPI in a Distributed Environment](#)

Because performance reporting varies by implementation, installing report packs is part of the post-installation configuration process. Post-installation configuration is covered in detail in the *HP OpenView Performance Insight Administration Guide*.

- **Configure OVPI**

Following successful installation of OVPI 5.2, complete all the post-installation tasks in [Chapter 6, Post-Installation](#) and then start to configure OVPI. For detailed information about the configuration process, see the *HP OpenView Performance Insight Administration Guide*.

- **Upgrade the RDBMS**

OVPI 5.2 supports only Oracle version 10g. If you are using an older version, you must upgrade. Upgrade instructions are in [Chapter 9, Upgrading to Oracle 10g Enterprise Edition](#).

- **Upgrade OVPI**

If you have an older version of OVPI, you can upgrade to version 5.2. Upgrade instructions are in [Chapter 10, Upgrading to OVPI 5.2](#).

Typical Installation by System Role

After you determine the appropriate operating environment (standalone or distributed), you can install OVPI components accordingly.

The role a particular system serves in the environment—satellite database server, remote poller, web client, and so on—determines which OVPI components need to be installed on it. To help determine a system's role, you should understand the types of tasks it will perform.

Standalone Environment System Roles

A standalone system is a single system that performs all data processing tasks. The system serves all roles and requires all OVPI components to be installed. Because data collection is performed from the database server, the standalone system does not require a separate remote polling system.

Distributed Environment System Roles

In a distributed environment, systems perform specialized roles:

- **Remote polling system:** Performs data collection.
- **Satellite database server:** Performs the following processes:
 - Raw data to rate data processing
 - Rate data to hourly data summarization

Typically, the satellite database server does not run processing routines on collected data more frequently than hourly. It copies partially aggregated data to the central database server where aggregation is completed.

- **Central database server:** Receives partially processed data from one or more satellite servers and processes data from the hourly level to completion. It performs the daily, monthly, and forecasting summarization tasks.
- **Remote database server** (*optional*): Performs additional specialized roles.
- **Web Access Server:** Hosts the OVPI web site and handles reports requests and report viewing and building tasks from OVPI clients.

- **OVPI clients:** Multiple applications that let the user view reports, build reports, and perform numerous system management tasks.

The following table shows which OVPI components you would typically install for the type of environment and role.

System Role	RDBMS	OVPI Database Schema	OVPI Performance Manager	Web Access Server	OVPI Clients	Remote Poller
Standalone Environment						
Central Database Server	X	X	X (includes polling function)	X (includes OVPI Clients)	N/A	N/A
Distributed Environment						
Central Database Server	X	X	X	X (optional)	X (if no WAS)	
Satellite Database Server	X	X	X	X (optional)	X (optional)	
Remote Database Server	X	X				
Web Access Server				X (includes OVPI Clients)		
Remote Polling System						X
Client-Only						
OVPI Clients					X	

Supported OVPI Configurations

Operating System	RDBMS	OVPI Component
HP-UX 11.11 HP-UX 11.23 PA-RISC	Oracle Database Server 10g (10.2.0.3.0)	All
Solaris 9 and 10	Oracle Database Server 10g (10.2.0.3.0)	All
Red Hat Enterprise Linux AS 4.0 x86 (SP3)	Oracle Database Server 10g (10.2.0.3.0)	All
Windows 2003 Server R2 Windows 2003 Server x86 Standard Edition Windows 2003 Server x86 (Enterprise/ Datacenter) (Windows 2003, 64-bit version is not supported)	Oracle Database Server 10g (10.2.0.3.0)	All
Windows XP	Oracle Database Server 10g (10.2.0.3.0)	Clients only

Installation Media

The current version of OVPI includes the following installation media:

- OVPI 5.2 Installation DVD (includes RDBMS installation and documentation)
- Report Pack CD



OVPI does not support installation from DEPOT paths that contain spaces. For example, if you have a folder by the name “my space” in the following path: /my space/DVDROM, you cannot install or upgrade from this path.

2 Installation Prerequisites

HP strongly recommends that you read the *HP OpenView Performance Insight Release Notes* before you install. Release notes provide an overview of new features, bug fixes, last-minute changes made to OVPI, and a list of available Report Packs for the release.

Pre-Installation Tasks

The following tasks need to be completed in the sequence given before you can install the RDBMS or OVPI components.

Task 1: Update your operating system software

Install all required patches to your operating system software. .



Contact your HP sales representative for the most recent list of patches required.

1 Verify patches for release levels.

Make sure that your operating system is at the correct release level. You must install operating system patches before installing the RDBMS.

Windows Systems

- a From the Windows Explorer Help menu, select **About Windows**.
- b Find the service pack number on the Version line. In the following example, *xxxx* is the build number and *n* is the service pack number:

Version 5.0 (Build *xxxx*: Service Pack *n*)

Windows 2003 requires Service Pack 1.

HP-UX Systems

Type the following command:

```
/usr/sbin/swlist -l product | fgrep PH
```

Solaris Systems

Type the following command:

```
showrev -p
```

Required patches for Solaris are the following:

Solaris 10 Solaris 10 Recommended Patch Cluster, Sep/07/06

Solaris 9 Solaris 9 Recommended Patch Cluster, Oct/14/05

Red Hat Linux Systems

Type the following command:

```
rpm -q -a
```

If your system is not at the current patch level for the release, download and install the required patches before continuing.

- 2 Install HP-UX-specific patches.

HP-UX11.11:

GOLDAPPS11i B.11.11.0612.459 Applications Patches for HP-UX 11i v1,
December 2006

GOLDBASE11i B.11.11.0612.459 Base Patches for HP-UX 11i v1,
December 2006

HP-UX11.23 (PA):

QPKAPPS B.11.23.0703.059a Applications Quality Pack Bundle for
HP-UX 11i v2, March 2007

QPKBASE B.11.23.0703.059a Base Quality Pack Bundle for HP-UX
11i v2, March 2007

You can download the patch from **<http://www1.itrc.hp.com/>**

- 3 Install Red Hat Linux-specific patches.

Linux (RHEL4): Update 3

Task 2: Verify that patches are running for Java

OVPI includes Java 1.4.2.13, which will automatically load onto your system during OVPI installation. However, Java may not run properly unless you applied the patches required for your operating system.

You must install all operating system patches before you install the Oracle database or OVPI. For your convenience, the patches that were required and tested at the time this guide was printed are included. Contact your HP sales representative for the most recent list of patches required.

Viewing Installed Patches

To determine which patches are installed on your system, use the following commands:

HP-UX Systems:

```
/usr/sbin/swlist -l product | fgrep PH
```

Solaris Systems:

```
showrev -p
```

Windows Systems:

- a From the Windows Explorer Help menu, select **About Windows**.
- b Find the Service Pack number on the Version line. In the following example, *xxxx* is the build number and *n* is the service pack number:
Version 5.0 (Build *xxxx*: Service Pack *n*).

Required Java Patches

To locate the latest Java patches for your operating system, go to the following URLs:

HP-UX Systems: **<http://www.hp.com/products1/unix/java/patches/index.html>**

Solaris Systems: **<http://java.sun.com/j2se/1.4/download.html>** and find the Solaris OS Patches section

Windows Systems: **<http://windowsupdate.microsoft.com>**

URLs are subject to change without notice.

Task 3: (For HP-UX only) Install HP-UX Measurement Interface for 11i product

The new OVPI monitoring feature requires the HP-UX Measurement Interface for 11i product to be installed so that OVPI system status can be monitored properly. The HP-UX Measurement Interface for 11i package is available on media distributed with HP-UX Mission Critical Operating Environment (MC-OE) and the HP-UX Enterprise Operating Environment bundles. It can also be obtained from the HP-UX Application Release distribution media.

If `/opt/perf/lib/libnums.sl` exists, the required files are installed on your system.

HP-UX systems that have GlancePlus or OpenView Performance Agent installed will already have the required files needed by the OVPI monitoring feature, so no additional prerequisite product installation is required on these systems.

Task 4: Identify ports for network connectivity

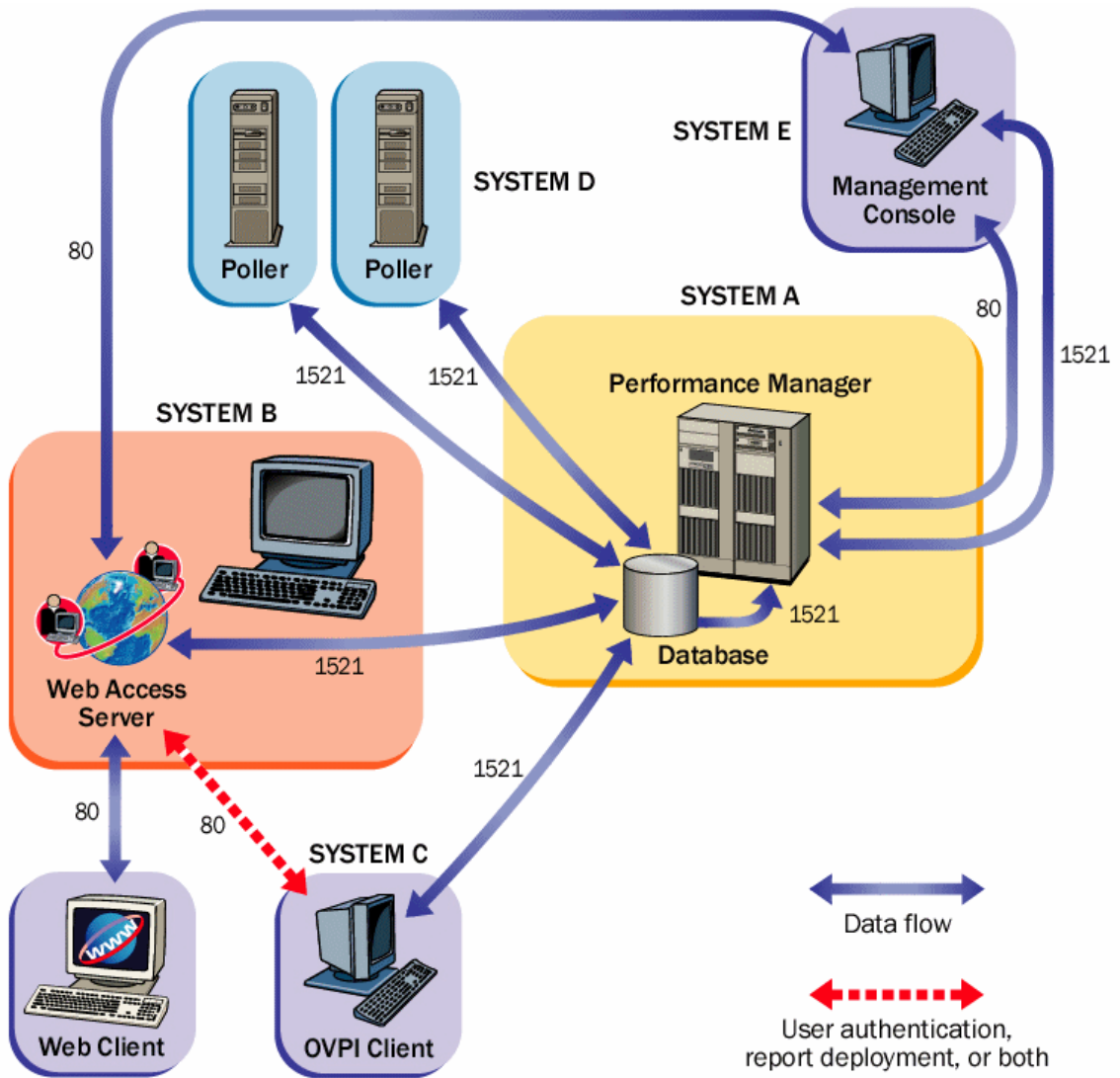
Ports establish connectivity between OVPI systems. OVPI uses the following default port numbers.

OVPI Component	Default Port Number
Oracle RDBMS	1521 (Windows systems) 1521 (UNIX Systems)
Web Access Server	80 (SSL not enabled)
(Includes the management server, which also uses port 80 by default. If any other web server is running on port 80, use a different port for OVPI; for example, port 8080.)	443 (SSL enabled)
Management Console	80



If you are using firewall software, you must open the OVPI ports in the firewall. For instructions, see your firewall documentation.

The following example shows an OVPI configuration using the default port numbers.



Polling and SNMP Connectivity

Any system that gathers data from the network requires connectivity through intermediate firewalls to reach the network devices. It is recommended that the remote poller system and polled devices be outside the firewall, and that the remote poller connects through the firewall to the database server. This reduces the number of connections through the firewall.

In situations where a satellite database server is controlling polling systems, you may need to create specialized polling policies to help divide the devices to be polled between polling systems. For information about creating polling policies, see the *HP OpenView Performance Insight Administration Guide*.

Client Connectivity

To view reports using a web browser, you must have HTTP connectivity between your systems and the Web Access Server.

To use the Report Viewer or Report Builder applications, you must have connectivity between the client system and the Web Access Server system and the database server on the appropriate ports. When installing clients, specify the same Web Access Server and port number that was specified on the Web Access Server reference page. For more information about installing the Web Access Server, see [Installing the Web Access Server](#) on page 121.

Task 5: Plan for web access

- 1 Verify that you are using the supported web browsers.

Web users must be able to connect to one of the following web browsers:

- Microsoft Internet Explorer 5.5 or later
- Mozilla Firefox 1.5 or later

- 2 Verify that Java scripting is enabled.

Your web browser must have Java scripting enabled. Otherwise, you will not be able to view the Navigation frame for the Web Access Server application.

To enable Java scripting, do one of the following, depending on the web browser:

Internet Explorer

- a From the browser's Tools menu, select **Internet Options**. The Internet Options dialog box opens.

- b Select the Security tab. Click **Internet** for the Web content zone, and then click **Custom Level**. The Security Settings dialog box opens.
- c Scroll down the list of settings and locate the Scripting settings. Select **Enable** under Active scripting.
- d Click **OK** in the Security Settings dialog box.
- e Click **OK** in the Internet Options dialog box.

Mozilla Firefox

- a From the browser's Tools menu, select **Options**.
The Options dialog box opens.
- b Select the **Content** tab and then select **Enable JavaScript** check box.
- c Click **OK** in the Options dialog box.

Task 6: Install the SNMP security pack for SNMPv3 nodes

If you plan to collect data from SNMPv3 nodes, you must install the SNMP Security Pack product, available from SNMP Research International, Inc. Go to the SNMP web site for information:

<http://www.snmp.com>

Install the following version, depending on your operating system:

- Windows Systems: Version 16.1.0.35
- UNIX Systems: Version 16.1.0.19

You must configure your SNMPv3 nodes following installation. For configuration details, see the *HP OpenView Performance Insight Administration Guide*.

Task 7: Integrate with Network Node Manager

- 1 Verify that you are running NNM version 7.5 or later.

If your system is already running NNM version 7.5, you can install OVPI on the system. OVPI and NNM will share components that enable the OVPI MIB Browser and Collection Wizard tools to function. These tools will not function with earlier versions of NNM.

HP recommends upgrading NNM to version 7.5 or later before installing OVPI.



You cannot install OVPI with any NNM version prior to NNM 6.4.

2 Stop NNM processes before installing OVPI.

To avoid errors from occurring during installation, stop NNM processes before installing OVPI. Follow these steps.

Windows Systems

- a From the **Start** button on the Windows task bar, click **Programs→HP OpenView→Network Node Manager Admin**, and select **NNM Services - Stop**.
- b Verify that the NNM processes are stopped. From the **Start** button on the Windows task bar, click **Programs→HP OpenView→Network Node Manager Admin**, and select **NNM Services - Status**.
- c Close the Services window. Otherwise, the OVPI Services will fail to install.

UNIX Systems

- a At the command prompt, type:
ovstop -c
- b Verify that the NNM processes have stopped. At the command prompt, type:
ovstatus -c

Task 8: Stop Compaq Insight Manager services (HP Compaq systems only)

If you intend to install OVPI on a Compaq system, you must stop the Compaq Insight Manager services.

Task 9: (Windows systems only) Disable HP-proprietary memory management devices

If your environment includes Windows systems that are running HP-proprietary memory management services, you must disable those services by using the Services Manager to set those services to “disabled.” The services to disable include:

- HpComponent

- HPEventLog
- HPFpcSvc
- HpLerSvc
- HPSdnSvc

Task 10: (UNIX systems only) Verify that you are using supported desktops

OVPI supports the Common Desktop Environment (CDE). OVPI does not support OpenWindows.

Task 11: Plan for internationalization and localization

OVPI supports internationalization. You can install OVPI on any language version of the supported operating systems. Database support is internationalized for Oracle.

OVPI version 5.2 is provided in English only.

Install db3 Module (Red Hat Linux Systems Only)

If you intend to install OVPI client applications on a Red Hat Linux system, you must install the Linux system with the db3 module (rpm). The module is located on the Red Hat installation CD, but is not automatically installed. You must install it to use OVPI.

Installation Prerequisites Checklist

- ☐ You have read the Performance Insight Release Notes for this release.
- ☐ You have decided whether to use a standalone or distributed environment. See [Operating Environments](#) on page 5
- ☐ You have all required installation media. See [Installation Media](#) on page 20
- ☐ You are using a supported system configuration (operating system and RDBMS). See [Pre-Installation Tasks](#) on page 21
- ☐ You have identified which OVPI components to install on each system. See [Typical Installation by System Role](#) on page 18 and [Pre-Installation Tasks](#) on page 21
- ☐ You have installed the required patches for your operating system. See [Update your operating system software](#) on page 21
- ☐ You have identified port numbers for network and client connectivity. See [Identify ports for network connectivity](#) on page 24
- ☐ You have confirmed that your web clients are using a supported browser, and you have enabled Java scripting for the browser. See [Plan for web access](#) on page 26
- ☐ If required, you have installed the SNMP Security Pack. See [Install the SNMP security pack for SNMPv3 nodes](#) on page 27
- ☐ If you are planning to install OVPI on a system that is running NNM, you have verified that you are using the correct version of NNM and you have stopped NNM processes. See [Integrate with Network Node Manager](#) on page 27
- ☐ If you are installing on a Red Hat Linux system, you have installed with the db3 module. See [Install Red Hat Linux-specific patches.](#) on page 22

- ❑ If you are installing on a Compaq system, you have stopped any Compaq Insight Manager services. See [Stop Compaq Insight Manager services \(HP Compaq systems only\)](#) on page 28
- ❑ If you are running Windows with HP proprietary memory management services, you have disabled those services. See [\(Windows systems only\) Disable HP-proprietary memory management devices](#) on page 28
- ❑ If you are a UNIX user, you are using a supported desktop. See [\(UNIX systems only\) Verify that you are using supported desktops](#) on page 29

Memory and Storage Requirements

The following table shows the minimum storage requirements for OVPI components, based on disk, by operating system.

Component	HP-UX PA-RISC	Solaris	Windows	Linux
OVPI Database Schema	600 MB	2100 MB	2500 MB	2000 MB
OVPI Performance Manager	425 MB	400 MB	340 MB	400 MB
Web Access Server	255 MB	420 MB	340 MB	400 MB
OVPI Clients	180 MB	340MB	1700 MB	320MB
Remote Poller	265 MB	200 MB	130 MB	200 MB
Full Standalone	900 MB	2200 MB	2100 MB	2100 MB

The following table shows the minimum and recommended memory requirements for OVPI. The requirements are based on original system size recommendations, and may change based on polling requirements.

Component	Minimum	Recommended
OVPI Database Schema	512 MB	1 GB
OVPI Performance Manager (includes OVPI Database Schema)	2 GB	4 GB
Management Server	256 MB	512 MB
OVPI Clients	256 MB each ^a	512 MB

Component	Minimum	Recommended
Command-Line Utilities	256 MB ^b	512 MB
Remote Poller	256 MB	512 MB
Full Standalone Install	4 GB	8 GB

- a. If you plan to have more than one component running at the same time, the memory requirements are additive. For example, if you run the Management Console, Report Builder, and the Web Access Server simultaneously on one system, 768 MB is the minimum memory requirement. In a standalone installation, the Web Access Server and Management Server use the same Java Virtual Memory (JVM). The minimum, therefore, is still 256 MB.
- b. Command line utilities use far less memory.

The OVPI Database Schema is set to between 50 to 60 percent of total memory. The Management Server, OVPI clients, Command-Line Utilities, and Remote Poller are installed at minimum (1 to 2 GB of memory). The remaining processing space is used by the OVPI Performance Manager. Make sure that this space is large enough to handle polling and data loading.

To change the amount of memory for Report Builder, Report Viewer, or Web Access Server after installation, change the Java settings using the Web Access Server. See the *HP OpenView Performance Insight Administration Guide* for details.

Installation Parameter Values

OVPI provides default values for many installation parameters. If you want to change any of the defaults, you can avoid delays during installation by identifying the changes ahead of time.

If you change the default path settings for Windows systems, make sure you do not add spaces in the directory path.

The following table lists parameter defaults you might decide to change. Unless noted, parameters apply to both standalone and distributed installations.

Parameter and Description	Default Value Windows Systems	Default Value UNIX Systems
Destination Folder The directory where the OVPI software will be installed.	C:\OVPI	/usr/ovpi
Oracle Host Name System on which Oracle is installed		
Oracle TCP/IP Port Number The TCP/IP port number that Oracle uses to communicate with clients and servers on other systems.	5000	2052
Oracle Server Name (DSQUERY) Name of the Oracle SQL Server where the client applications will look for information by default.	<LOCAL_HOST> In this instance, LOCAL_HOST (Windows) or LOCALHOST (UNIX) is the name of the Oracle host.	<LOCAL_HOST>
Oracle Directory The directory into which you installed Oracle.	C:\Oracle	/usr/Oracle
Database Devices The directory where OVPI will create the database device files (if raw devices are used, device files are not created)	Oracle_directory\db files 50%	Oracle_directory/dbfiles 50%
Database Size The size of the database device file.	800 MB	800 MB

Parameter and Description	Default Value Windows Systems	Default Value UNIX Systems
Transaction Log and Percent of Database	Oracle_directory\db files 50%	Oracle_directory/ dbfiles 50%
Temporary Space and Percent of Database	Oracle_directory\db files (Windows) 50%	Oracle_directory/ dbfiles (UNIX) 50%
Cache Folder The cache directory used to store collected data before it is placed in the database.	\$DPIPE_HOME \collect	\$DPIPE_HOME /collect
Username The name for the Web Access Server administrator.	trendadm	trendadm
HTTP Port The port number used for HTTP communication with the Web Access Server.	80	80
Web Access Server Host (used in distributed installs only)		
Web Access Server Port (Used in distributed installs only) The HTTP port number used by the Web Access Server.	80	80

Parameter and Description	Default Value Windows Systems	Default Value UNIX Systems
Remote Management Server Host (used in distributed installs only) The name of the database host system.	blank	blank
Remote Management Server Port (used in distributed installs only) The HTTP port number used by the database host system.	80	80

3 Installing Oracle 10g Enterprise Edition

You must install the Oracle RDBMS, and it must be running, before you can install OVPI. Make sure that the instance for the Oracle listener program created for OVPI is running.

Oracle Installation Prerequisites

- 1 Review the Oracle documentation.

Before installing Oracle, you should read any Oracle documentation of interest, and consider printing out the *Oracle Installation Guide* for easy reference during the installation. Oracle documentation is on the Oracle Install CD. Click **Browse Documentation** and review release notes, readme files, and product documentation as necessary. Oracle documents are also available online at **www.oracle.com**

- 2 Consult with a database administrator.

If possible, consult with an Oracle Database Administrator (DBA) before installing Oracle. A database administrator can help you design and set up the Oracle database and can help you with the creation of tablespaces for optimal use by OVPI.

- 3 Follow general performance guidelines.

Whenever possible adhere to the following guidelines when installing Oracle for use with OVPI:

- Install Oracle and OVPI on separate physical devices
- Keep at least three active copies of the database control file on at least three different physical devices.

- Use at least three groups of redo logs. Separate redo logs to the greatest extent possible onto devices with limited activity occurring when the database is in use. Shadow redo logs whenever possible.
- If possible, put the system tablespace on a separate device.
- If possible, put the data datafile on separate devices from the index datafiles.
- If possible, put the archive log files on a separate device.



The intent of these recommendations is to reduce disk contention. In general, the more disk heads moving at the same time, the faster your database can operate.

4 Verify sufficient database size, storage, and memory.

Before installing Oracle, make sure the system meets the following hardware requirements.

- OVPI Database Size

To determine the size of the OVPI database, you must consider the number of devices polled, the amount of data objects collected, and the length of time the data will be stored. The total size is distributed across the various tablespaces.

A sizing spreadsheet that can help you to estimate system requirements is available on the latest version of the Report Packs CD. To determine the overall database size required, enter values for each Report Pack you will install, and the number of objects (devices, interfaces, VPNs, and so on) that will be managed.

Determining the size requirements is important to allow you to accurately estimate the hardware resources necessary to support your configuration.

- Memory and Storage Requirements for OVPI Database

You are not required to install all the OVPI components onto the same UNIX file system or Windows partition. However, when you install a specific component, its default space *must* be from one file system or partition.



For instructions to increase the size of the OVPI database after OVPI is installed, see the *HP OpenView Performance Insight Administration Guide*.

- Minimum OVPI Database Storage

For the minimum storage requirements for the database server, see the Oracle installation guide. After initial installation is complete, you can access the Oracle Enterprise Management console and use its suggestions for setting up memory regions (Cache, PGA, and so on).

The OVPI database size is determined by many factors. If you completed the spreadsheet provided on the Report Packs CD, use it to guide you in estimating your database sizes and configuration.

If you are installing OVPI on the same system as the Oracle database server, you can allow the OVPI installation to create a database smaller than the total expected size because OVPI installation creates tablespaces that have the “autoextend” option enabled, allowing Oracle to add space as needed to the OVPI database.

- 5 Set the COMPATIBLE parameter.

Make sure the COMPATIBLE parameter is set to 9.2.0.1.0. For information about setting this parameter, see the Oracle documentation.

Creating an Oracle Database for OVPI

This section does not provide step-by-step instructions for installing Oracle. For that information, see the *Oracle Installation Guide* and follow the procedures for your operating system.

This section provides information that you should consider when installing Oracle and creating an Oracle database for use with OVPI.

If you are installing the Oracle database server on the same system that will hold the OVPI database, you should allow the OVPI installation to create the tablespaces. If you are installing the Oracle database server on a separate system from the OVPI database (a remote database installation), you **MUST** create the tablespaces using Oracle on the database server before installing OVPI.

After the Oracle database is installed, configured, and running, you can proceed to install OVPI. For information about how to install OVPI, see [Chapter 4, Installing OVPI on a Standalone Server](#) or [Chapter 5, Installing OVPI in a Distributed Environment](#).

Install the Oracle Database Server

Follow the instructions for installing Oracle on your operating system in the *Oracle Installation Guide*. During the installation process, you will be required to decide what to install and what settings to specify.

General Oracle Installation Guidelines

- Install Oracle 10.2.0.1.0. You will apply an upgrade patch for 10.2.0.3.0 later in the process.
- Choose the **Custom** installation instead of installing the Enterprise Edition. This results in fewer components being installed and reduces the overhead and time to edit components.
- When installing Oracle 10g, the following are the **minimum components** necessary for OVPI, shown as grouped during the installation. Additional components can be installed to provide additional Oracle controls, but they are not required for OVPI. Several frequently used optional components are indicated for installation but may be omitted if space is an issue.

Select:

- Oracle 10.2.0.1.0
- Enterprise Edition Options 10.2.0.1.0
- Oracle Net Services 10.2.0.1.0
 - Oracle Net Listener 10.2.0.1.0
- Oracle Enterprise Manager Products 10.2.0.1.0
 - Oracle Management Server 10.2.0.1.0 (optional)
 - Oracle Intelligent Agent 10.2.0.1.0
 - Enterprise Manager Client 10.2.0.1.0
 - Oracle Change Management Pack 10.2.0.1.0 (optional)
 - Oracle Diagnostics Pack 10.2.0.1.0 (optional)
 - Oracle Tuning Pack 10.2.0.1.0 (optional)

Deselect:

- Oracle HTTP Server 10.2.0.1.0 if possible. It may not be deselectable if another application requires it.

Some components are mandatory for Oracle to install and appear automatically selected or may be grayed out. Do not deselect them.

After you select and deselect the appropriate components, you can proceed with the installation.



You can install OVPI with or without Database partitioning, but HP recommends that you use Database partitioning.

Task 1: Create the Oracle database

When the Create Database window opens, click **Yes**.



You must create a database before you can install OVPI

Task 2: Configure the Oracle database

If you choose to allow Oracle to create the database for you, the following responses during the database configuration process will create a simple, functional database. See your Oracle Database Administrator for guidance in creating a more robust database.

- Protocol: specify TCP
- Port number: specify 1521
- Net Service Name: MUST match Oracle SID for the OVPI database. If your site does not permit you to do this, see [Editing the tnsnames.ora File](#) on page 52 for additional instructions.

When the Database Configuration Assistant Welcome window opens, follow these steps:

- 1 Operations: select **Create a database** and click **Next**.
- 2 Database Templates: select **Custom Database** and click **Next**.
- 3 Database Identification: type the Global Database Name and SID and click **Next**.



If the Global Database Name is different from the SID, you will need to modify the resulting tnsnames.ora file later for OVPI. This is important because report packs will not install correctly unless the Global Database Name and the SID match or the tnsnames.ora file is modified.

- 4 Database Connection Options: select **Dedicated Server Mode** and click **Next**.
- 5 Initialization Parameters: determine the amount of physical memory.
 - Click **Typical**. Change the default setting from 60% to 70%. In general, assign as much memory as possible to the Oracle database.
 - Click the **Character Sets** tab. Click **Use Unicode (AL32UTF8)** and click **Next**.
- 6 Database Storage: click **Next**. This allows you to distribute the physical files that comprise the OVPI database across file systems. See the Oracle documentation for recommendations.
- 7 Creation Options: click to check **Create Database** and click **Finish**.
- 8 Review the database summary and finish the installation.

- a The Summary window opens, showing a summary of the database to be created. Click **OK**.
- b The Database Configuration Assistant window opens when database creation is complete. Type the SYS and SYSTEM account passwords and click **Exit**.
- c The End of Installation window opens. Click **Exit**.

Task 3: Apply the Oracle 10.2.0.3 patch set

You must upgrade the installed Oracle version to 10.2.0.3.0 before you can install or run OVPI. When you download the patch, open the README file and follow its directions for your operating system.

Task 4: Edit the listener.ora file

You must edit the tnsnames.ora file to install OVPI. To edit the tnsnames.ora file, follow these steps:

- 1 Find the tnsnames.ora file, which is located in one of the following directories depending on your operating system:

Windows Systems

```
oracle_install_dir\network\admin
```

UNIX Systems

```
oracle_install_dir/network/admin
```

In this instance, *oracle_install_dir* is the directory into which you installed the Oracle client.

- 2 Open the file using a text editor.
- 3 Add an entry for the GLOBAL_DBNAME for the system on which Oracle is installed.

In the following example, the GLOBAL_DBNAME for the system on which Oracle is installed is PI52. In the example, the bold text indicates lines you need to add.

```
# listener.ora Network Configuration File: /opt/oracle10g/
network/admin/listener.ora
# Generated by Oracle configuration tools.

SID_LIST_LISTENER =
```

```

(SID_LIST =
  (SID_DESC =
    (SID_NAME = PLSExtProc)
    (ORACLE_HOME = /opt/oracle10g)
    (PROGRAM = extproc)
  )
)

SID_LIST_LISTENER =
  (SID_LIST =
    (SID_DESC =
      (GLOBAL_DBNAME= PI52)
      (SID_NAME = PI52)
      (ORACLE_HOME = /opt/oracle10g)
    )
  )

LISTENER =
  (DESCRIPTION_LIST =
    (DESCRIPTION =
      (ADDRESS_LIST =
        (ADDRESS = (PROTOCOL = IPC) (KEY = EXTPROC))
      )
      (ADDRESS_LIST =
        (ADDRESS = (PROTOCOL = TCP) (HOST =
db1.ackcat.com) (PORT = 1521))
      )
    )
  )

```

- 4 Save the listener.ora file
- 5 Restart listener, which can be done as follows;

Windows Systems

- From the Control Panel window, double-click Administrative Tools. The Administrative Tools window opens.
- Double-click Services. The Services window opens.
- Select and restart the listener program and the database server.

UNIX Systems

From the command prompt, restart the listener program by typing:

```
>lsnrctl stop  
> lsnrctl start
```

Task 5: Create tablespaces

If you are installing the Oracle database server on the same system that will hold the OVPI database, you can either create the tablespaces automatically when you install OVPI, or you can create them manually using Oracle. If you create the tablespaces during OVPI installation, you are limited to a subset of file system setup parameters, but the process is simpler. If you create them manually, you can use all Oracle options and have full control about how and where they are created, but the procedure is more complicated and should only be undertaken in cooperation with an Oracle database administrator.

If you are installing the Oracle database server on a separate system from the OVPI database, (a remote database installation) you **MUST** use Oracle to create the tablespaces on the database server before installing OVPI.



If you want to create the tablespaces manually, HP recommends that you contact Support, or make sure an Oracle database administrator creates the tablespaces for use with OVPI. If you create the tablespaces manually, you must ensure that the tablespace names match the names listed below exactly.

Guidelines for Tablespace Sizing

The guidelines in this section are important to consider if you want to increase the entire OVPI database by a certain size.



You can change the size of the tablespaces later during the OVPI installation. See [\(Optional\) Change specific Oracle configuration parameters](#) on page 106 for details.

The following table shows the Oracle tablespaces and the percentage of the database that they should occupy, based on an 800 MB minimum size for the main database.

Tablespace	Percent of Total Database
dpipe_default_seg	2%
dpipe_property_ind_seg	2%
dpipe_property_seg	2%

Tablespace	Percent of Total Database
dpipe_upload_ind_seg	3%
dpipe_upload_seg	3%
dpipe_rate_ind_seg	10%
dpipe_rate_seg	10%
dpipe_summary_ind_seg	10%
dpipe_summary_seg	10%
dpipe_overflow_seg	30%
dpipe_archive_ind_seg	6%
dpipe_archive_seg	6%
dpipe_event_ind_seg	2%
dpipe_event_seg	4%
Total Size of the Database	100%

The following table is an example that shows how you would set up a 10GB database using the ratios listed in the previous table and the extent size rule.

Tablespace	Initial Tablespace Size	Extent
dpipe_default_seg	20 MB	10 MB
dpipe_property_ind_seg	20 MB	10 MB
dpipe_property_seg	20 MB	10 MB
dpipe_upload_ind_seg	31 MB	15 MB
dpipe_upload_seg	31 MB	15 MB
dpipe_rate_ind_seg	102 MB	51 MB
dpipe_rate_seg	102 MB	51 MB
dpipe_summary_ind_seg	102 MB	51 MB

Tablespace	Initial Tablespace Size	Extent
dpipe_summary_seg	102 MB	51 MB
dpipe_overflow_seg	307 MB	154 MB
dpipe_archive_ind_seg	61 MB	30 MB
dpipe_archive_seg	61 MB	30 MB
dpipe_event_ind_seg	20 MB	10 MB
dpipe_event_seg	41 MB	20 MB
Total Database	10 GB	Default
temp	40 GB	Default
undo	10 GB	Default

The extent size rule is the lesser of 50% of the initial tablespace size and 1 GB. For example, for an 80 GB database, the initial size of dpipe_overflow_seg will be 24 GB, and extents will be 1 GB (not 50%).

On HP-UX and Solaris, you must create data and property tablespaces with 32K block size and index tablespaces with 8K block size. On Windows and Linux you must create data and property tablespaces with 16K block size and index tablespaces with 8K block size. The dpipe_default_seg tablespace also should be of the same block size as the data tablespace.

Creating the Tablespaces

To create tablespaces, follow these steps or use the Oracle Enterprise Manager:

- 1 Using SQL*Plus, type the following commands to create the dpipe_default_seg tablespace and the dsi_dpipe user, and to grant the dsi_dpipe user the required privileges:

```
SQL> CREATE TABLESPACE dpipe_default_seg
DATAFILE 'dpipe_default_seg.dbf' SIZE 500M REUSE
AUTOEXTEND ON NEXT 250M MAXSIZE UNLIMITED BLOCKSIZE 32K
LOGGING ONLINE PERMANENT
EXTENT MANAGEMENT LOCAL AUTOALLOCATE
SEGMENT SPACE MANAGEMENT AUTO;
```

```

SQL> CREATE USER dsi_dpipe IDENTIFIED BY dsi_dpipe DEFAULT
TABLESPACE dpipe_default_seg TEMPORARY TABLESPACE temp
PROFILE DEFAULT ACCOUNT UNLOCK;
SQL> GRANT connect TO dsi_dpipe;
SQL> GRANT dba TO dsi_dpipe;
SQL> GRANT exp_full_database TO dsi_dpipe;
SQL> GRANT imp_full_database TO dsi_dpipe;
SQL> GRANT unlimited_tablespace TO dsi_dpipe;
SQL> GRANT select any table TO dsi_dpipe;
SQL> GRANT select any dictionary TO dsi_dpipe;
SQL> GRANT execute ON sys.dbms_lock TO dsi_dpipe;
SQL> COMMIT;
SQL> CONNECT dsi_dpipe/dsi_dpipe;

```

In some cases your Oracle database administrator may allow you to grant dba privileges to dsi_dpipe. In that case, work with your database administrator to set up the following set of privileges for OVPI:

Grant <privilege>	To <name>
connect	dsi_dpipe
resource;	dsi_dpipe
create session	dsi_dpipe
create table	dsi_dpipe
create view	dsi_dpipe
create procedure	dsi_dpipe
create trigger	dsi_dpipe
create sequence	dsi_dpipe
alter session	dsi_dpipe
select any table	dsi_dpipe
select any dictionary	dsi_dpipe
execute ON sys.dbms_lock	dsi_dpipe

You may also need to alter the available extension limits for the following tablespaces to prevent them from running out of space:

```

user dsi_dpipe quota unlimited on dpipe_default_seg;
user dsi_dpipe quota unlimited on dpipe_property_seg;

```



```

user dsi_dpipe quota unlimited on dpipe_property_ind_seg;
user dsi_dpipe quota unlimited on dpipe_summary_seg;
user dsi_dpipe quota unlimited on dpipe_summary_ind_seg;
user dsi_dpipe quota unlimited on dpipe_rate_seg;
user dsi_dpipe quota unlimited on dpipe_rate_ind_seg;
user dsi_dpipe quota unlimited on dpipe_upload_seg;
user dsi_dpipe quota unlimited on dpipe_upload_ind_seg;

```

2 Create the following tablespaces as the dsi_dpipe user:

- dpipe_property_ind_seg
- dpipe_property_seg
- dpipe_upload_ind_seg
- dpipe_upload_seg
- dpipe_rate_ind_seg
- dpipe_rate_seg
- dpipe_summary_ind_seg
- dpipe_summary_seg
- dpipe_overflow_seg
- dpipe_archive_ind_seg
- dpipe_archive_seg
- dpipe_event_ind_seg
- dpipe_event_seg

The following is an example of how you would use SQL*Plus to create the dpipe_property_ind_seg tablespace:

```

SQL> CREATE TABLESPACE dpipe_property_ind_seg
DATAFILE 'dpipe_property_ind_seg.dbf' SIZE 200M REUSE
AUTOEXTEND ON NEXT 100M MAXSIZE UNLIMITED BLOCKSIZE 8K
LOGGING ONLINE PERMANENT
EXTENT MANAGEMENT LOCAL AUTOALLOCATE
SEGMENT SPACE MANAGEMENT AUTO;

```

This example creates a tablespace that is 200MB. For information about how to determine the proper size for your tablespaces based on the size of your database, see [Guidelines for Tablespace Sizing](#) on page 45.

The following table lists the configuration parameters and the recommended value for each. You can obtain the current list of values for the parameters by querying the V\$SYSTEM_PARAMETER table.

Parameter and Description	Recommended Value
SGA_MAX_SIZE The maximum amount of memory that will be utilized by the Oracle database. This memory is shared memory and is used by all Oracle server processes. shared memory = 40% of SGA size buffer cache = 40% of SGA size large pool = 12% of SGA size java pool = 8% of SGA size	70% of the total system memory
PGA_AGGREGATE_TARGET (M) The target aggregate PGA memory available to all server processes associated with the instance.	200M
DB_FILE_MULTIBLOCK_READ_COUNT The maximum number of blocks that should be read in one I/O operation when a sequential scan occurs (allowing you to minimize I/O during table scans).	stripe size (KB) ^a / DB_BLOCK_SIZE (KB) ^b
WORKAREA_SIZE_POLICY The policy for sizing work areas and for controlling the mode in which work areas are tuned.	AUTO
DB_16K_CACHE_SIZE (Windows) The size of the default buffer pool for buffers with the primary block size. DB_32K_CACHE_SIZE (UNIX) The size of the cache for 32K buffers.	95% of available buffer cache ^c

a. See [Determine stripe size](#), on page 51

b. See [Determine the database block size](#), on page 51.

c. See [Determine cache size](#), on page 51.

- 3 Determine stripe size.

RAID arrays use *striping* to improve performance. Striping is a technique that splits up files into smaller pieces and spreads them across multiple disk drives. This allows data to be retrieved faster from the disks.

Stripe size is the size of the blocks used in striping. This value can range from 2 KB to 512 KB (or higher) in powers of 2. Consult a Database Administrator for the stripe size.

- 4 Determine the database block size.

To determine DB_BLOCK_SIZE, type the following SQL*Plus command:

```
SELECT value  
FROM   V$PARAMETER  
WHERE  name = 'db_block_size';
```

- 5 Determine cache size.

To determine what 95% of the available buffer cache is, type the following SQL*Plus command:

```
SELECT (dc.CURRENT_SIZE + fm.CURRENT_SIZE) * 0.95  
FROM   V$SGA_DYNAMIC_FREE_MEMORY fm,  
  
       V$SGA_DYNAMIC_COMPONENTS dc  
WHERE  dc.COMPONENT = 'buffer cache';
```

Once you complete installing and configuring Oracle, you can install OVPI.

Editing the tnsnames.ora File

If the global database name and SID for the OVPI database do not match, you must edit the tnsnames.ora file as follows:

- 1 Find the tnsnames.ora file, which is located in one of the following directories depending on your operating system:

Windows Systems

oracle_install_dir\network\admin

UNIX Systems

oracle_install_dir/network/admin

In this instance, *oracle_install_dir* is the directory where you installed the Oracle client.

- 2 Open the file using a text editor (or use Oracle Net Manager and create a service name).
- 3 Add an entry for the SERVICE_NAME for the system on which Oracle is installed.

► If SERVICE_NAME does not work, use SID to define the system entry.

In the following example, the SERVICE_NAME for the system on which Oracle is installed is PI51 and the HOST is dbl.ackcat.com:

```
# This is a sample TNS entry in the tnsnames.ora file.
# Note that the key is the same as the SERVICE_NAME; this
# is necessary for OVPI applications to find the correct
# server entry.
PI51 =
  (DESCRIPTION =
    (ADDRESS_LIST =
      (ADDRESS = (PROTOCOL = TCP) (HOST =
db1.ackcat.com) (PORT = 1521))
    )
    (CONNECT_DATA =
      (SERVICE_NAME = PI51)
    )
  )
```

- 4 Save the tnsnames.ora file.

Configuring a Remote Oracle Database

The OVPI Database and OVPI Performance Manager are often installed on the same database server. If that is the case with your installation, skip this section.

When the OVPI database is installed independently of OVPI Performance Manager, it is termed a “remote Oracle database.” This section provides instructions for configuring an Oracle database for remote use.



You must use Oracle 10.2.0.3.0. Earlier versions of the Oracle database must be upgraded for use with OVPI 5.2. Install the 10.2.0.3.0 patch set where noted in the following procedure.

To configure a remote Oracle database, perform the following tasks.

Task 1: Start the installation program and install the Oracle 10g client

Refer to the Oracle documentation for the installation procedure.

Task 2: Configure the Oracle client to point to the remote Oracle database

- 1 In the Net Configuration Assistant Welcome window, select **No** and click **Next**. The Net Service Name Configuration, Database Version window opens.
- 2 Click **Oracle9i or later database or service** (the default) and click **Next**. The Net Service Name Configuration, Service Name window opens.
- 3 Type the database’s service name in the Service Name field and click **Next**. The Net Service Name Configuration, Select Protocols window opens.



If the Net Service name does not match the SID name, follow the procedures described in [Editing the tnsnames.ora File](#) on page 52.

- 4 Click **TCP** (the default) and click **Next**. The Net Service Name Configuration, TCP/IP Protocol window opens.
- 5 Type the host name for the computer on which the database is located, click **Use the standard port number of 1521**(the default), and click **Next**. The Net Service Name Configuration, Test window opens.

Task 3: Test the connection to the Oracle database

- 1 In the Net Service Name Configuration, Test window, select **Yes, perform a test**, and click **Next**. The Connecting window indicates whether the test was successful. Normally the test fails the first time.
 - a If the test is not successful, click **Back** to review information that you provided. Enter the `dsi_dpipe` user name and password specified for the OVPI database previously created on the remote Oracle server.
 - b If the test is successful, click **Next**. The Net Service Name Configuration, Net Service Name window opens.

Task 4: Finish the installation

- 1 In the Net Service Name Configuration, Net Service Name window, type the net service name and click **Next**. The Another Net Service Name window opens.
- 2 Click **No** and click **Next**. The Net Service Name Configuration Done window opens.
- 3 Click **Next**. The Oracle Net Configuration Assistant Done window opens.
- 4 Click **Finish**. The End of Installation window opens.
- 5 Click **Exit**. Continue to [Task 5](#) if you need to upgrade your Oracle database to 10.2.0.3.0. Otherwise continue to [Task 6](#).

Task 5: Upgrade to Oracle 10.2.0.3.0 by applying the patch set to your Oracle database

Follow the procedures described in [Apply the Oracle 10.2.0.3 patch set](#) on page 43 to install the patch.

Task 6: Test the connection from Oracle client system to the remote Oracle database

Type the following SQL*Plus command:

```
sqlplus system/password@oracle_SID_value
```

In this instance, *system* is the Oracle user, *password* is the password for the Oracle user, and *oracle_SID_value* is your Oracle SID value for the OVPI database.

Task 7: On the Oracle database server, create the `dsi_dpipe` user and tablespaces

- 1 Create the `dsi_dpipe` user and grant it specific privileges.

2 Create specific tablespaces as the dsi_dpipe user.

Follow the procedure in [Create tablespaces](#) on page 45.

Task 8: On the OVPI system, install the OVPI database



When you run the OVPI installation wizard on the system where Oracle Client is installed, you must at a minimum select the **OVPI Database Schema** and **Performance Manager** check boxes from the Component Selection window. This installs the schema to the remote database and properly configures OVPI to use the remote database.

You can select the other check boxes depending on the type of installation you are performing. For example, if this is a standalone installation, you will select all four of the check boxes in the window

Post-Installation

- 1 Start the Oracle listener program and database.

If you are using a remote database, make sure that the database and listener are running on the Oracle database server, that the listener is running on the OVPI client system, and that connectivity is verified.

Do the following *after* applying the 10.2.0.3 patch set and *before* installing OVPI. Otherwise, OVPI will display an error regarding a missing system table, IND_ONLINE\$.

- a Start the listener:

Windows Systems

- From the Control Panel window, double-click **Administrative Tools**. The Administrative Tools window opens.
- Double-click **Services**. The Services window opens.
- Select and start the listener program and the database server.

UNIX Systems

- b From the command prompt, start the listener program by typing:

```
>lsnrctl start
```

- c Log on as sysdba using SQL*PLUS by typing:

```
>sqlplus/nolog
SQL>connect sys/manager as sysdba
```

- d Start the database by typing:

```
SQL>shutdown
SQL>startup migrate
```

- 2 Use a common character set across distributed systems.

In a distributed configuration, the central database server, satellite database servers, and polling systems can be on different operating system platforms. Because the default database character sets may differ between operating systems, make sure that all database instances and OVPI Clients use a common character set.

- 3 Confirm that Oracle is running:

Windows Systems

- a From the Control Panel window, open the Administrative Tools window, and then the Services window.
- b Locate the Oracle services, where *<db name>* is the name of the OVPI database:

```
Oracle OraHome 10 TNSListener  
OracleService <db name>
```

The Status should say **Started**.

UNIX Systems

- a Type the following at the command line:
ps -ef | grep -i oracle
- b Check that the resulting list shows the listener program and a series of other Oracle processes:

```
$oracle/home/bin/tnslsnr  
ora_XXX_<sid value>
```

In this instance, *xxx* is the process name and *<sid value>* is the Oracle system identifier. If processes are not listed, your database is not running.

Starting and Stopping Oracle

Starting Oracle

Windows Systems

- 1 From the Control Panel window, double-click the **Administrative Tools** icon. The Administrative Tools window opens.
- 2 Double-click the **Services** icon. The Services window opens.
- 3 Right-click the service name:

```
Oracle OraHome 10 TNSListener
OracleService <db name>
```

In this instance, *<db name>* is the name of the OVPI database. This is the minimum set of services required for OVPI to run.

- 4 Select **Start** from the shortcut menu.



To make the Oracle service start automatically whenever you reboot your system, follow these steps:

- 1 Right-click the service name, and then select **Properties**.
- 2 From the Startup type list, select **Automatic**.

UNIX Systems

To start Oracle on UNIX systems, follow these steps:

- 1 Log in as Oracle user, and from the Oracle home/bin directory, type:

```
sqlplus
```

- 2 Enter the username:

```
sys as sysdba
```

- 3 Enter the appropriate password.

- 4 Type the following command:

```
startup
```

This starts up the database specified by \$Oracle_SID.

Stopping Oracle

Windows Systems

- 1 From the Control Panel window, double-click **Administrative Tools**. The Administrative Tools window opens.
- 2 Double-click **Services**. The Services window opens.
- 3 Right-click the service names:

```
Oracle OraHome 10 TNSListener
OracleService <db name>
```

In this instance, <db name> is the name of the OVPI database.

- 4 Select **Stop** from the shortcut menu.

UNIX Systems

- 1 Log in as Oracle user, and from the Oracle home/bin directory, type:

```
sqlplus
```

- 2 Enter the user name:

```
sys as sysdba
```

- 3 Enter the appropriate password.
- 4 Type one of the following commands:

- **shutdown**

This performs a soft shutdown, allowing all running tasks to end normally.

- **shutdown immediate**

This shuts down the system after users and tasks finish their current operations.

- **shutdown abort**

This performs a hard shutdown, terminating all tasks as soon as possible.

- 5 Type **exit** to exit from sqlplus.

Troubleshooting an Oracle Installation Problem

The error log file in the Oracle installation directory can help you determine the cause of an installation failure. Oracle writes messages to the log file each time the system is booted and each time an Oracle error occurs.

See the *Oracle Installation Guide* for information about Oracle log files and how to access and use them. After you identify the cause of a problem, consult the Oracle documentation for additional procedures.

For UNIX systems, this error log file is located in \$ORACLE_BASE/oraInventory/logs.

4 Installing OVPI on a Standalone Server

Start the OVPI Installation Program

The OVPI installation program contains options for installing the OVPI components and remote pollers. To upgrade the database, see [Chapter 9, Upgrading to Oracle 10g Enterprise Edition](#). To upgrade OVPI and the remote pollers, see [Chapter 10, Upgrading to OVPI 5.2](#).

Follow these steps:

- 1 Log on to the local system.

Windows Systems

Log on using the Administrator account.

UNIX Systems

Log on as root.

- 2 Insert the OVPI Installation CD in the CD-ROM drive.

UNIX Systems

Mount the CD using the instructions provided in the following table.

Operating System	Command
Solaris	<p>The CD should mount automatically when you insert it in the CD-ROM drive, opening the File Manager window. If not, as root, type the following:</p> <pre>mkdir /cdrom mount -r /dev/dsk/cd_devicename /cdrom</pre> <p>In this instance, <i>cd_devicename</i> is the name of the CD-ROM device.</p>
HP-UX	<p>Use the SAM utility to mount the CD-ROM, <i>or</i> type the following commands:</p> <pre>mkdir /cdrom mount /dev/dsk/cd_devicename /cdrom</pre> <p>In this instance, <i>cd_devicename</i> is the name of the CD-ROM device.</p>
Red Hat Linux	<p>The CD should mount automatically when you insert it in the CD-ROM drive, opening the File Manager window. If not, as root, type the following:</p> <pre>mount -r /dev/cdrom <mount_directory></pre> <p>In this instance, <i>mount_directory</i> is the directory where contents of the CD-ROM are stored.</p>

Solaris Systems

- a Display the *cd_label* by typing the command:

```
ls -l /cdrom
```

- b Change directory by typing the command:

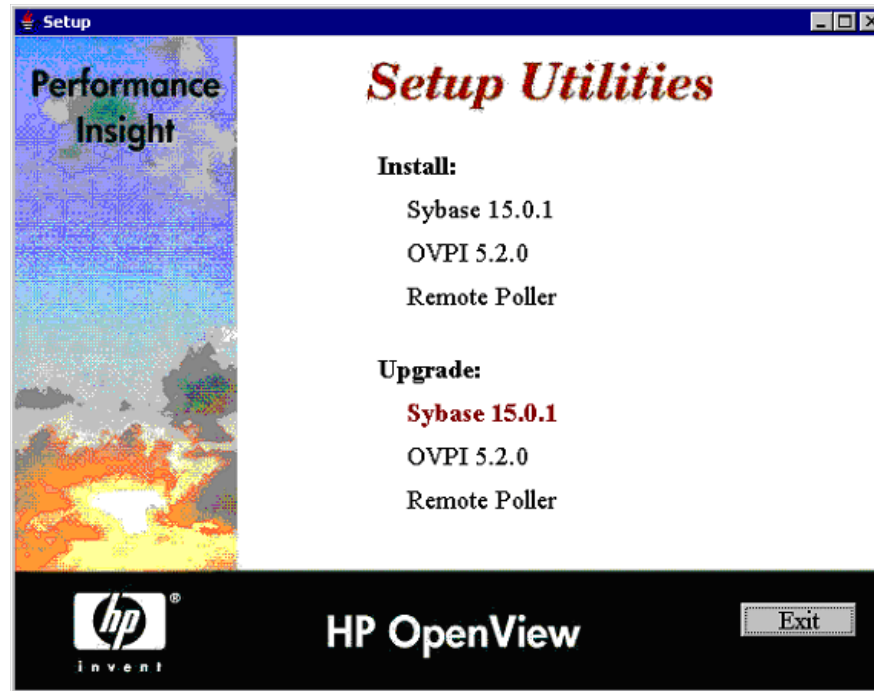
```
cd /cdrom/cd_label
```

In this instance, *cd_label* identifies the CD name.

- 3 Start the installation program:

Windows Systems

Insert the OVPI Installation CD. The setup program should start automatically. If it does not, from the top level folder on the CD, double-click **setup.exe**. The Setup Utilities window opens.



If the window does not display correctly, change the text size of the Windows font:

- From the Control Panel window, double-click the **Display** icon.
- Select the Settings tab, and then click **Advanced**.
- Select the General tab, and then select **Small Fonts** from the Font Size list.

UNIX Systems

Locate the setup program and start it by typing the command:

`./setup`

The Setup Utilities window opens.

To continue installing OVPI in a standalone environment, proceed to [Next Steps](#) on page 65.

To install OVPI in a distributed environment, go to [Chapter 5, Installing OVPI in a Distributed Environment](#).

Next Steps

When you install OVPI in a standalone environment, you install *all* OVPI components on one system.

With few exceptions, the steps for installing OVPI are the same for Windows and UNIX systems. Differences are noted within the instructions.

If you plan to install using a remote Oracle database, follow the instructions in [Chapter 5, Installing OVPI in a Distributed Environment](#).



Before you start installing OVPI, you must stop the db console process in Oracle. Execute the following:

```
$ORACLE_HOME/bin/emctl stop dbconsole
```

You must do this because the OVPI installer restarts the Oracle database during installation. If the dbconsole process is running, the OVPI install will fail.

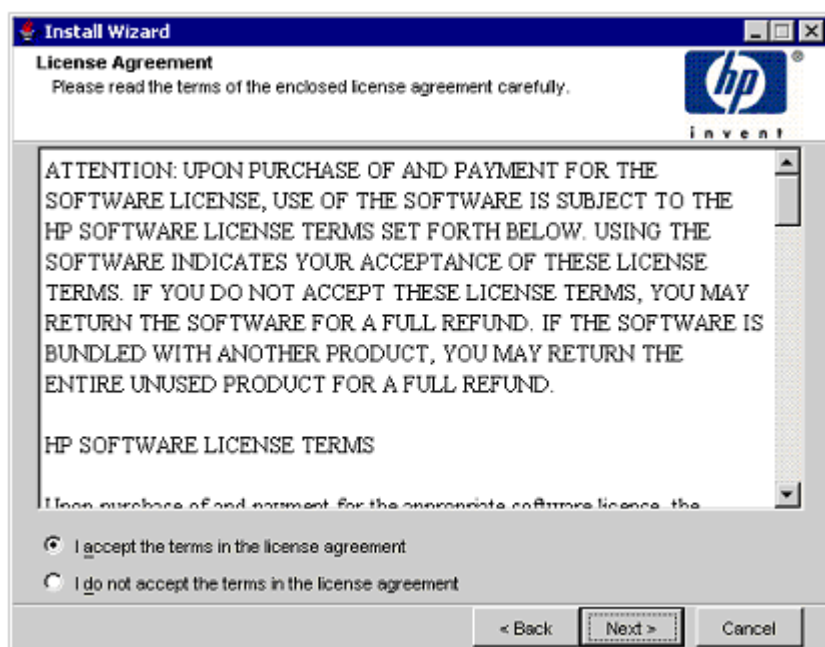
Task 1: Start the OVPI installation program

- 1 If you did not start the OVPI installation program, start it now. The Setup window opens.

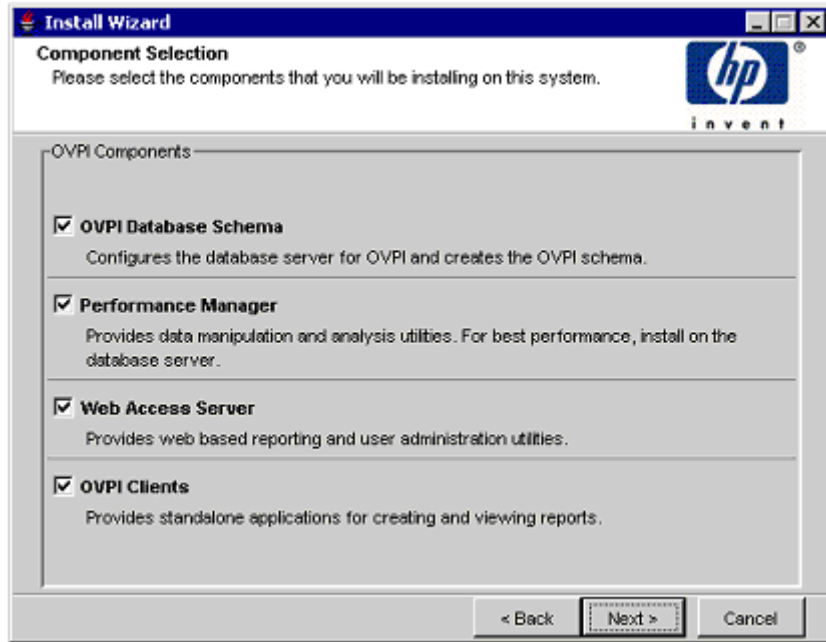
- 2 Select **OVPI 5.2.0** from the Install section of the window. The Welcome window opens.



- 3 Read the Welcome window and click **Next** to continue. The License Agreement window opens.



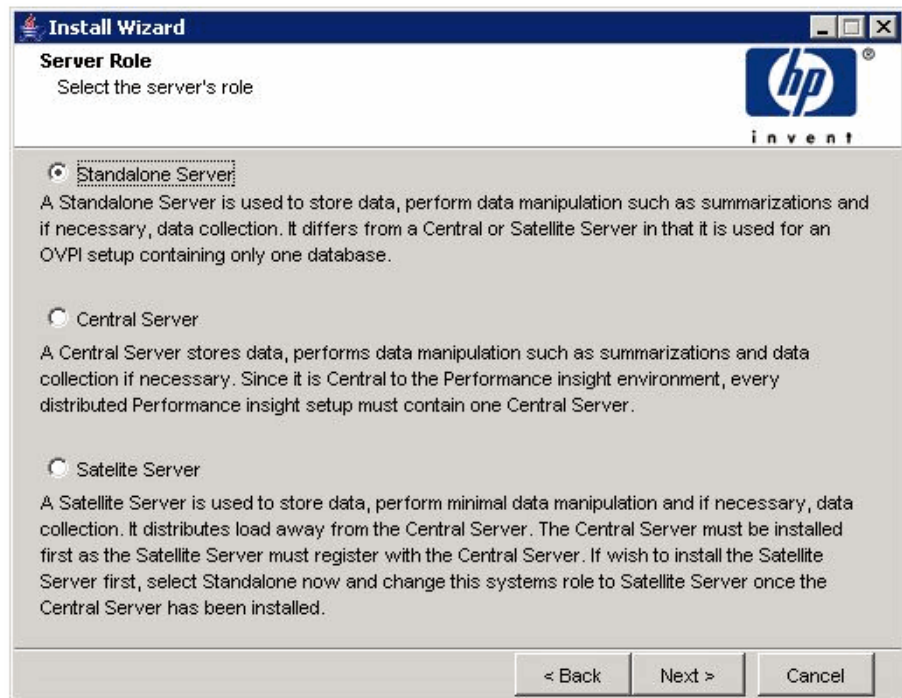
- 4 Accept the license agreement and click **Next** to continue. You must accept the license agreement to proceed. If you click **Cancel**, you will be prompted to confirm your rejection of the license agreement and installation ends. The Component Selection window opens.



Task 2: Select *all* the OVPI components to install

- 1 In the Component Selection window, select *all* OVPI components to install. All components are required for a standalone installation.

Click **Next** to continue. The Server Role window opens.



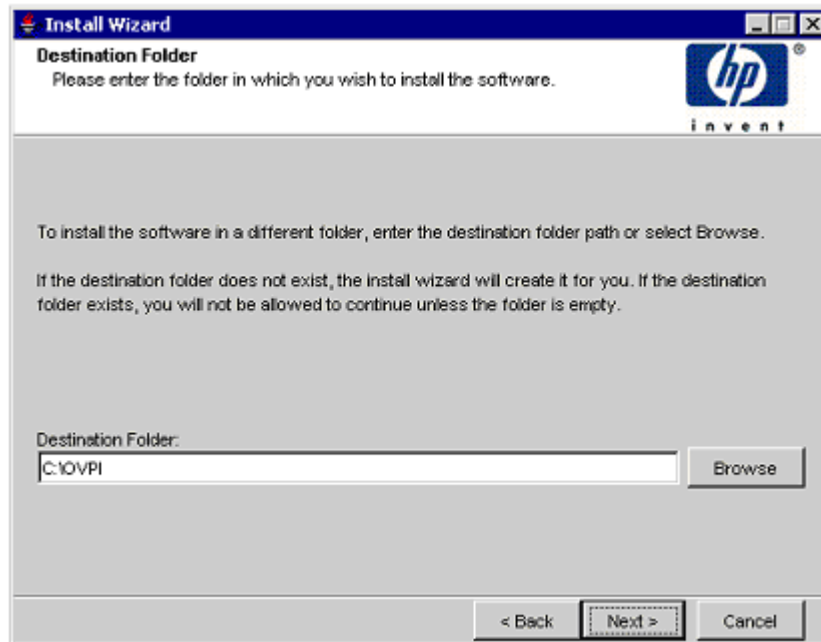
Task 3: Select a role for the database system

In the Server Role window, select Standalone Server.

If you want to change the role at a later time, use the System and Network Administration application in the OVPI Management Console. For more information, see the *HP OpenView Performance Insight Administration Guide*.

Task 4: Specify a destination directory for the OVPI software

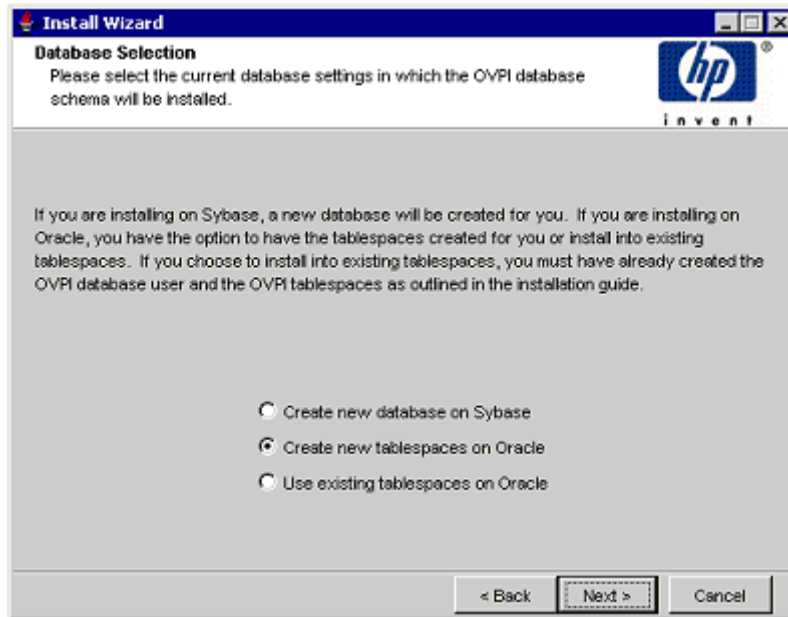
The Destination Folder window opens.



In the Destination Folder window, specify the directory to which the OVPI software will be installed. The destination directory can be an NFS mounted directory, a UNIX soft link, a UNIX hard link, or a Windows mapped drive.

- 1 Accept the default destination directory, or identify a different directory. The pathname cannot contain any spaces.
 - If the destination directory does not already exist, the Installation Program creates it.
 - If the destination directory does exist and contains data, a message warns you that the directory is not empty.
 - If the destination directory is located on a file system that the Installation Program cannot access, a message warns you. You cannot continue the installation until you supply a valid destination.

- 2 Click **Next** to continue. The Database Selection window opens.



Task 5: Select the RDBMS on which the OVPI database instance will be created

In the Database Selection window, identify the database onto which the OVPI Database instance will be created and indicate whether to create new tablespaces or install into existing tablespaces.

- 1 Select one of the following options:

- **Create new tablespaces on Oracle**

Select this option if you did not create the database user account (dsi_dpipe) and tablespaces, as described in [Guidelines for Tablespace Sizing](#) on page 45. The dsi_dpipe user and the following tablespaces must not exist:

- dpipe_default_seg
- dpipe_property_ind_seg
- dpipe_property_seg

- dpipe_upload_ind_seg
- dpipe_upload_seg
- dpipe_rate_ind_seg
- dpipe_rate_seg
- dpipe_summary_ind_seg
- dpipe_summary_seg
- dpipe_overflow_seg
- dpipe_archive_ind_seg
- dpipe_archive_seg
- dpipe_event_ind_seg
- dpipe_event_seg

- **Use existing tablespaces on Oracle**

Select this option if either of the following is true:

- The system on which you are installing OVPI will use an Oracle Client to access a remote Oracle database.
- You created the OVPI database user account (dsi_dpipe) and tablespaces listed above, as described in [Guidelines for Tablespace Sizing](#) on page 45, and adjusted the recommended Oracle parameters, as described in [Creating the Tablespaces](#) on page 47.

If you are unsure of which option to use, select **Create new tablespaces on Oracle**.

2 Click **Next** to continue.

Task 6: Locate and connect to the database

In the Oracle Reference Using Oracle Administrator User window, locate and connect to the Oracle database.

1 Accept the default values or type new values for the following parameters:

- **Oracle Instance ID (SID):** Type the name of the Oracle database instance.

A default is provided only if the Oracle environment variable ORACLE_SID is set. Verify that the SID shown is correct because you may have more than one database instance running.

- **Oracle TCP/IP Port Number:** Type the TCP/IP port for Oracle. The default is 1521.
 - **Oracle User with DBA Privileges:** The default is sys. Do not change it.
 - **Oracle User Password:** Type the password for the sys account that you created when you installed the Oracle RDBMS.
 - **Oracle Home Directory:** Identify the directory onto which you installed Oracle. If the installation program can determine the location of the Oracle Home directory, it is shown as the default.
- 2 Click **Next** to continue. The Oracle User and Tablespace Creation window opens.

Install Wizard

Oracle User and Tablespace Creation
Please enter the information necessary to create the OVPI user and tablespaces.

If you wish to customize each tablespace that will be created, select the Advanced button. Modifying the *Database Size* or *Data File Folder* fields on this page will override any Tablespace settings that have been entered via the Advanced button.

OVPI Tablespace Settings

Database Size:
1539 MB

Data File (.dbf) Folder:
C:\Ora10g\ds

OVPI DB User (ds1_dppe)

Password:

Confirm Password:

Click for advanced settings.

Task 7: Create the Oracle user account and the new tablespaces



Tablespaces are created with autoextend turned on, which allows Oracle to automatically extend a datafile to meet the needs of the data if sufficient free space does not currently exist in the tablespace. Monitor the system to make sure that the physical file system does not exceed 100%.

Before you change the values for the Database Size and Data File Folder parameters, decide whether you want to modify the data files for database segments using the Advanced button. Total Size and Data File Folder settings will override any settings made using the Advanced OVPI Configuration window.

1 Accept the default values or type new values for the following parameters:

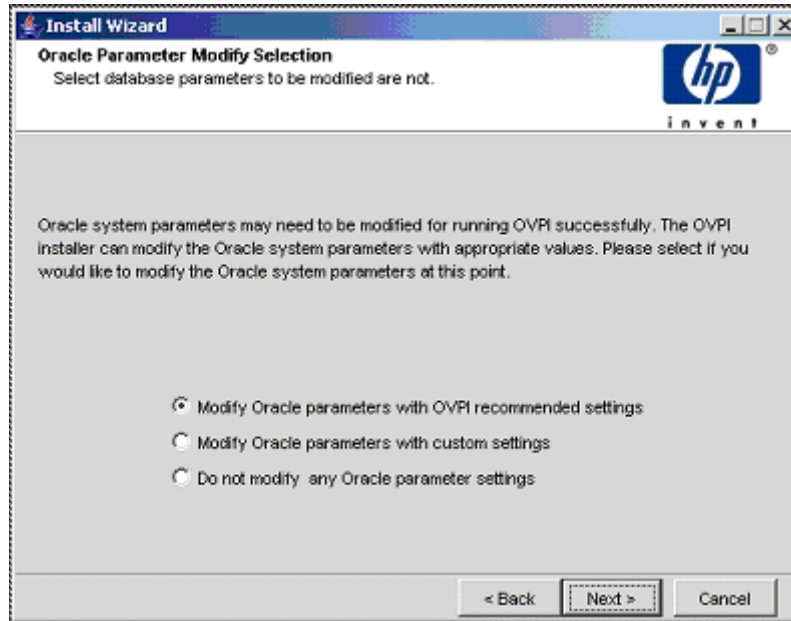
- **Database Size:** Type the database size. The default size is 1024 MB. The minimum size is 500 MB. The tablespaces will be created with the space appropriately distributed.
- **Data File (.dbf) Folder:** Type the directory in which the database files (.dbf) are created.
- **Password:** Type a password for the OVPI database user account (dsi_dppe).

The password must start with an alphabetic character and must be between one and 30 characters in length. Valid characters are all alphanumeric characters and the underscore (_). The password is not case sensitive.

- **Confirm Password:** Retype the password.

Task 8: (Optional) Change specific Oracle configuration parameters

The Oracle Parameter Modify Selection window gives you three choices for changing your Oracle configuration.



- You can modify the parameters using the OVPI recommended settings.
- You can modify the parameters with custom settings. See the table in [step 2](#) on page 49, which lists recommendations for determining values:
 - **SGA_MAX_SIZE**: Determine the maximum amount of memory that will be utilized by the Oracle database. This memory is shared memory and is used by all Oracle server processes.
 - **PGA_AGGREGATE_TARGET (M)**: Specify the target aggregate PGA memory available to all server processes associated with the instance. The default is 200M.
 - **DB_FILE_MULTIBLOCK_READ_COUNT**: Specify the maximum number of blocks that should be read in one I/O operation when a sequential scan occurs in order to minimize I/O during table scans.

- **WORKAREA_SIZE_POLICY**: Specify the policy for sizing work areas to control the mode in which working areas are tuned. The default is AUTO. It is *not* recommended that you use MANUAL for the value.
- **DB_16K_CACHE_SIZE**: Specify the size of the DEFAULT buffer pool for buffers with the primary block size. The default is TRUE. It is *not* recommended that you use FALSE.
- **DB_32K_CACHE_SIZE**: Specify the size of the cache for 32K buffers.

If you choose to customize the settings, the following window appears:

The screenshot shows a Windows-style dialog box titled "Install Wizard" with a subtitle "Configure Oracle Parameters". Below the subtitle is the instruction "Enter Oracle database parameters for setting". In the top right corner is the HP logo and the word "invent". The main content area contains five input fields arranged in two columns. The left column has "SGA_MAX_SIZE" (value: 455), "PGA_AGGREGATE_TARGET(M)" (value: 200), and "WORKAREA_SIZE_POLICY" (a dropdown menu currently showing "AUTO"). The right column has "DB_CACHE_SIZE" (value: 512) and "DB_32K_CACHE_SIZE" (value: 512). At the bottom right of the window are three buttons: "< Back", "Next >" (which is highlighted with a dashed border), and "Cancel".

- a Fill in the desired values (the graphic shows example values).

- b Click **Next**. The values entered are recorded on the Advanced OVPI Configuration window as follows:

Advanced OVPI Configuration

Default | Property | Upload | File | Summary | Overview | Event | Archive | Parameters

Enter the parameter settings.

SGA_MAX_SIZE
455

PGAAggregate_TARGET(M)
200

WORKAREA_SIZE_POLICY
AUTO

DB_CACHE_SIZE
512

DB_16K_CACHE_SIZE
512

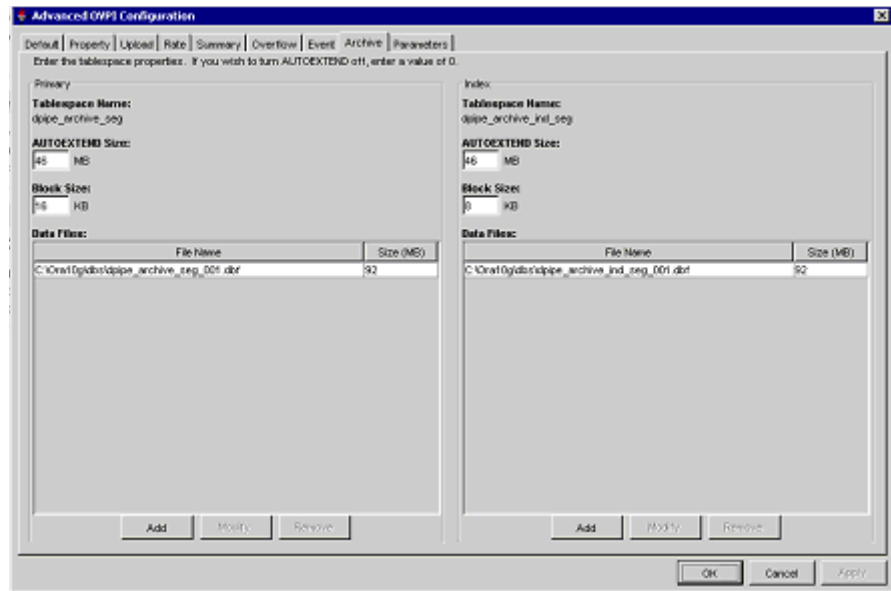
OK Cancel Apply

- You can choose not to change any of the Oracle parameters.
- 2 Make your selection and click **Next**.
 - 3 (Optional) If necessary, click **Advanced** to display the Advanced OVPI Configuration window. Use the window to add, modify, or remove the data files that comprise the tablespaces.



After you modify the database segments using the Advanced OVPI Configuration window, do **not** change the values for the Database Size and Data File Folder Size options in the Oracle User and Tablespace Creation window. If you change the values for these options, you cannot reset them; thus, they override the changes you made using the Advanced Configuration dialog box. There is no way to reset these options, unless you cancel the installation program and start the installation again.

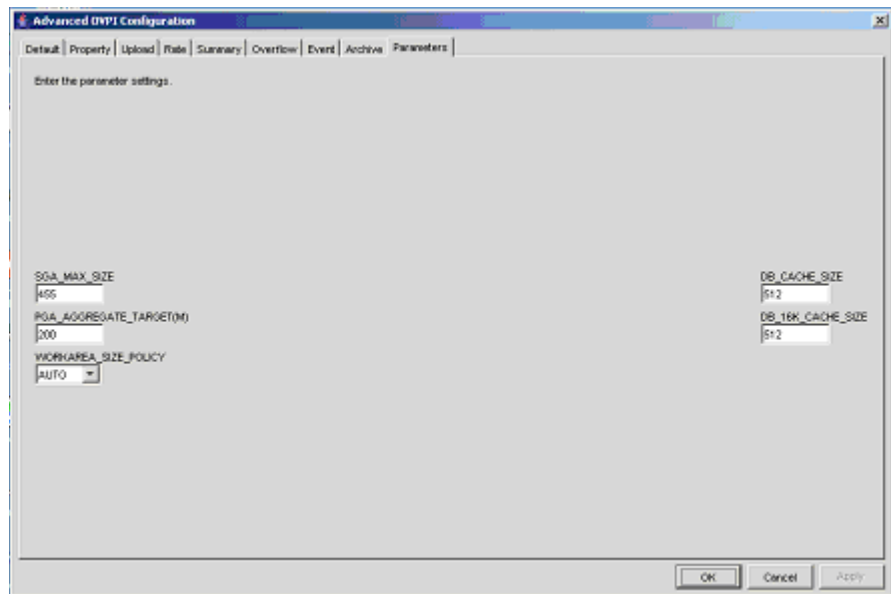
- a Fill in the values and click Advanced.



For tablespace sizing guidelines, see [Chapter 3, Installing Oracle 10g Enterprise Edition](#).

- 4 Select the tab associated with the tablespace you want to change. The tablespace tabs are:
- Default: the dpipe_default_seg tablespace
 - Property: the dpipe_property_seg and dpipe_property_ind_seg tablespaces
 - Upload: the dpipe_upload_seg and dpipe_upload_ind_seg tablespaces
 - Rate: the dpipe_rate_seg and dpipe_rate_ind_seg tablespaces
 - Summary: the dpipe_summary_seg and dpipe_summary_ind_seg tablespaces
 - Overflow: the dpipe_overflow_seg tablespace
 - Archive: the dpipe_archive_seg tablespace
 - Event: the dpipe_event_seg tablespace

- 5 Accept the default values or type values for the tablespace parameters. In each case, the parameters are:
 - **AUTOEXTEND SIZE:** Type the size of the extend in MB. Specifying 0 for the extend size disables the Oracle autoextend feature.
 - **Data Files** (File Name and Size (MB): You must create at least one data file for each tablespace. Use logical names and descriptions; operating system maximums apply.
 - To add a data file, click **Add**. The DataFile Information window opens. Use the window to type the name of the data file and the size of the data file, and click **OK**.
 - To modify a data file, select the data file, and click **Modify**. The DataFile Information window opens. Use the window to change the name of data file, its size, or both, and click **OK**.
 - To remove a data file, select the data file, and click **Remove**.
 - Click **OK**. The following window appears:



- 6 Click **OK** to return to the Oracle User and Tablespace Creation window.

Task 9: Locate and connect to the database

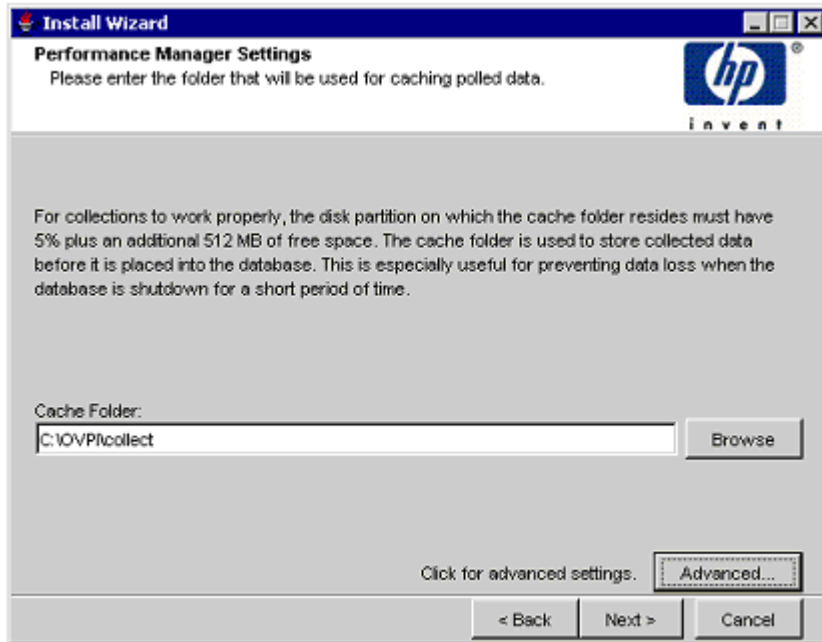
In the Oracle Reference Using Database Administrator User window, locate and connect to the Oracle database.

- 1 Accept the default values or type new values for the following parameters:
 - **Oracle Instance ID (SID):** type the name of the Oracle database instance.

A default is provided only if the Oracle environment variable ORACLE_SID is set. Verify that the SID shown is correct, because you may have more than one database instance running.
 - **Oracle TCP/IP Port Number:** type the TCP/IP port for Oracle. The default is 1521.
 - **Oracle User with DBA Privileges:** the default is sys. Do not change it.
 - **Oracle User Password:** type the password for the sys account that you created when you installed the Oracle RDBMS.
 - **Oracle Home Directory:** identify the directory onto which you installed Oracle. If the installation program can determine the location of the Oracle Home directory, it is shown as the default.
- 2 Click **Next** to continue. The Oracle User and Tablespace Creation window opens.

Task 10: Configure polling collections

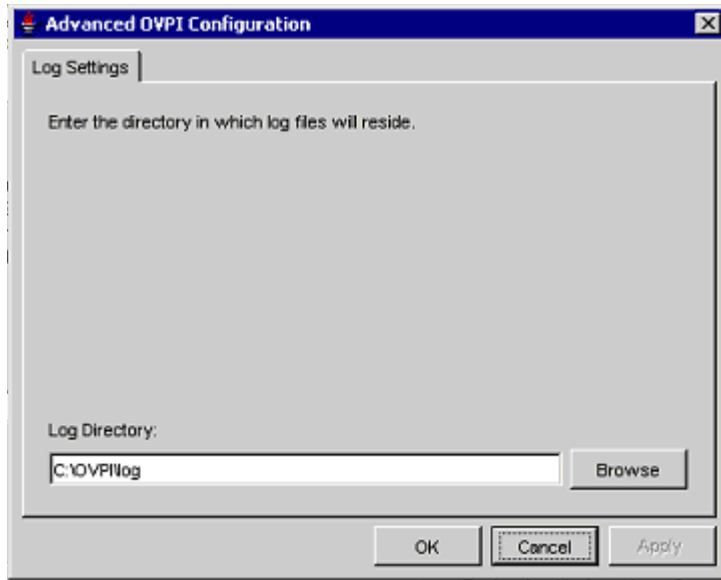
In the Performance Manager Settings window, identify the cache directory in which to store collected data before it is placed into the database. This can prevent data loss when the database is shut down for a short period.



- 1 Accept the default directory or type a fully-qualified directory path to be used for caching polled data.

For collections to work properly, the disk partition on which the cache directory resides must have 5% plus an additional 512 MB of free space. For example, if the disk partition is 10 GB, it must have 1 GB of free space.

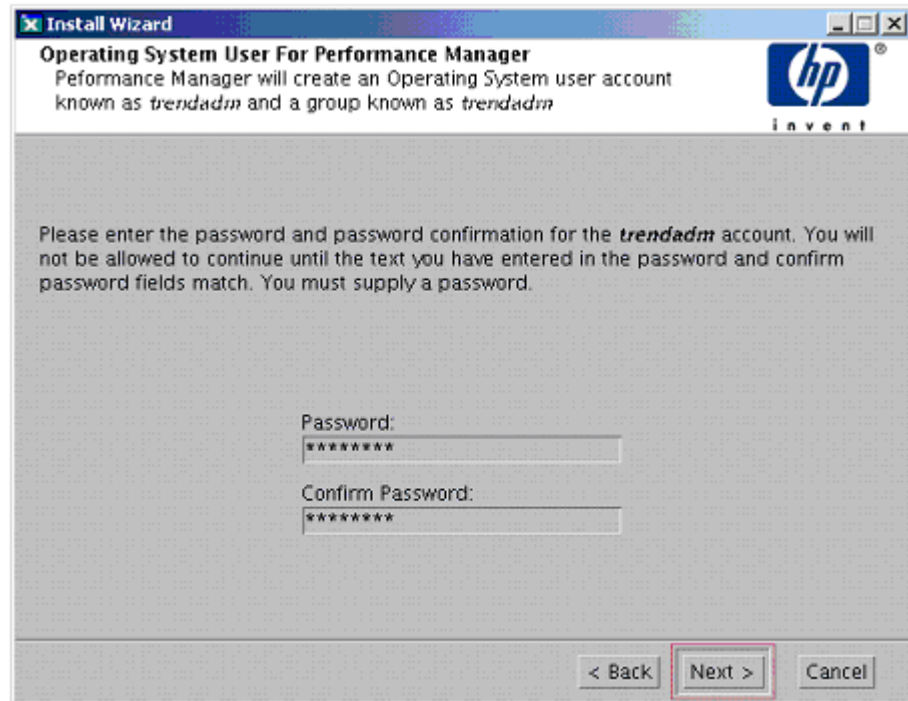
- 2 If needed, click **Advanced** to open the Advanced OVPI Configuration window, in which you can specify the directory in which the log files will reside.



- a Accept the default path, which creates a log directory under the directory to which you installed OVPI (log files will be maintained there, regardless of the directory you specify), or type the directory path in which the log files will reside.
 - b Click **OK** to apply changes and return to the Performance Manager Settings window.
- 3 Click **Next** to continue.

Task 11: Create or modify the operating system account

In the Operating System User for Performance Manager window, identify an operating system account and group named *trendadm*, the purpose of which is to preserve the environment in which OVPI will run.



➤ UNIX only: Do not confuse the *trendadm* account used to log on to the operating system with the *trendadm* account created later, used to log on to the Web Access Server application. The window prompts you for different information depending on whether the operating system and group account already exists.

To create the operating system account and group:

- 1 Create a password for the *trendadm* account by typing values for the following:

- a **Password:** The password must be at least one character long. It can be any length and contain any character. HP recommends that you adhere to your company's policy for password creation.
 - b **Confirm Password:** Retype the password.
- 2 Click **Next** to continue.

To modify the operating system account user environment.

- 1 Click one of the following:
- **Modify user environment:** This parameter updates the trendadm account's .profile or .cshrc with the OVPI environment variables (COLLECT_HOME, DPIPE_HOME, DPIPE_TMP, and TREND_LOG).
 - **Do not modify user environment:** This parameter does not update the account's .profile or .cshrc with the OVPI environment variables. If you select this option, you must manually add the OVPI environment variables later.
- 2 Click **Next** to continue.

Task 12: Specify an administrator and port for the Web Access Server

In the Web Access Server Settings window, create an OVPI administrator account for the Web Access Server, as well as an HTTP port on which to listen.

Install Wizard

Web Access Server Settings

The OVPI Web Access Server component requires an OVPI administrator user to be created on your Web Access Server and a HTTP port on which to listen.

User Settings

Please enter the username and password for the OVPI web access administrator.

Username: trendadm

Password: *****

Confirm Password: *****

Port Settings

Please enter the HTTP port on which the web access server will listen. If you choose a port other than 80, the port number must be used in the URL for accessing the web access server.

HTTP Port: 80

Click for advanced settings. Advanced...

< Back Next > Cancel

1 Type values for the following parameters:

- **Username:** Accept the default username for the Web Access Server administrator, or type a new name. This account is used to log on to the Web Access Server.

▶ **UNIX only:** Do not confuse this account with the trendadm account used for logging on the operating system, which is used to preserve the environment in which OVPI will run.

There are no restrictions on the minimum and maximum length or on the characters that can be used in the username and password. HP recommends that you adhere to your company's policy for username and password creation.

- **Password:** Type a password for the Web Access Server administrator account.

You can change password rules after you install OVPI using the Web Access Server application. see the *HP OpenView Performance Insight Administration Guide* for details.

- **Confirm Password:** Retype the password.
 - **HTTP Port:** Accept the default port (80) or type a new port number for the Web Access Server. Any open port can be used.
- 2 If necessary, click **Advanced** to open the Advanced Configuration window, in which you can select the following tabs:

Directories: To change the location of report directories, in which all deployed reports are stored. To change the location of the reports directories:

- Accept the default directory or identify a new directory.
- Click **Apply**.
- Click **OK** to return to the Web Access Server Settings window.

OVPI Users: To create and modify user accounts used to log on to OVPI clients. You can create regular user accounts or administrator accounts. Regular user accounts can access the OVPI clients. Administrator accounts can access the administration features (Administration link) of the Web Access Server. see the *HP OpenView Performance Insight Administration Guide* for details.

To add or modify a user account:

- Click **Add User**. A default username (new-user), password (new-user), and role (user) displays, along with created user accounts.
- Double-click the name or password, delete the value, and type a new value. Select either **user** or **admin** for Role.
- Click **Apply**.

To remove a user account:

- Select the user name and click **Remove User**.
- Click **Apply**. and then click **OK** to return to the Web Access Server Settings window.

You can also create, modify, and delete user accounts after you install OVPI using the Web Access Server. See the *HP OpenView Performance Insight Administration Guide* for details.

SSL Setup: To enable SSL communications, which you can use to enable secure communication between the Web Access Server and a supported web browser, Report Viewer, Report Builder, and the Management Console. To enable SSL, you create a self-signed certificate. This self-signed certificate allows you to enable SSL, however, it is only valid for 90 days. You should send this certificate to a certificate authority in order to receive a signed digital certificate or generate another self-signed certificate before the 90 days expires. After you sign a digital certificate, you must import it using the Web Access Server application. You can also use the Web Access Server to change SSL settings after you install OVPI. See the *HP OpenView Performance Insight Administration Guide* for details.

To enable SSL communications and create a self-signed certificate, click to select the **Enable SSL** check box.

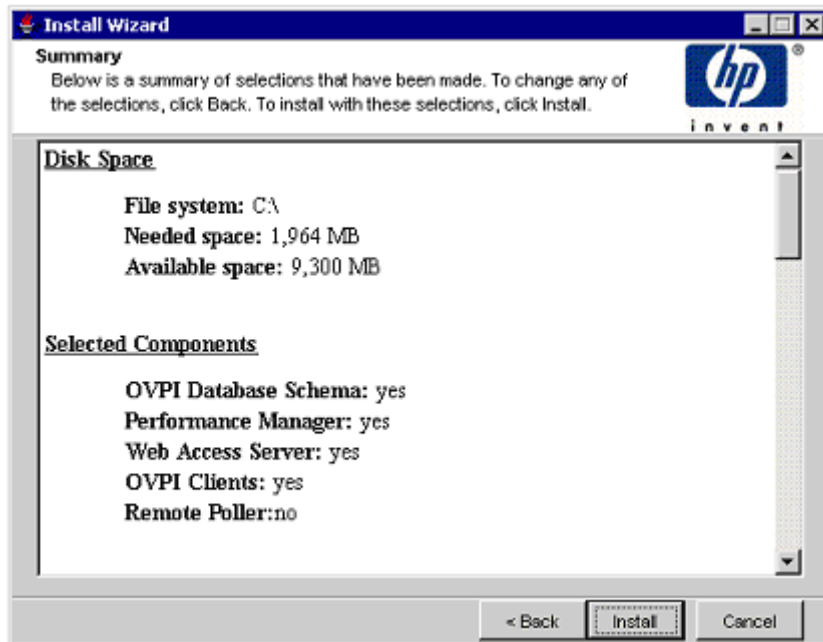
By selecting this option, you will not disable the standard HTTP listener. Thus, the secured SSL port and the unsecured HTTP port will both be enabled.

- a **SSL Port:** Accept the default value or type a new value.
- b **Keystore Password:** Type a password of six characters or more. Record the password and keep it in a secure place. You will need it to generate a signed certificate. After you generate your self-signed certificate, it will be stored in the certificate repository. This password lets the Web Access Server access the certificate repository.

The remaining fields request information that is necessary when you generate an SSL key that must be verified and signed by a certificate-signing authority. This information is used by the person who checks the certificate to ensure that the certificate is valid.

- a **Organization** (Optional): Type the name of your organization, for example, "ABC Systems, Inc."
- b **Org. Unit** (Optional): Type the name of your department or division, for example, "Northeast Sales".
- c **City** (Optional): Type the name of your city or locality, for example, "Los Angeles".

- d **State** (Optional): Type the name of your state or province, for example, "California".
 - e **Country** (Required): Type your two-letter country code in the Country box, for example, "US".
- 3 Click **Apply**.
 - 4 Click **OK** to return to the Web Access Server Settings window.
 - 5 Click **Next** to continue. The Summary window opens.



Task 13: Review the installation information

- 1 If necessary, click **Back** to return to a previous window to make a change. After you make any change, click **Next** until you return to the Summary window.
- 2 Click **Install** to continue. The Installation Progress window opens.

Task 14: Finish the installation

In the Installation Progress window you can view the status of the installation as it occurs. After the installation process is completed, information about whether the installation was successful is displayed.

If the OVPI installation completes successfully, click **Done**.

- UNIX Systems: The installation is complete.
- Windows Systems: Reboot the system to complete installation.

If the OVPI installation is unsuccessful:

- 1 Click **Details** at the bottom of the Installation Progress window for additional information.
- 2 Contact Support (see [Support](#) on page 4).

To install report packs and datapipes, see the instructions in the *HP OpenView Performance Insight Administration Guide*.

5 Installing OVPI in a Distributed Environment

Starting the OVPI Installation Program

The OVPI Installation Program contains options for installing the OVPI components and remote pollers. To upgrade the database (which you must do before upgrading OVPI), see [Chapter 9, Upgrading to Oracle 10g Enterprise Edition](#). To upgrade OVPI and the remote pollers, see [Chapter 10, Upgrading to OVPI 5.2](#).

Follow these steps:

- 1 Log on to the local system.

Windows Systems

Log on using the Administrator account.

UNIX Systems

Log on as root.

- 2 Insert the OVPI Installation CD in the CD-ROM drive.

UNIX Systems

Mount the CD using the instructions provided in the following table.

Operating System	Command
Solaris	<p>The CD should mount automatically when you insert it in the CD-ROM drive, opening the File Manager window. If not, as root, type the following:</p> <pre>mkdir /cdrom mount -r /dev/dsk/cd_devicename /cdrom</pre> <p>In this instance, <i>cd_devicename</i> is the name of the CD-ROM device.</p>
HP-UX	<p>Use the SAM utility to mount the CD-ROM, <i>or</i> type the following commands:</p> <pre>mkdir /cdrom mount /dev/dsk/cd_devicename /cdrom</pre> <p>In this instance, <i>cd_devicename</i> is the name of the CD-ROM device.</p>
Red Hat Linux	<p>The CD should mount automatically when you insert it in the CD-ROM drive, opening the File Manager window. If not, as root, type the following:</p> <pre>mount -r /dev/cdrom <mount_directory></pre> <p>In this instance, <i>mount_directory</i> is the directory where contents of the CD-ROM are stored.</p>

Solaris Systems

- a Display the *cd_label* by typing the command:

```
ls -l /cdrom
```

- b Change directory by typing the command:

```
cd /cdrom/cd_label
```

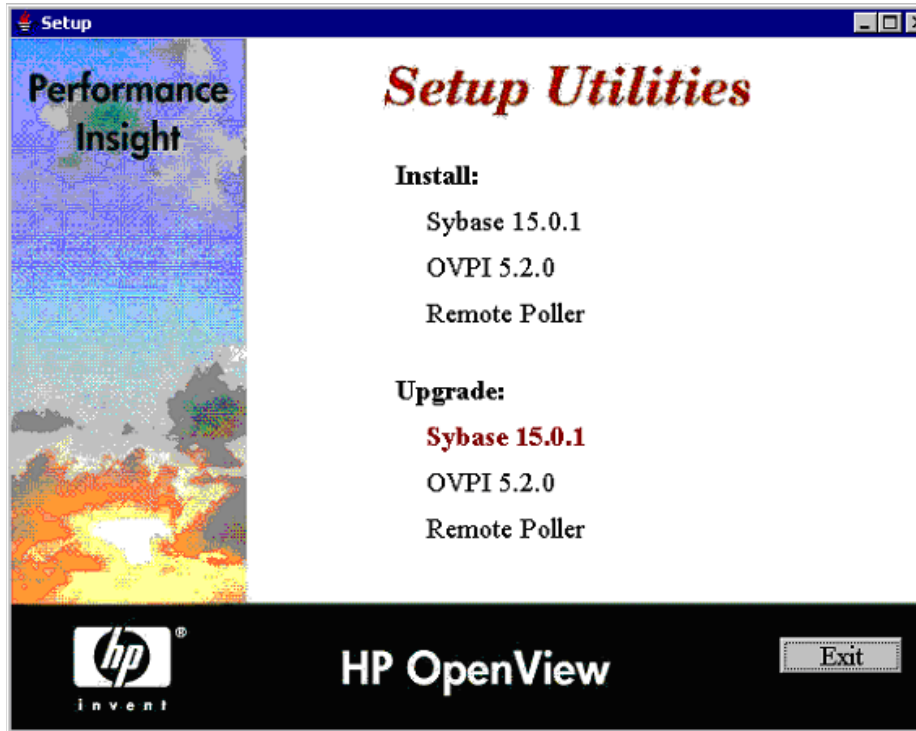
In this instance, *cd_label* identifies the CD name.

- 3 Start the Installation Program:

Windows Systems

Insert the OVPI Installation CD. The setup program should start automatically. If it does not start, from the top-level folder on the CD, double-click setup.exe.

The Setup Utilities window opens.



If the window does not display correctly, change the text size of the Windows font:

- a From the Control Panel window, double-click the **Display** icon.
- b Select the Settings tab, and then click **Advanced**.
- c Select the General tab, and then select **Small Fonts** from the Font Size list.

UNIX Systems

Locate the setup program, and start it by typing the command:

```
./setup
```

Next Steps

There are numerous ways to install OVPI in a distributed environment. The instructions describe how to individually install the OVPI components in the representative complex distributed configuration discussed in [Chapter 1, Introduction to OVPI Installation](#).

The order of installation in a distributed environment is:

- Install the OVPI Database Schema and OVPI Performance Manager on the central database server first.

Install the Web Access Server. If you have more than one Web Access Server, repeat the installation procedure for each.

Install report packs on the central database server. Do not install datapipes on the central database server unless the central server is polling. Then deploy reports to each Web Access Server. You can defer this task until the installation is complete.

- Install the OVPI Database Schema and OVPI Performance Manager on each satellite database server.

At this point, you can discover the network on the satellite database servers.

- Install report packs and datapipes on each satellite database server.
- Install the Remote Poller component on each remote polling system. If you have more than one remote polling system, you must repeat the installation procedure for each.

At this point, you can perform a type discovery of each satellite database server, configure report packs for operation in the distributed environment, and configure polling policies for remote polling systems. You can defer this task until the installation is complete.

- Install the OVPI client applications on individual workstations whose users will be accessing the Web Access Server.

If you plan to use a remote Oracle database, see [Configuring a Remote Oracle Database](#) on page 53 before beginning.



Before you start installing OVPI, you must stop the db console process in Oracle. Execute the following:

```
$ORACLE_HOME/bin/emctl stop dbconsole
```

You must do this because the OVPI installer restarts the Oracle database during installation. If the dbconsole process is running, the OVPI install will fail.

OVPI Database Schema and OVPI Performance Manager

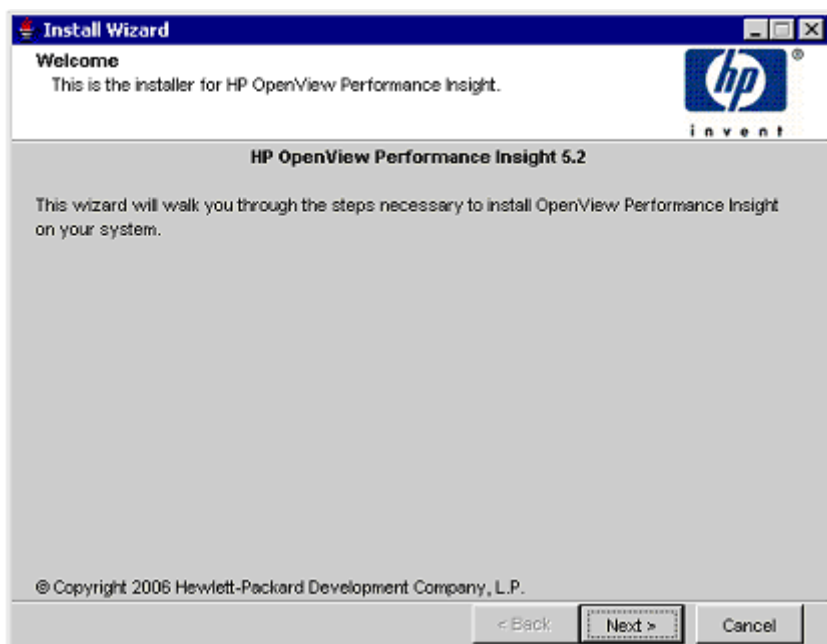
This section describes the steps for installing the OVPI Database Schema and OVPI Performance Manager on the database server (central or satellite) in a distributed environment. Unless you are using a remote database, you must install both components on the same system.

Much of the procedure is the same as for installing the OVPI Database Schema and OVPI Performance Manager on a standalone system.

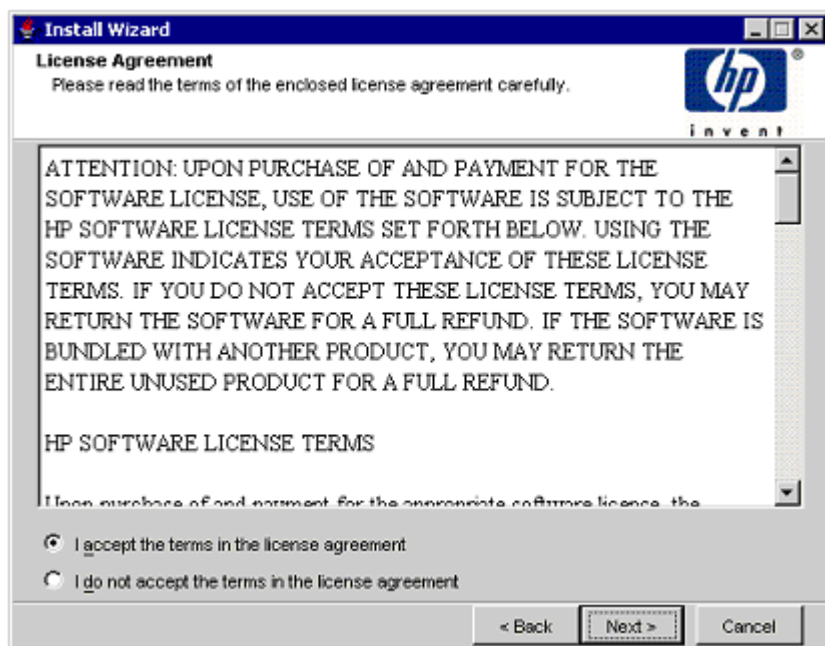
Task 1: Start the OVPI installation program

- 1 If you have not already started the OVPI installation program, start it now.

- 2 The Setup Utilities window opens. Select **OVPI 5.2.0** from the Install section of the window. The Welcome window opens.

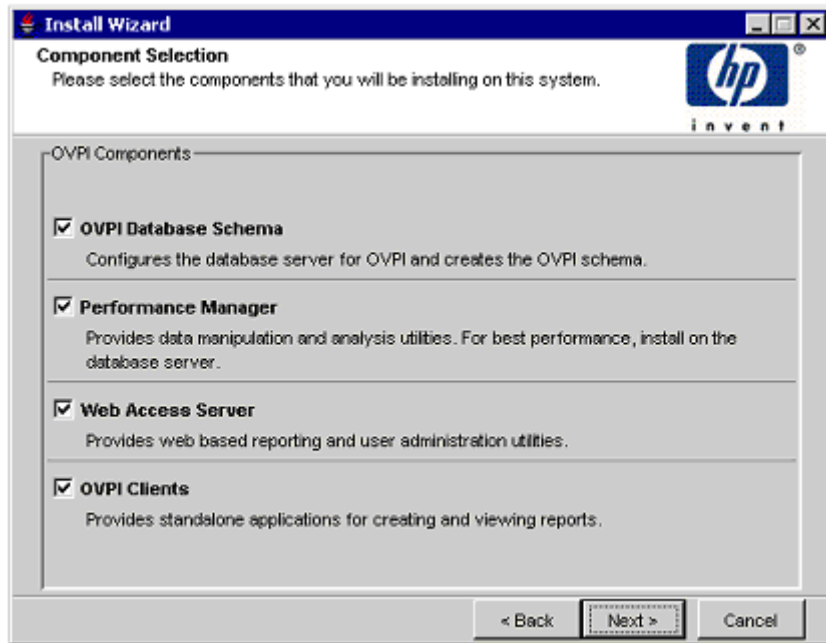


- 3 Read the Welcome window and click **Next** to continue. The License Agreement window opens.



- 4 Accept the license agreement and click **Next** to continue. You must accept the license agreement to proceed. If you click **Cancel**, you will be prompted to confirm your rejection of the license agreement and installation ends.

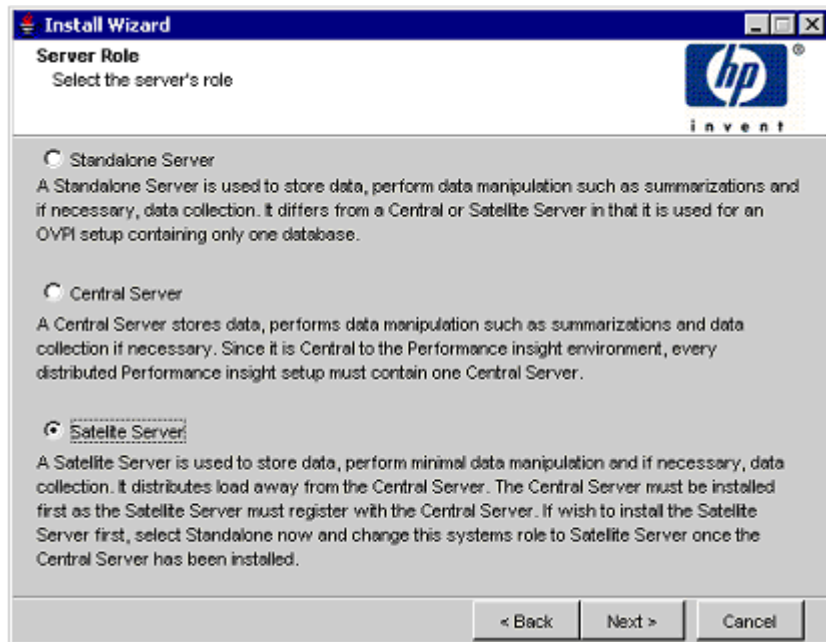
- Task 2: Select the OVPI components you want to install
- The Component Selection window opens.



- 1 Click to select **OVPI Database Schema** and **Performance Manager** from the Install section of the window. Deselect any other components.
- 2 Click **Next** to continue.

Task 3: Select a role for the database system

The Server Role window opens.



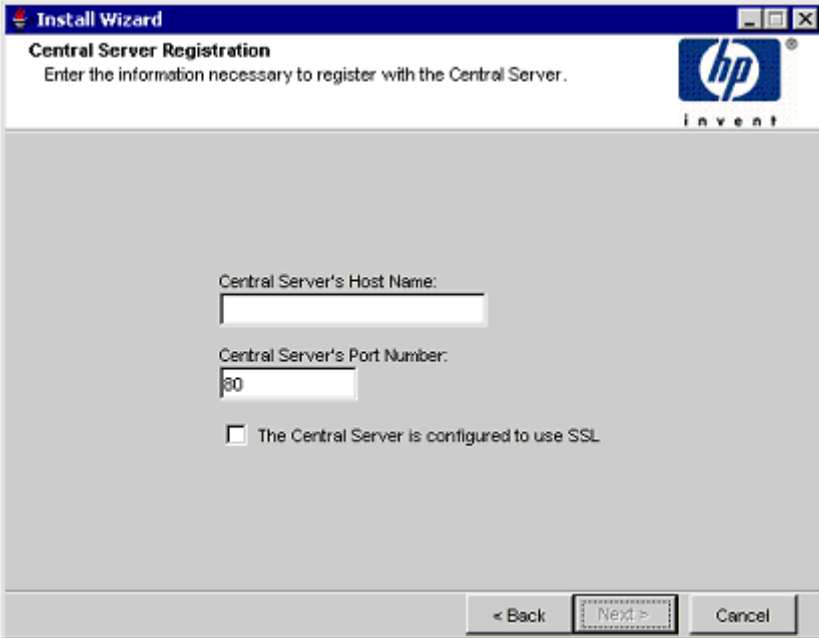
Select the desired role and click **Next** to continue.

If you want to change the role at a later time, use the System and Network Administration application in the OVPI Management Console. For more information, see the *HP OpenView Performance Insight Administration Guide*.

Task 4: Specify the host name and port number for the Satellite Server

Satellite Server provides an option to specify the host name and port number (default value is 80) of the central server to register with. This is required to synchronize the information stored in the systems.xml file. For secure communication, you can enable SSL. The registration is completed at the end of the installation process.

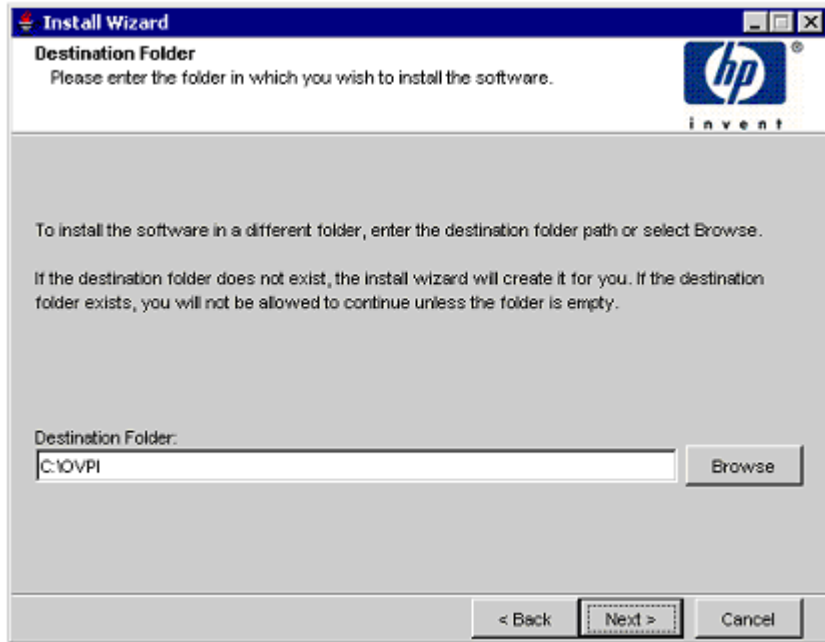
Click **Next** to continue. The Central Server Registration window opens.



The screenshot shows a Windows-style window titled "Install Wizard" with a blue header bar. Below the header, the title "Central Server Registration" is displayed in bold, followed by the instruction "Enter the information necessary to register with the Central Server." in a smaller font. In the top right corner, the HP logo is shown above the word "invent". The main area of the window is light gray and contains three input fields: "Central Server's Host Name:" with an empty text box, "Central Server's Port Number:" with a text box containing the number "80", and a checkbox labeled "The Central Server is configured to use SSL" which is currently unchecked. At the bottom right, there are three buttons: "< Back", "Next >" (which is highlighted with a dashed border), and "Cancel".

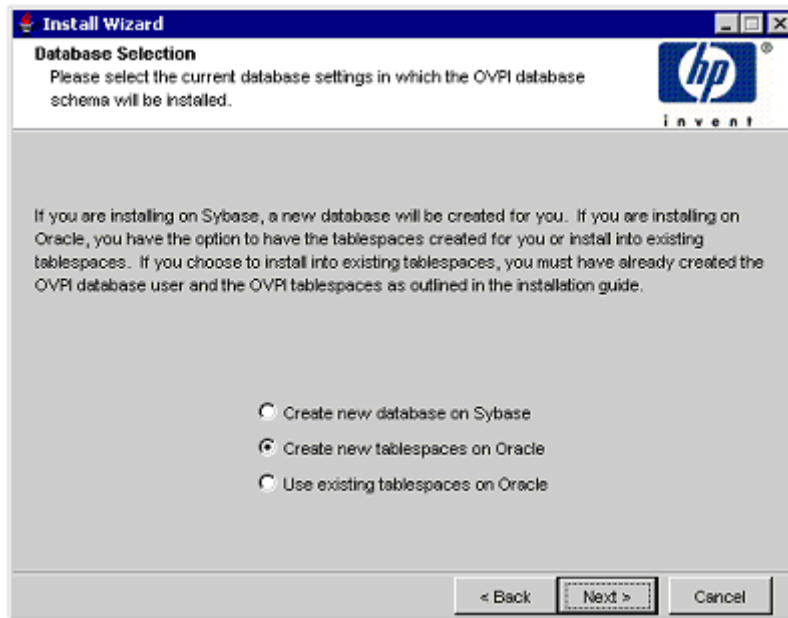
Task 5: Specify an installation directory for the OVPI software

In the Destination Folder window, specify the directory to which the OVPI software will be installed. The destination directory can be an NFS mounted directory, a UNIX soft link, a UNIX hard link, or a Windows mapped drive.



- 1 Accept the default destination directory, or identify a different directory. The pathname cannot contain any spaces.
 - If the destination directory does not already exist, the Installation Program creates it.
 - If the destination directory does exist and contains data, a message warns you that the directory is not empty.
 - If the destination directory is located on a file system that the Installation Program cannot access, a message warns you. You cannot continue the installation until you supply a valid destination.

- 2 Click **Next** to continue. The Database Selection window opens.



Task 6: Select the RDBMS on which the OVPI database instance will be created

The Database Selection window opens. Use the window to identify the RDBMS on which the OVPI Database instance will be created, and to indicate whether to create new tablespaces or install into existing tablespaces.

- 1 Select one of the following options:

- **Create new tablespaces on Oracle**

Select this option if you have not already created the database user account (dsi_dpipe) and tablespaces, as described in [Guidelines for Tablespace Sizing](#) on page 45. Thus, the dsi_dpipe user and the following tablespaces must *not* exist:

- dpipe_default_seg
- dpipe_property_ind_seg
- dpipe_property_seg

- dpipe_upload_ind_seg
- dpipe_upload_seg
- dpipe_rate_ind_seg
- dpipe_rate_seg
- dpipe_summary_ind_seg
- dpipe_summary_seg
- dpipe_overflow_seg
- dpipe_archive_ind_seg
- dpipe_archive_seg
- dpipe_event_ind_seg
- dpipe_event_seg

- **Use existing tablespaces on Oracle**

Select this option if either of the following is true:

- The system on which you are installing OVPI will use Oracle Client to access a remote Oracle database.
- You have already created the OVPI database user account (dsi_dpipe) and tablespaces listed above, as described in [Guidelines for Tablespace Sizing](#) on page 45, and adjusted the recommended Oracle parameters, as described in [Creating the Tablespaces](#) on page 47.



If you are unsure of which option to use, select **Create New Tablespaces on Oracle**.

2 Click **Next** to continue.

- If you clicked **Create new tablespaces on Oracle**, continue to [Task 7](#).
- If you clicked **Use existing tablespaces on Oracle**, go to [Task 10](#) on page 111.

Task 7: Locate and connect to the database

In the Oracle Reference Using Database Administrator User window, locate and connect to the Oracle database.

1 Accept the default values or type new values for the following parameters:

- **Oracle Instance ID (SID):** type the name of the Oracle database instance.

A default is provided only if the Oracle environment variable ORACLE_SID is set. Verify that the SID shown is correct, because you may have more than one database instance running.

- **Oracle TCP/IP Port Number:** type the TCP/IP port for Oracle. The default is 1521.
- **Oracle User with DBA Privileges:** the default is sys. Do not change it.
- **Oracle User Password:** type the password for the sys account that you created when you installed the Oracle RDBMS.
- **Oracle Home Directory:** identify the directory onto which you installed Oracle. If the installation program can determine the location of the Oracle Home directory, it is shown as the default.

- 2 Click **Next** to continue. The Oracle User and Tablespace Creation window opens.

Install Wizard

Oracle User and Tablespace Creation

Please enter the information necessary to create the OVPi user and tablespaces.

If you wish to customize each tablespace that will be created, select the Advanced button. Modifying the *Database Size* or *Data File Folder* fields on this page will override any Tablespace settings that have been entered via the Advanced button.

OVPi Tablespace Settings

Database Size: 1539 MB

Data File (.dbf) Folder: C:\Oracle\oradb

OVPi DB User (ds1_dp1pe)

Password: *****

Confirm Password: *****

Task 8: Create the Oracle user account and the new tablespaces



Tablespaces are created with autoextend on, allowing Oracle to automatically extend a datafile to meet the needs of the data if enough free space does not currently exist in the tablespace. Monitor the system to make sure that the physical file system does not exceed 100%.

Before you change the values for the Database Size and Data File Folder parameters, decide whether you want to modify the data files for database segments using the Advanced button. Total Size and Data File Folder settings will override any settings made using the Advanced OVPI Configuration window.

1 Accept the default values or type new values for the following parameters:

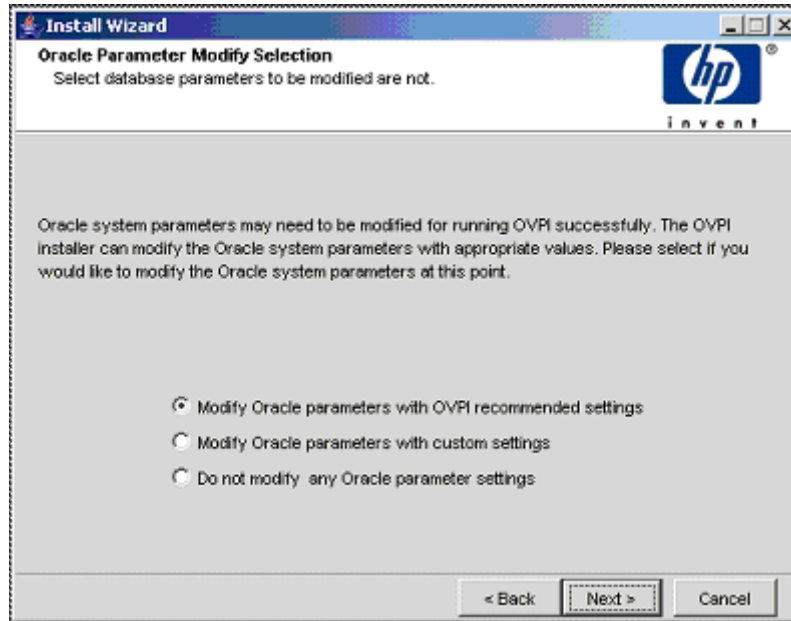
- **Database Size:** Type the database size. The default size is 1024 MB. The minimum size is 500 MB. The tablespaces will be created with the space appropriately distributed.
- **Data File (.dbf) Folder:** Type the directory in which the database files (.dbf) are created.
- **Password:** Type a password for the OVPI database user account (dsi_dpipe).

The password must start with an alphabetic character and must be between one and 30 characters in length. Valid characters are all alphanumeric characters and the underscore (_). The password is *not* case sensitive.

- **Confirm Password:** Retype the password.

Task 9: (Optional) Change specific Oracle configuration parameters

The Oracle Parameter Modify Selection window gives you three choices for changing your Oracle configuration.



- You can modify the parameters using the OVPI recommended settings.
- You can modify the parameters with custom settings. See the table in [step 2](#) on page 49, which lists recommendations for determining values:
 - **SGA_MAX_SIZE**: Determine the maximum amount of memory that will be utilized by the Oracle database. This memory is shared memory and is used by all Oracle server processes.
 - **PGA_AGGREGATE_TARGET (M)**: Specify the target aggregate PGA memory available to all server processes associated with the instance. The default is 200M.
 - **DB_FILE_MULTIBLOCK_READ_COUNT**: Specify the maximum number of blocks that should be read in one I/O operation when a sequential scan occurs in order to minimize I/O during table scans.

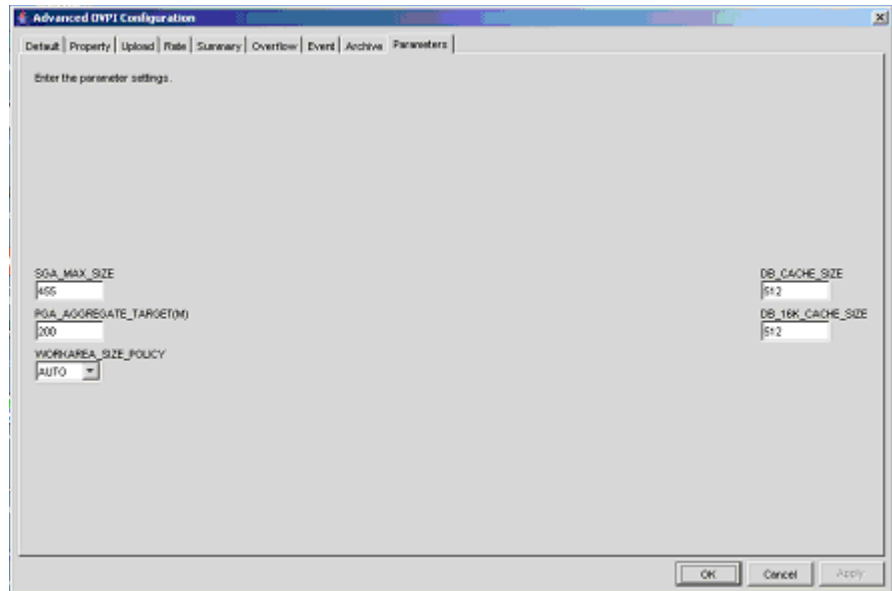
- **WORKAREA_SIZE_POLICY**: Specify the policy for sizing work areas to control the mode in which working areas are tuned. The default is AUTO. It is *not* recommended that you use MANUAL for the value.
- **DB_16K_CACHE_SIZE**: Specify the size of the DEFAULT buffer pool for buffers with the primary block size. The default is TRUE. It is *not* recommended that you use FALSE.
- **DB_32K_CACHE_SIZE**: Specify the size of the cache for 32K buffers.
- **PARALLEL_AUTOMATIC_TUNING**: Specify whether or not Oracle will determine the default values for the parameters that control parallel execution.

If you choose to customize the settings, the following window appears:

The screenshot shows a Windows-style dialog box titled "Install Wizard" with a sub-header "Configure Oracle Parameters". Below the sub-header is the instruction "Enter Oracle database parameters for setting". The HP logo and the word "invent" are in the top right corner. The main area contains five input fields arranged in two columns. The left column has "SGA_MAX_SIZE" with value "455", "PGA_AGGREGATE_TARGET(M)" with value "200", and "WORKAREA_SIZE_POLICY" with a dropdown menu showing "AUTO". The right column has "DB_CACHE_SIZE" with value "512" and "DB_32K_CACHE_SIZE" with value "512". At the bottom right are three buttons: "< Back", "Next >" (which is highlighted with a dashed border), and "Cancel".

- Fill in the desired values (the graphic shows example values).

- b Click **Next**. The values entered are recorded on the Advanced OVPI Configuration window as follows:



The screenshot shows the 'Advanced OVPI Configuration' window with the 'Parameters' tab selected. The window contains several input fields for database parameters. The 'SQL_MAX_SIZE' field is set to '455'. The 'PGA_AGGREGATE_TARGET(M)' field is set to '200'. The 'WORKAREA_SIZE_POLICY' field is set to 'AUTO'. The 'DB_CACHE_SIZE' field is set to '512'. The 'DB_16K_CACHE_SIZE' field is set to '512'. At the bottom right, there are 'OK', 'Cancel', and 'Apply' buttons.

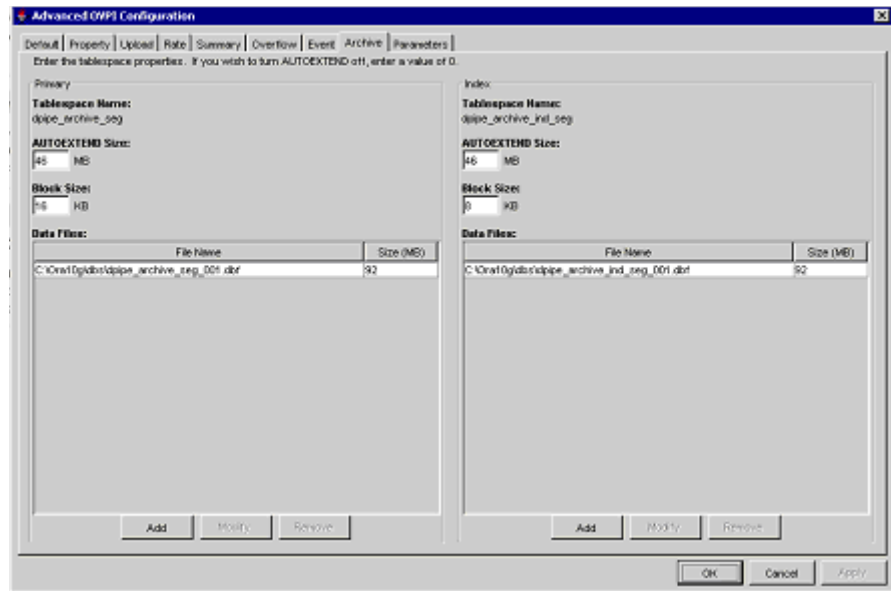
Parameter Name	Value
SQL_MAX_SIZE	455
PGA_AGGREGATE_TARGET(M)	200
WORKAREA_SIZE_POLICY	AUTO
DB_CACHE_SIZE	512
DB_16K_CACHE_SIZE	512

- You can choose not to change any of the Oracle parameters.
- 2 Make your selection and click **Next**.
 - 3 (Optional) If necessary, click **Advanced** to display the Advanced OVPI Configuration window. Use the window to add, modify, or remove the data files that comprise the tablespaces.



After you modify the database segments using the Advanced OVPI Configuration window, do **not** change the values for the Database Size and Data File Folder options in the Oracle User and Tablespace Creation window. If you change the values for these options, you cannot reset them; thus, they override the changes you made using the Advanced Configuration dialog box. There is no way to reset these options, unless you cancel the installation program and start the installation again.

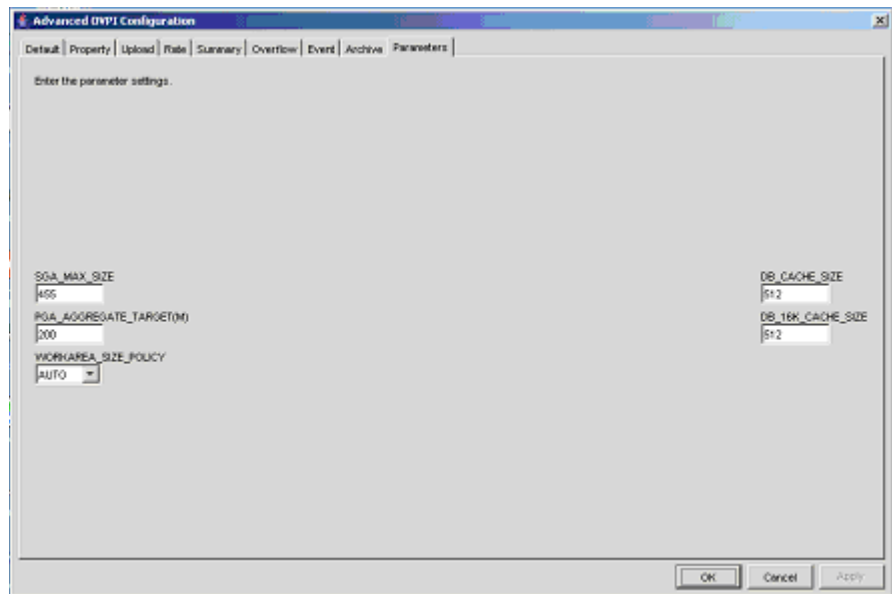
- a Fill in the values and click Advanced.



For tablespace sizing guidelines, see [Chapter 3, Installing Oracle 10g Enterprise Edition](#).

- 4 Select the tab associated with the tablespace you want to change. The tablespace tabs are:
- Default: the dpipe_default_seg tablespace
 - Property: the dpipe_property_seg and dpipe_property_ind_seg tablespaces
 - Upload: the dpipe_upload_seg and dpipe_upload_ind_seg tablespaces
 - Rate: the dpipe_rate_seg and dpipe_rate_ind_seg tablespaces
 - Summary: the dpipe_summary_seg and dpipe_summary_ind_seg tablespaces
 - Overflow: the dpipe_overflow_seg tablespace
 - Archive: the dpipe_archive_seg tablespace
 - Event: the dpipe_event_seg tablespace

- 5 Accept the default values or type values for the tablespace parameters. In each case, the parameters are:
 - **AUTOEXTEND SIZE:** Type the size of the extend in MB. Specifying 0 for the extend size disables the Oracle autoextend feature.
 - **Data Files** (File Name and Size (MB): You must create at least one data file for each tablespace. Use logical names and descriptions; operating system maximums apply.
 - To add a data file, click **Add**. The DataFile Information window opens. Use the window to type the name of the data file and the size of the data file, and click **OK**.
 - To modify a data file, select the data file, and click **Modify**. The DataFile Information window opens. Use the window to change the name of data file, its size, or both, and click **OK**.
 - To remove a data file, select the data file, and click **Remove**.
 - Click **OK**. The following window appears:



- 6 Click **OK** to return to the Oracle User and Tablespace Creation window.

Task 10: Locate and connect to the database

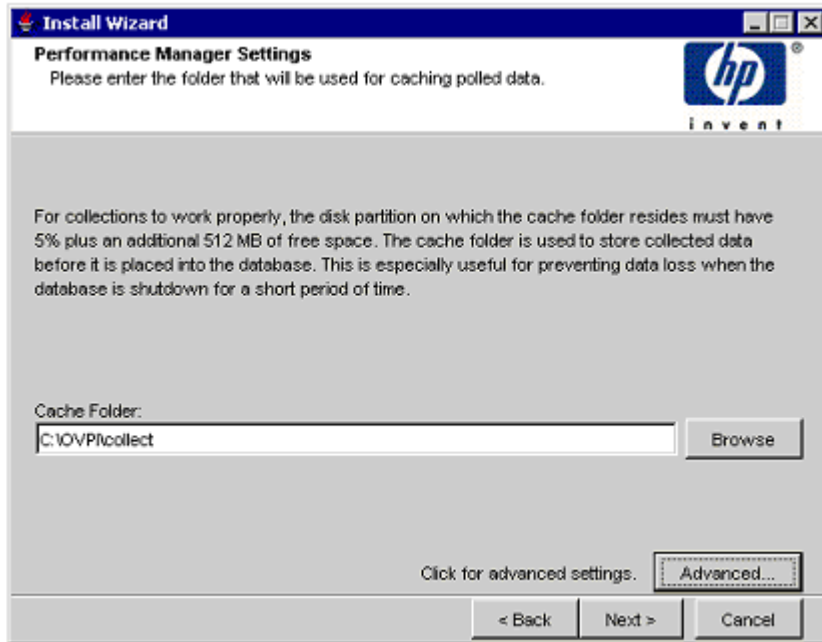
In the Oracle Reference Using Database Administrator User window, locate and connect to the Oracle database.

- 1 Accept the default values or type new values for the following parameters:
 - **Oracle Instance ID (SID):** type the name of the Oracle database instance.

A default is provided only if the Oracle environment variable ORACLE_SID is set. Verify that the SID shown is correct, because you may have more than one database instance running.
 - **Oracle TCP/IP Port Number:** type the TCP/IP port for Oracle. The default is 1521.
 - **Oracle User with DBA Privileges:** the default is sys. Do not change it.
 - **Oracle User Password:** type the password for the sys account that you created when you installed the Oracle RDBMS.
 - **Oracle Home Directory:** identify the directory onto which you installed Oracle. If the installation program can determine the location of the Oracle Home directory, it is shown as the default.
- 2 Click **Next** to continue. The Oracle User and Tablespace Creation window opens.

Task 11: Configure polling collections

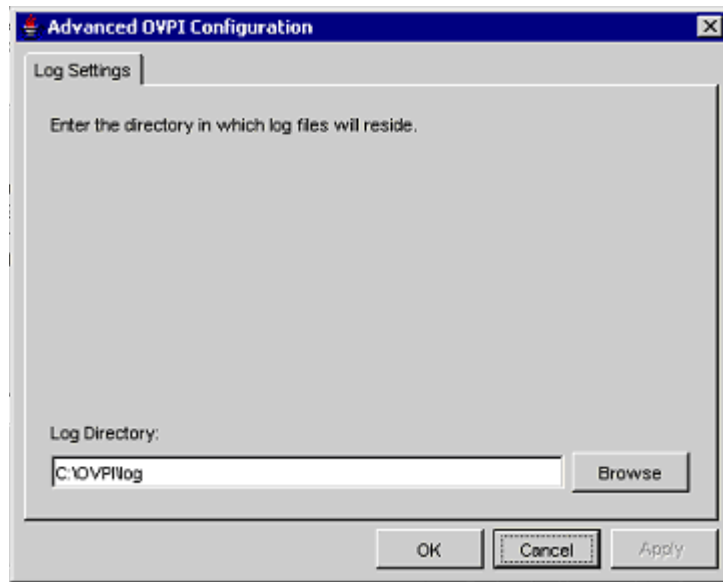
In the Performance Manager Settings window, identify the cache directory in which to store collected data before it is placed into the database. This can prevent data loss when the database is shut down for a short period.



- 1 Accept the default directory or type a fully-qualified directory path to be used for caching polled data.

For collections to work properly, the disk partition on which the cache directory resides must have 5% plus an additional 512 MB of free space. For example, if the disk partition is 10 GB, it must have 1 GB of free space.

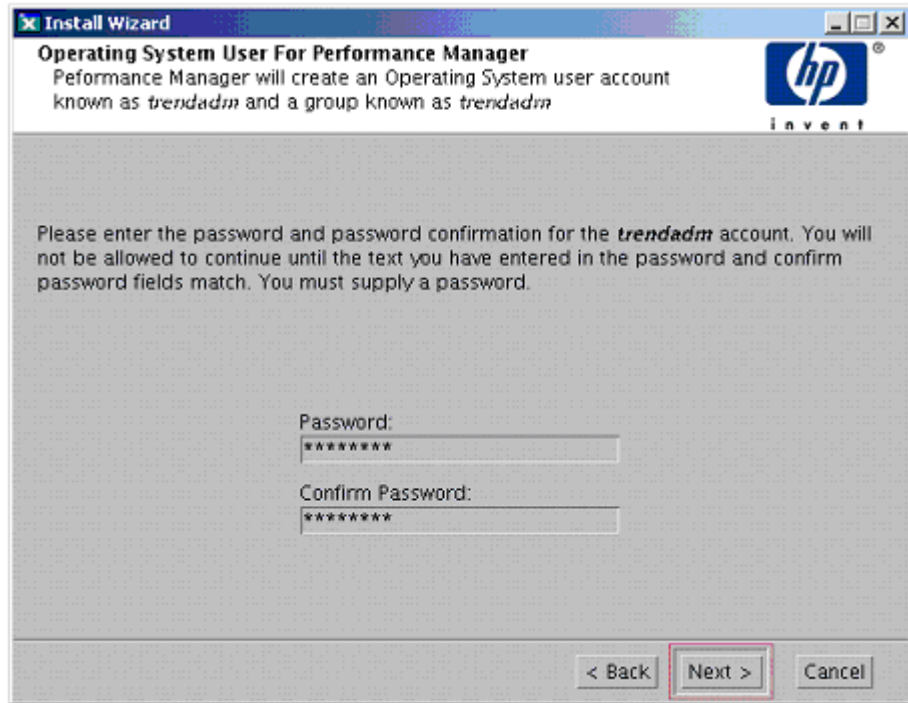
- 2 If needed, click **Advanced** to open the Advanced OVPI Configuration window, where you can specify the directory in which the log files will reside.



- a Accept the default path, which creates a log directory under the directory into which you installed OVPI (certain log files will be maintained there, regardless of the directory you specify), or type the directory path in which the log files will reside.
 - b Click **OK** to apply changes and return to the Performance Manager Settings window.
- 3 Click **Next** to continue.

Task 12: UNIX systems only: Create or modify the operating system account

In the Operating System User for Performance Manager window, identify an operating system account and group named *trendadm*, whose purpose is to preserve the environment in which OVPI will run.



Do not confuse the *trendadm* account used to log on to the operating system with the *trendadm* account created later, used to log on to the Web Access Server application.

The window prompts you for different information depending on whether the operating system and group account already exists.

- If the operating system account and group do not exist, the Create OS user window opens.

To create the operating system account and group:

- a Create a password for the *trendadm* account by typing values for the following:

- **Password:** The password must at minimum be one character in length, has no limit on maximum length, and may contain any character. HP recommends that you adhere to your company's policy for password creation.
- **Confirm Password:** Retype the password.
- b Click **Next** to continue.
- If the operating system account and group exist, the Existing OS User window opens.

To modify the operating system account's user environment:

- a Click one of the following:
 - **Modify user environment:** This parameter updates the trendadm account's .profile or .cshrc with the OVPI environment variables (COLLECT_HOME, DPIPE_HOME, DPIPE_TMP, and TREND_LOG).
 - **Do not modify user environment:** This parameter will not update the account's .profile or .cshrc with the OVPI environment variables. If you select this option, you must manually add the OVPI environment variables later.
- b Click **Next** to continue.

Task 13: Specify an administrator and port for the Web Access Server

In the Web Access Server Settings window, create an OVPI administrator account for the Web Access Server, as well as an HTTP port on which to listen.

Install Wizard

Web Access Server Settings

The OVPI Web Access Server component requires an OVPI administrator user to be created on your Web Access Server and a HTTP port on which to listen.

User Settings

Please enter the username and password for the OVPI web access administrator.

Username: trendadm

Password: *****

Confirm Password: *****

Port Settings

Please enter the HTTP port on which the web access server will listen. If you choose a port other than 80, the port number must be used in the URL for accessing the web access server.

HTTP Port: 80

Click for advanced settings. Advanced...

< Back Next > Cancel

1 Type values for the following parameters:

- **Username:** Accept the default username for the Web Access Server administrator, or type a new name. This account is used to log on to the Web Access Server.

➤ Do not confuse this account with the trendadm account used for logging on the operating system (UNIX installations only), which is used to preserve the environment in which OVPI will run.

There are no restrictions on the minimum and maximum length or on the characters that can be used in the username and password. HP recommends that you adhere to your company's policy for username and password creation.

- **Password:** Type a password for the Web Access Server administrator account.

You can change password rules after you install OVPI using the Web Access Server application. See the *HP OpenView Performance Insight Administration Guide* for details.

- **Confirm Password:** Retype the password.
 - **HTTP Port:** Accept the default port (80) or type a new port number for the Web Access Server. Any open port can be used.
- 2 If necessary, click **Advanced** to open the Advanced Configuration window, in which you can select the following tabs:

Directories: Change the location of report directories in which all deployed reports are stored.

- Accept the default directory or identify a new directory.
- Click **Apply**.
- Click **OK** to return to the Web Access Server Settings window.

OVPI Users: Create and modify user accounts used to log on to OVPI clients. You can create regular user accounts or administrator accounts. Regular user accounts can access the OVPI clients. Administrator accounts can access the administration features (Administration link) of the Web Access Server. See the *HP OpenView Performance Insight Administration Guide* for details.

To add or modify a user account:

- Click **Add User**. A default username (new-user), password (new-user), and role (user) displays, along with created user accounts.
- Double-click the name or password, delete the value, and type a new value. Select either **user** or **admin** for Role.
- Click **Apply**.

To remove a user account:

- Select the user name and click **Remove User**.
- Click **Apply**, and then click **OK** to return to the Web Access Server Settings window.

You can also create, modify, and delete user accounts after you install OVPI using the Web Access Server. See the *HP OpenView Performance Insight Administration Guide* for details.

SSL Setup: Enable SSL communications to enable secure communication between the Web Access Server and a supported web browser, Report Viewer, Report Builder, and the Management Console. To enable SSL, you create a self-signed certificate. This self-signed certificate allows you to enable SSL, however, it is only valid for 90 days. You should send this certificate to a certificate authority in order to receive a signed digital certificate or generate another self-signed certificate before the 90 days expires. After you sign a digital certificate, you must import it using the Web Access Server application. You can also use the Web Access Server to change SSL settings after you install OVPI. See the *HP OpenView Performance Insight Administration Guide* for details.

To enable SSL communications and create a self-signed certificate:

- a Click to select the **Enable SSL** check box.

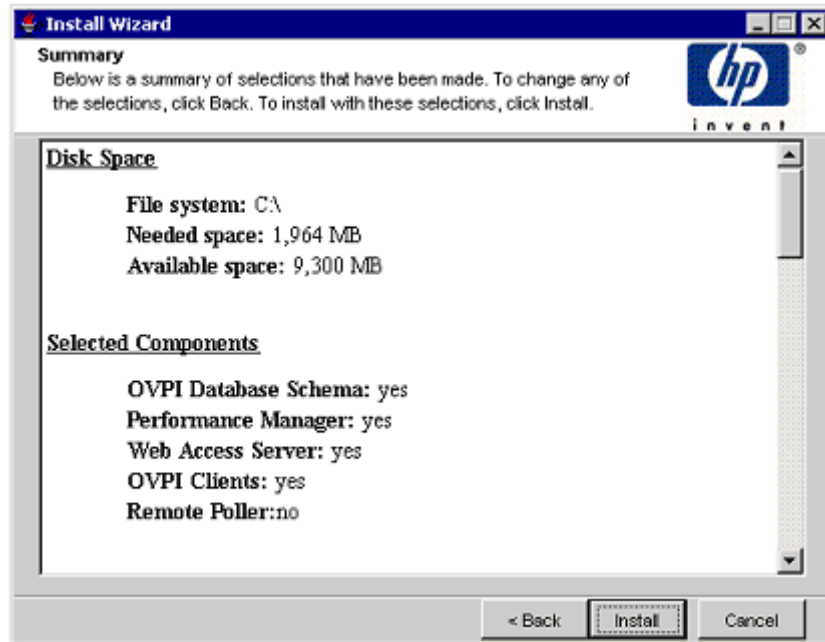
By selecting this option, you will not disable the standard HTTP listener. Thus, the secured SSL port and the unsecured HTTP port will both be enabled.

- **SSL Port:** Accept the default value or type a new value.
- **Keystore Password:** Type a password of six characters or more. Record the password and keep it in a secure place. You will need it to generate a signed certificate.

After you generate your self-signed certificate, it will be stored in the certificate repository. This password lets the Web Access Server access the certificate repository.

- b The remaining fields request information that is necessary when you generate an SSL key that must be verified and signed by a certificate-signing authority. This information is used by the person who checks the certificate to ensure that the certificate is valid.
 - **Organizations:** Optional. Type the name of your organization, for example, “ABC Systems, Inc.”
 - **Org. Unit:** Optional. Type the name of your department or division, for example, “Northeast Sales”.
 - **City:** Optional. Type the name of your city or locality, for example, “Los Angeles”.

- **State:** Optional. Type the name of your state or province, for example, “California”.
 - **Country:** Required. Type your two-letter country code in the Country box, for example, “US”.
- c Click **Apply**.
 - d Click **OK** to return to the Web Access Server Settings window.
- 3 Click **Next** to continue. the Summary window opens.



Task 14: Review the installation information

In the Summary window, review the installation selections.

- 1 If necessary, click **Back** to return to a previous window to make a change. After you make any change, click **Next** until you return to the Summary window.
- 2 Click **Install** to continue. The Installation Progress window opens.

Task 15: Finish the installation

In the Installation Progress window you can view the status of the installation as it occurs. After the installation process is completed, information about whether the installation was successful is displayed.

- If the OVPI installation completed successfully, click **Done**.
UNIX Systems: The installation is complete.
Windows Systems: Reboot the system to complete installation.
- If the OVPI installation was unsuccessful:
 - a Click **Details** at the bottom of the Installation Progress window for additional information.
 - b Contact Support.

Task 16: Install other OVPI components as necessary

To install the Web Access Server, go to [Installing the Web Access Server](#) on page 121.

To install Remote Pollers, go to [Installing the Remote Poller Component](#) on page 130.

To install Client Applications, go to [Installing the OVPI Clients](#) on page 127.

Installing the Web Access Server

The database should be installed and running before you install the Web Access Server.

During installation, you are asked to provide the remote management server host name and port number. This enables the Installation Program to download database information from the database system. If you did not install the database, the installation will continue. However, you must use the Management Console to configure the database system after the install.

Much of the procedure is the same as for installing the Web Access Server on a standalone system.

Task 1: Start the OVPI installation program

- 1 If you have not already started the OVPI installation program, start it now.
- 2 The Setup window opens. Select **OVPI 5.2.0** from the Install section of the window.
- 3 The Welcome window opens. Read the Welcome window and click **Next** to continue.
- 4 The License Agreement window opens. Accept the license agreement and click **Next** to continue.



You must accept the license agreement to proceed. If you click **Cancel**, you will be prompted to confirm your rejection of the license agreement and installation ends.

Task 2: Select the OVPI components to install

The Component Selection window opens. Use the window to select the components to install.

- 1 Click to select **Web Access Server** from the Install section of the window. Deselect any other components.
- 2 Click **Next** to continue.

Task 3: Specify an installation directory for the OVPI components

If you already installed another OVPI component on this system, you have provided directory information. Continue to [Task 4](#).


In the Destination Folder window, specify the directory to which the OVPI software will be installed. The destination directory can be an NFS mounted directory, a UNIX soft link, a UNIX hard link, or a Windows mapped drive.

- 1 Accept the default destination directory, or identify a different directory. The path name cannot contain any spaces.
 - If the destination directory does not already exist, the Installation Program creates it.
 - If the destination directory does exist and contains data, a message warns you that the directory is not empty.
 - If the destination directory is located on a file system that the Installation Program cannot access, a message warns you. You cannot continue the installation until you supply a valid destination.
- 2 Click **Next** to continue. The Database Selection window opens.

Task 4: Specify an administrator and port for the Web Access Server

The Web Access Server Settings window opens. Use the window to create an OVPI administrator account for the Web Access Server, as well as an HTTP port on which to listen.

- 1 Type values for the following parameters:
 - **Username:** Accept the default username for the Web Access Server administrator, or type a new name. This account is used to log on to the Web Access Server.

 Do not confuse this account with the trendadm account used for logging on the operating system (UNIX installations only), which is used to preserve the environment in which OVPI will run.

There are no restrictions on the minimum and maximum length or on the characters that can be used in the username and password. HP recommends that you adhere to your company's policy for username and password creation.

- **Password:** Type a password for the Web Access Server administrator account.

You can change password rules after you install OVPI using the Web Access Server application. See the *HP OpenView Performance Insight Administration Guide* for details.

- **Confirm Password:** Retype the password.
 - **HTTP Port:** Accept the default port (80) or type a new port number for the Web Access Server. Any open port can be used.
- 2 If needed, click **Advanced** to open the Advanced Configuration window, where you can select the following tabs:
 - **Directories:** To change the location of report directories, go to [Directories](#).
 - **OVPI Users:** To create and modify user accounts, go to [OVPI Users](#).
 - **SSL Setup:** To enable SSL communications, go to [SSL Setup](#).
 - 3 Click **Next** to continue.

Directories

The reports directory is where all deployed reports will be stored. To change the location of the reports directories:

- 1 Accept the default directory or identify a new directory.
- 2 Click **Apply**.
- 3 Click **OK** to return to the Web Access Server Settings window.

OVPI Users

User accounts are used to log on to the following OVPI Clients: Management Console, Report Builder, Report Viewer, and Web Access Server.

You can create regular user accounts or administrator accounts. Regular user accounts can access the OVPI Clients. Administrator accounts can access the administration features (Administration link) of the Web Access Server. See the *HP OpenView Performance Insight Administration Guide* for details.

To add or modify a user account:

- 1 Click **Add User**. A default username (new-user), password (new-user), and role (user) displays, along with created user accounts.
- 2 Double-click the name or password, delete the value, and type a new value. Select either **user** or **admin** for Role.

- 3 Click **Apply**.

To remove a user account:

- 1 Select the user name.
- 2 Click **Remove User**.
- 3 Click **Apply**.
- 4 Click **OK** to return to the Web Access Server Settings window.

You can also create, modify, and delete user accounts after you install OVPI using the Web Access Server. See the *HP OpenView Performance Insight Administration Guide* for details.

SSL Setup

You can use SSL to enable secure communication between the Web Access Server and a supported Web browser, Report Viewer, Report Builder, and the Management Console.

To enable SSL, you create a self-signed certificate. This self-signed certificate will allow you to enable SSL, however, it is only valid for 90 days. You should send this certificate to a certificate authority in order to receive a signed digital certificate or generate another self-signed certificate before the 90 days expires.

Once you have a signed digital certificate, you must import it using the Web Access Server application. Additionally, you can use the Web Access Server to change SSL settings after you install OVPI. See the *HP OpenView Performance Insight Administration Guide* for details.

To enable SSL communications and create a self-signed certificate:

- 1 Click to select the **Enable SSL** check box.

By selecting this option, you will not disable the standard HTTP listener, which means that the secured SSL port and the unsecured HTTP port will both be enabled.

- **SSL Port:** Accept the default value or type a new value.
- **Keystore Password:** Type a password of six characters or more. Record the password and keep it in a secure place; you will need it to generate a signed certificate.

After you generate your self-signed certificate, it will be stored in the certificate repository. This password lets the Web Access Server access the certificate repository.

The remaining fields request information that is necessary when you generate an SSL key that must be verified and signed by a certificate-signing authority. This information is used by the person who checks the certificate to ensure that the certificate is valid.

- **Organization:** Optional. Type the name of your organization, for example, “ABC Systems, Inc.”
- **Org. Unit:** Optional. Type the name of your department or division, for example, “Northeast Sales”.
- **City:** Optional. Type the name of your city or locality, for example, “Los Angeles”.
- **State:** Optional. Type the name of your state or province, for example, “California”.
- **Country:** Required. Type your two-letter country code in the Country box, for example, “US”.

2 Click **Apply**.

3 Click **OK** to return to the Web Access Server Settings window.

Supply information about the remote database.

The Remote Management Server Settings window opens. Use the window to supply information necessary to locate and download system information necessary to connect to your remote OVPI database.

1 Specify information for the following parameters:

- **Remote Management Server Host:** Type the name of the database host.
- **Remote Management Server Port:** Type the HTTP port number for the database host.

If the system fails to connect to the database to obtain database information, a warning message displays. The OVPI database and the Oracle Listener program must be running before you continue. (If you continue the installation, you must use the Management Console to set up the database connection after the installation finishes.)

2 Click **Next** to continue.

Task 5: Review the installation information

In the Summary window, review the installation selections.

- 1 If necessary, click **Back** to return to a previous window to make a change. After you make any change, click **Next** until you return to the Summary window.
- 2 Click **Install** to continue. The Installation Progress window opens.

Task 6: Finish the installation

In the Installation Progress window you can view the status of the installation as it occurs. After the installation process is completed, information about whether the installation was successful is displayed.

- If the OVPI installation completed successfully, click **Done**.
 - UNIX Systems: the installation is complete.
 - Windows Systems: reboot the system to complete installation.
- If the OVPI installation was unsuccessful:
 - a Click **Details** at the bottom of the Installation Progress window for additional information.
 - b Contact Support. See [Support](#) on page 4.



Windows Systems Only: If the system where you installed the Web Access Server experiences hardware failure, reinstall the Web Access Server on a new system. If you have deployed reports (a configuration task), run the `deploytool` command from the system on which the OVPI database is installed to redeploy reports to the Web Access Server. For more information about the `deploytool` command, see the *Performance Insight Reference Guide*.

Task 7: Install other OVPI components as necessary

To install Client Applications, see [Installing the OVPI Clients](#) on page 127.


To install Remote Pollers, see [Installing the Remote Poller Component](#) on page 130.

Installing the OVPI Clients

OVPI Clients provide the interface between OVPI and its users, and are installed as a group on any networked system. For a list of the OVPI Clients, see [OVPI Clients](#) on page 14.

Task 1: Start the OVPI installation program.

- 1 If you have not already started the OVPI Installation Program, start it now.
- 2 The Setup window opens. Select **OVPI 5.2.0** from the Install section of the window.
- 3 The Welcome window opens. Read the Welcome window and click **Next** to continue.
- 4 The License Agreement window opens. Accept the license agreement and click **Next** to continue.


 You must accept the license agreement to proceed. If you click **Cancel**, you will be prompted to confirm your rejection of the license agreement and installation ends.

Task 2: Select the OVPI components to install

The Component Selection window opens. Use the window to select the components to install.

- 1 Click to select **OVPI Clients** from the Install section of the window. Deselect any other components.
- 2 Click **Next** to continue.

Task 3: Specify an installation directory for the OVPI software.

 If you have already installed another OVPI component on this system, you have provided directory information. Continue to [Task 4](#).

In the Destination Folder window, specify the directory to which the OVPI software will be installed. The destination directory can be an NFS mounted directory, a UNIX soft link, a UNIX hard link, or a Windows mapped drive.

- 1 Accept the default destination directory, or identify a different directory. The pathname cannot contain any spaces.

- If the destination directory does not already exist, the Installation Program creates it.
- If the destination directory does exist and contains data, a message warns you that the directory is not empty.
- If the destination directory is located on a file system that the Installation Program cannot access, a message warns you. You cannot continue the installation until you supply a valid destination.

2 Click **Next** to continue. The Database Selection window opens.

Task 4: Specify the information needed to access the Web Access Server

The Remote Web Access Server Settings window opens. Use the window to enter information about where the Web Access Server will be installed.

1 Accept the defaults or specify values for the following parameters:

- **Web Access Server Host:** Type the name of the Web Access Server.
- **Web Access Server Port:** Type the port number for the Web Access Server.

2 Click **Next** to continue.

Task 5: Review the installation information

In the Summary window, review the installation selections.

- 1 If necessary, click **Back** to return to a previous window to make a change. After you make any change, click **Next** until you return to the Summary window.
- 2 Click **Install** to continue. The Installation Progress window opens.

Task 6: Finish the installation

In the Installation Progress window you can view the status of the installation as it occurs. After the installation process is completed, information about whether the installation was successful is displayed.

- If the OVPI installation completed successfully, click **Done**.
 - UNIX Systems: the installation is complete.
 - Windows Systems: reboot the system to complete installation.
- If the OVPI installation was unsuccessful:

- a Click **Details** at the bottom of the Installation Progress window for additional information.
- b Contact Support.

Task 7: Install other OVPI components as necessary

To install Remote Pollers, go to [Installing the Remote Poller Component](#) on page 130.

Installing the Remote Poller Component

If you already installed OVPI Performance Manager on *this* system, you do not need to install the Remote Poller component. It is installed with OVPI Performance Manager. Remote Poller systems do not use Performance Manager.

Task 1: Start the OVPI installation program

- 1 If you have not already started the OVPI installation program, start it now. See [Starting the OVPI Installation Program](#) on page 91.
- 2 The Setup window opens. Select **Remote Poller** from the Install section of the window.
- 3 The Welcome window opens. Read the Welcome window and click **Next** to continue.

The License Agreement window opens. Accept the license agreement and click **Next** to continue. You must accept the license agreement to proceed. If you click **Cancel**, you will be prompted to confirm your rejection of the license agreement and installation ends.

Task 2: Specify an installation directory for the OVPI components



If you already installed another OVPI component on this system, you provided directory information. Continue to [Task 3](#).

In the Destination Folder window, specify the directory to which the OVPI software will be installed. The destination directory can be an NFS mounted directory, a UNIX soft link, a UNIX hard link, or a Windows mapped drive.

- 1 Accept the default destination directory, or identify a different directory. The pathname cannot contain any spaces.
 - If the destination directory does not already exist, the Installation Program creates it.
 - If the destination directory does exist and contains data, a message warns you that the directory is not empty.
 - If the destination directory is located on a file system that the Installation Program cannot access, a message warns you. You cannot continue the installation until you supply a valid destination.

- 2 Click **Next** to continue. The Database Selection window opens.

Task 3: Supply information about the database


The Remote Management Server Settings window opens. Use the window to supply information necessary to locate and download system information necessary to connect to your remote OVPI database.

- 1 Specify information for the following parameters:
 - **Remote Management Server Host:** Type the name of the database host.
 - **Remote Management Server Port:** Type the HTTP port number for the database host.

This information is used to allow the remote poller system to automatically connect with the OVPI server running Performance Manager. The first time they connect, an information block is downloaded from the OVPI server and saved.

Task 4: Configure polling collections

The Performance Manager Settings window opens. Use this window to identify the cache directory used to store collected data before it is placed into the database. This can prevent data loss when the database is shut down for a short period.

- 1 Accept the default directory or type a fully-qualified directory path to be used for caching polled data.
 -  For collections to work properly, the disk partition on which the cache directory resides must have 5% plus an additional 512 MB of free space. For example, if the disk partition is 10 GB, it must have 1 GB of free space.
- 2 If needed, click **Advanced** to open the Advanced OVPI Configuration window, where you can specify the directory in which the log files will reside.
 - a Accept the default path, which creates a log directory under the directory into which you installed OVPI (certain log files will be maintained there, regardless of the directory you specify), or type the directory path in which the log files will reside.

- b Click **OK** to apply changes and return to the Performance Manager Settings window.

3 Click **Next** to continue.

Task 5: UNIX systems only: Create or modify the operating system account

The Operating System User for Performance Manager window opens. Use the window to identify the operating system account and group named trendadm, whose purpose is to preserve the environment in which OVPI will run.



Do not confuse the trendadm account used to log on to the operating system with the trendadm account created later, used to log on to the Web Access Server application.

The window prompts you for different information depending on whether the operating system and group account already exist.

- If the operating system account and group do not exist, the Create OS user window opens.

To create a password for the trendadm account by typing values for the following:

- a **Password:** The password must at minimum be one character in length, has no limit on maximum length, and may contain any character. HP recommends that you adhere to your company's policy for password creation.
- b **Confirm Password:** Retype the password.

Click **Next** to continue.

- If the operating system account and group exist, the Existing OS User window opens.

Click one of the following:

- **Modify user environment:** This parameter updates the trendadm account's .profile or .cshrc with the OVPI environment variables (COLLECT_HOME, DPIPE_HOME, DPIPE_TMP, and TREND_LOG).
- **Do not modify user environment:** This parameter will not update the account's .profile or .cshrc with the OVPI environment variables. If you select this option, you must manually add the OVPI environment variables later.

Click **Next** to continue.

Task 6: Review the installation information

In the Summary window, review the installation selections.

- 1 If necessary, click **Back** to return to a previous window to make a change. After you make any change, click **Next** until you return to the Summary window.
- 2 Click **Install** to continue. The Installation Progress window opens.

Task 7: Finish the installation

In the Installation Progress window you can view the status of the installation as it occurs. After the installation process is completed, information about whether the installation was successful is displayed.

- If the OVPI installation completed successfully, click **Done**.
 - UNIX Systems: the installation is complete.
 - Windows Systems: reboot the system to complete installation.
- If the OVPI installation was unsuccessful:
 - a Click **Details** at the bottom of the Installation Progress window for additional information.
 - b Contact Support. [Support](#) on page 4

The Remote Poller does not poll devices until you configure its polling policy. To configure the polling policy, use the Polling Policies application in the Management Console. For more information, see the *HP OpenView Performance Insight Administration Guide*.

Installing OVPI Clients Only

You can install only the OVPI Clients on any system in a standalone or distributed environment without installing any other OVPI components on that system. This type of install is termed a client-only install, and gives users the ability to access the Web Access Server for reporting and administration capabilities from local workstations.

In a client-only installation, you cannot use the following applications from the Management Console Tools menu: Catalog Manager, MIB Browser, SNMP Discovery, Type Discovery, and Package Manager. You cannot register a new data table, property table, or automatically add a collection to the database. For full functionality, OVPI Performance Manager must also be installed.

To install the clients only, follow the instructions provided at [Installing the OVPI Clients](#) on page 127.

6 Post-Installation

Apply a Service Pack

After you install OVPI, you should check for service packs for your OVPI system. If available, you should download and apply the most recent service pack. It includes any previous service packs.

You must have an HP Passport ID to access service packs. For information about how to obtain an HP Passport ID, see [Support](#) on page 4.

To locate the most recent service pack for this release

- 1 Go to the following url:

www.openview.hp.com/downloads/index.html

- 2 Click **Software patches**.

The HP Passport sign-in window opens.

- 3 Enter your HP Passport ID and log on.

- 4 Navigate to the Performance Insight software patches and download the service pack.

Use a Common Character Set Across Distributed Systems

In a distributed configuration, the central database server, satellite database servers, and polling systems can be different platforms. Because the default database character sets may differ between operating systems, make sure that all database instances and OVPI clients use a common character set.

Root Permission for Certificate Management Application

The Certificate Management application uses `ovcert` and `ovconfchg` programs present in the `/opt/OV/bin` directory. These programs are used for managing security certificates on the system. For more information, see the *HP OpenView Performance Insight 5.2 Administration Guide*. Root privilege is required to run these programs. Because the Certificate Management application is usually launched by **trendadm** user who has no root privileges, run the `ovswitchuser.sh` script. If you plan to run the programs manually, you do not need to run the script.

Perform Configuration Tasks

The immediate configuration tasks you must perform include the following:

- 1 Install the report packs on the central database server and deploy them to the Web Access Server.

A report pack is a collection of reports that analyze performance data. A datapipe contains directives for OVPI to use when collecting the data. Installing the datapipe configures OVPI to collect a specific type of performance data at a specific polling interval. Installing the report pack configures OVPI to summarize and aggregate the data collected by the datapipe. To install report packs and datapipes, use the OVPI Package Manager, an application supplied by the Management Console client application. There are many types of reports to choose from. Advanced users also have the option of creating their own reports. Before installing any report pack, see the user guide for the report pack.

Each report pack creates some tables to store and analyze collected data. If Oracle partitioning option is enabled, each table will contain number of partitions. Number of partitions depends upon type of data that is stored in the table. For example, raw or rate or hourly table will have partitions for each hour. Similarly, daily table will have partitions for each day. Therefore, when you install report packs, even if no data is collected, considerable amount of database space will be utilized for partition creation. Make sure enough database space is available before installing

report packs. Once Performance Insight starts collecting data, the system comes to an equilibrium in terms of space when `db_delete_data` ages or deletes older data and partitions.

If your configuration has more than one Web Access Server, deploy the reports to each one. Do not install datapipes on the central database server unless the central server is polling.

- 2 Discover the network on the satellite database servers for those nodes that you plan to poll. The discovery process involves running a utility that determines if there is a device at a specific IP address, if the device is SNMP-manageable, and if so, what kind of device it is (router, hub, or switch). This information is used to populate and update tables in the OVPI database instance.
- 3 Install report packs and datapipes on the satellite database servers, but do not deploy them. Make sure to install the same report packages on the satellite database servers that you installed on the central database server. Disable polling if a satellite database server is not going to be polling devices.
- 4 Run type discovery on the satellite database servers.
- 5 In a distributed configuration, configure report packs and polling policies for the distributed configuration. For example, you must modify the report package polling policies, located on the satellite database servers, so that the policies are collecting data from the system on which the remote poller component is located.
- 6 Other types of configuration tasks include the following:
 - Configuring the `trendtimer` utility to schedule activities to run at specific times
 - Creating data collections (types and sources of data)
 - Configuring polling policies
 - Configuring users and groups
 - Creating views for presenting data
 - Configuring the Web Access Server
 - Configuring the OVPI database
 - Scheduling and generating reports

All configuration tasks are explained in detail in the *HP OpenView Performance Insight Administration Guide*. You should read this guide immediately following OVPI installation.

Back Up Your System

After you install OVPI, you should back up both the database and the OVPI installation. For instructions, see the *HP OpenView Performance Insight Administration Guide*.

Confirming that OVPI is Running and Collecting Data

To verify that OVPI is running and collecting data:

- **Windows Systems**

- 1 From the Control Panel window, double-click **Administrative Tools**.

The Administrative Tools window opens.

- 2 Double-click the **Services** icon.

- 3 Locate the following OVPI Services in the Services list:

- OVPI Timer

- OVPI HTTP Server

The Status should say Started.

- 4 If the service is stopped, right-click the service name and click **Start** on the shortcut menu.

- **UNIX Systems**

Type the following at the command line:

```
ps -ef | grep trendtimer
```

The output will look similar to the following:

```
trendadm 1755      1  0  Apr 13  ?           0:10  
/usr/OVPI/bin/trendtimer -s /usr/OVPI/lib/trendtimer.sched
```

If the process is not listed, OVPI is not running. The path of program depends on where OVPI is installed.

You can also verify the jrun process (OVPI HTTP Server service on Windows). Although jrun is not required for OVPI to collect data successfully, it is required for activities using the web server. For example, to view reports.

Type the following command:

```
ps -ef | grep jrun
```

The output will look similar to the following:

```
root 22596      1  0 01:45:44 pts/ta    0:43  
/usr/OVPI/jrun/bin/jrun -nohup -start piweb
```

If the process is not listed, the web server is not running. The path of program depends on where OVPI is installed.

Starting and Stopping OVPI

The *HP OpenView Performance Insight Administration Guide* provides instructions for starting and stopping each OVPI component.

Troubleshooting OVPI Installation Problems

OVPI Log Files

All OVPI log files are located at `$DPIPE_HOME/log/`

The log file used during installation is named `install.log`. If you have problems during installation, check this log.

For information about how to use OVPI log files, see the *HP OpenView Performance Insight Troubleshooting Guide*, which is available online at the Support web site (see [Support](#) on page 4).

Windows Only: NNM Integration

On Windows systems only, when installing OVPI on a system running NNM, you may see ERROR and WARNING messages during the OVPI installation. You can ignore them.

- During installation, you may see the error:

```
failed to copy the file, msvcr70.dll, into the OVPI "bin"
directory
```

- After installation completes, the Details window Error tab displays this message:

```
msiexec failed with exit status: 1603
```

The Warning tab displays one or both of these warning messages:

```
Higher version of package might have been installed. Failed to
install
```

```
packageHPOvXpl-02.50.100-WinNT4.0-release.msi:{C9C24CC5-23CE-
4B55-8BC0-6D5785924842}
```

```
Higher version of package might have been installed. Failed to
install
```

```
packageHPOvJxpl-02.50.100-WinNT4.0-release.msi:{48C97C18-5AFA-
40FE-B51D-A4EECB02808}
```

7 Uninstalling OVPI

You must uninstall OVPI *before* you uninstall the RDBMS.

Uninstalling OVPI removes all OVPI-related tablespaces and the dsi_dpipe user from the database used by OVPI. The database itself remains.

OVPI Uninstall Prerequisite Tasks

Perform the following tasks before uninstalling OVPI.

- Stop the OVPI Timer
- Stop the OVPI HTTP Server
- Wait for OVPI processes to complete
- Verify that Oracle is still running

Note the directory locations for the following environment variables. These directories must be manually removed after the uninstall.

- DPIPE_HOME
- DPIPE_TMP
- TREND_LOG
- COLLECT_HOME

OVPI Uninstall Procedure

Use the OVPI Uninstall Wizard to uninstall OVPI. It removes all OVPI components from the local system, as well as files that were added to the system during OVPI installation. It does not remove files that were created by users or applications — log files and reports, for example.

With the exception of starting the Uninstall Wizard, the procedure for uninstalling OVPI is the same for Windows and UNIX systems.

Task 1: Start the OVPI Uninstall Wizard

- 1 Log on to the local system.

Windows Systems:

- a Log on using the Administrator account.
- b From the Windows Desktop, click **Start**. Point to Programs, point to HP OpenView, point to Performance Insight, and click **Uninstall**.

UNIX Systems:

- a Log on as root.
- b Type the following command:

```
$DPIPE_HOME/bin/uninstall
```

In this instance, `$DPIPE_HOME` is the directory into which you installed OVPI.

- 2 The Welcome window opens. Click **Next** to continue.
- 3 If the OVPI database schema is installed on the system where you are uninstalling OVPI, go to [Task 2](#).
- 4 If the OVPI database schema is not installed on the system where you are uninstalling OVPI go to [Task 3](#).

Task 2: Supply the Oracle Administrator password (local Oracle database only)

The Oracle Administrator Password window opens. Do one of the following:

- If you set the Oracle Administrator password, type the password in the Oracle Administrator (SA) Password box and click **Next** to continue.

- If you did not set the Oracle Administrator password, leave the Oracle Administrator (SA) Password box blank and click **Next** to continue.

Task 3: Review and uninstall

The Summary window opens. Use the window to review the components to be uninstalled.

- 1 If necessary, click **Back** to return to a previous window to make a change. After you make any change, click **Next** until you return to the Summary window.
- 2 Click **Uninstall** to continue.

Task 4: Finish the uninstall

The Uninstall Progress window opens. The window shows the status of the uninstall as it occurs. Following completion, the window reports whether installation was successful.

- If the OVPI uninstall completed successfully:
 - a Click **Done**.
 - UNIX Systems: the uninstall is complete.
 - Windows Systems: reboot the system to complete the uninstall.
 - b Continue to [OVPI Post-Uninstallation Tasks](#) on page 146.
- If the OVPI uninstall was unsuccessful:
 - a Click the **Details** button at the bottom of the Uninstall Progress window for additional information.
 - b Contact Support (see [Support](#) on page 4).

Uninstalling OVPI Manually (Windows Systems)

If OVPI fails to uninstall on a Windows system, you can manually uninstall OVPI. The OVPI uninstall may fail if:

- OVPI processes are still running. This could cause a file to fail to be deleted and cause warnings on uninstall.
- Something catastrophic happens during uninstall, such as a power failure
- The OVPI database is not running or the uninstall fails to connect to the database during the process.

Task 1: Stop OVPI services

- 1 From the Control Panel window, double-click **Administrative Tools**.
The Administrative Tools window opens.
- 2 Double-click the **Services** icon.
- 3 From the Services window, right-click **OVPI Timer** and select **Stop** from the menu.
- 4 From the Services window, right-click **OVPI HTTP Server** and select **Stop** from the menu.

Task 2: Remove the Web Access Server

- 1 Open a command prompt window.
- 2 Navigate to the following directory:
installation_directory\jrun\bin
In this instance, *installation_directory* is the directory into which you installed OVPI.
- 3 Type the command:
jrunsvc -remove "OVPI HTTP Server"

Task 3: Remove Windows Registry entries

Using the Registry Editor, remove the following Windows Registry entries:

- 1 From HKEY_LOCAL_MACHINE > SOFTWARE, expand the Macromedia folder, the Install Data folder, and remove the following entry:

JRun4

- 2 From HKEY_LOCAL_MACHINE > SOFTWARE > Hewlett-Packard > HP OpenView, remove the following entry:

Performance Insight

Task 4: Remove the OVPI Timer service

- 1 Open a command prompt window.
- 2 Navigate to the following directory:

installation_directory\bin

In this instance, *installation_directory* is the directory into which you installed OVPI.

- 3 Type the command:

trendtimer -r

Task 5: Remove specific environment variables

- 1 From the Control Panel window, double-click **System**. The System Properties dialog box opens.
- 2 Click the **Advanced** tab, and then click the **Environment Variables** button. The Environment Variables dialog box opens.
- 3 Delete the following variables:
 - COLLECT_HOME
 - DPIPE_HOME
 - DPIPE_TMP
 - TREND_LOG
- 4 Edit the PATH environment variable by removing anything that relates to OVPI.
- 5 Click **OK** when done.

Task 6: Restart your system.

OVPI Post-Uninstallation Tasks

To prevent potential problems if you reinstall OVPI, HP recommends that you delete the following directories:

- The OVPI directory
- The .ovpi directory

Delete the OVPI Installation Directory

The OVPI directory is the directory into which you installed OVPI.

The OVPI Uninstall Wizard removes files from the OVPI directory that were installed by the OVPI Installation Program. It does *not* remove generated files (log files), files created by users, or reports deployed for any installed report packs that were placed in this directory.



If there are reports or data in the OVPI directory that you want to save, move those files to another location before continuing.

To delete the OVPI directory, follow these steps.

- UNIX Systems:
 - a Open a new shell window on the system where OVPI was installed.
 - b Type the following command:

```
rm -rf $DPIPE_HOME/ovpi
```

In this instance, \$DPIPE_HOME is the directory into which you installed OVPI. For example, if you installed OVPI in the /data directory, you would type:

```
rm -rf /data/ovpi
```

- Windows Systems: perform one of the following:
 - Windows Explorer: Locate and right-click the **Performance Insight** directory. Select **Delete** from the menu.
 - Command Prompt window: Type the following command:

```
rmdir /S $DPIPE_HOME
```

In this instance, *\$DPIPE_HOME* is the directory into which you installed OVPI.

Remove Excess Directories

Manually remove the directories that contain the following environment variables:

- DPIPE_TMP
- TREND_LOG
- COLLECT_HOME

Delete the .ovpi Directory

The .ovpi directory stores your custom settings. It is present only if you run Report Builder, Report Viewer, or Web Access Server.



You should remove your .ovpi directory.

The .ovpi directory is a hidden file. You need to make it visible to remove it. On Windows, modify the directory view to show hidden files and directories by setting the Tools > Folder Options, View tab and selecting the “Show hidden files and folders” radio box.

To delete the .ovpi directory, do the following:

- UNIX Systems:

The .ovpi directory is located in the UNIX home directory.

- a Open a new shell window on the system where OVPI was installed.
- b Type the following command from the home directory:

```
rm -rf .ovpi
```

- Windows Systems:

The .ovpi directory is located at %SystemDrive%\Documents and Settings\username. Navigate to that directory and do one of the following:

- Windows Explorer: Right-click the .ovpi directory and select **Delete** from the menu.

- Command Prompt window: Type the following command:

```
rmdir /S .ovpi
```

Uninstall the RDBMS

Continue by uninstalling the RDBMS. See [Chapter 8, Uninstalling an Oracle RDBMS](#).

8 Uninstalling an Oracle RDBMS

Do not uninstall the Oracle RDBMS unless you have first uninstalled OVPI. See [Chapter 7, Uninstalling OVPI](#).

Before uninstalling Oracle, stop Oracle (see [Starting and Stopping Oracle](#) on page 58).

Follow these steps to uninstall both the RDBMS and the Oracle client.

- 1 Log on to the local system.
 - Windows Systems
Log on using the Administrator account.
 - UNIX Systems
Log on as root.
- 2 Start the Oracle uninstall procedure.
 - a Start the Oracle Universal Installer.
The Welcome window opens.
 - b Click the **Deinstall Products** button.
The Inventory window opens.
 - c Check all items to remove, and click the **Remove** button.
The Confirmation window opens.
 - d Confirm the items to remove, and click **Yes**.
The Remove window confirms the uninstallation of the products you selected.
- 3 Remove any remaining Oracle directories the uninstall tool was unable to remove.

9 Upgrading to Oracle 10g Enterprise Edition

If you are using Oracle 9i, you must upgrade to Oracle 10g version 10.2.0.3 by following these steps:

- 1 Install Oracle10g in different folder from the home folder of Oracle 9i.
 - a Select the Unicode (AL32UTF8) character set during the installation.
 - b Apply the 10.2.0.3 patch.
 - c Set the COMPATIBLE initialization parameter to at least 9.2.0. This will allow the upgrade to take place in 9i compatibility mode.
 - d Upgrade the Oracle 9i database to Oracle 10g using the Oracle Database Upgrade Assistant.

See the *Oracle Database Upgrade Guide 10g Release 2* for complete installation and upgrade instructions.

- 2 Verify path.

Edit the environment variable PATH to ensure that the Oracle10g install path (for example, C:\oracle\ora10) is the one referenced instead of the install path used for Oracle 9i.

The environment variable ORACLE_HOME should reference the Oracle10g home.

- 3 On Windows systems:

Edit the registry entry in
HKEY_LOCAL_MACHINE\SOFTWARE\ORACLE - set
ORACLE_HOME to the Oracle10g home.

- 4 Stop the Oracle 9i listener and start the Oracle 10g listener.
- 5 Verify that the {NEW ORACLE_HOME}\network\admin\sqlnet.ora has the following entry:

```
NAMES.DIRECTORY_PATH= (TNSNAMES, HOSTNAME, ONAMES)
```

- 6 Close all sql sessions before upgrading to OVPI 5.2. Otherwise, the OVPI 5.2 Upgrade Wizard will return a pop-up asking you to close all open sql sessions and then retry.
- 7 Stop the 10g Database Control service.

Upgrading a Remote Oracle Database

Perform steps 1 through 7 as provided above. After the database is upgraded, perform the following steps to create the new tablespaces specific to OVPI 5.2.

- 1 Create tablespaces for Archive and Event on the remote Oracle database explicitly. The following is an example of how you would use SQL*Plus to create the dpipe_archive_seg tablespace:

```
CREATE TABLESPACE dpipe_archive_seg DATAFILE
'dpipe_archive_sef.dbf' SIZE 10M REUSE AUTOEXTEND ON NEXT
10M MAXSIZE UNLIMITED LOGGING ONLINE PERMANENT EXTENT
MANAGEMENT LOCAL AUTOALLOCATE SEGMENT SPACE MANAGEMENT
AUTO;
```

- 2 Repeat the previous step to create the remaining tablespaces:

- dpipe_archive_ind_seg
- dpipe_event_seg
- dpipe_event_ind_seg

Verify Connection before Upgrading to OVPI 5.2

Open a sqlplus session on the remote Oracle machine to verify the setup. The version should be Oracle 10.2,

Verify connectivity from the Oracle client to the remote database by starting a sqlplus session.

10 Upgrading to OVPI 5.2

You can upgrade to OVPI 5.2 if you currently have installed the latest service pack level (Service Pack 6 or later) of OVPI 5.1 or 5.1.1.

You can upgrade to OVPI 5.2 whether you have a standalone or a distributed environment. The installation process provided in this section applies to all environment. However, if you have a distributed environment, you must first upgrade your database schema. The instructions can be found in [Chapter 9, Upgrading to Oracle 10g Enterprise Edition](#). Once you have upgraded your database, you can install the distributed components in any order.

The remote poller is upgraded separately from OVPI but the procedure is the same.

You must upgrade to Oracle 10g before you upgrade OVPI.

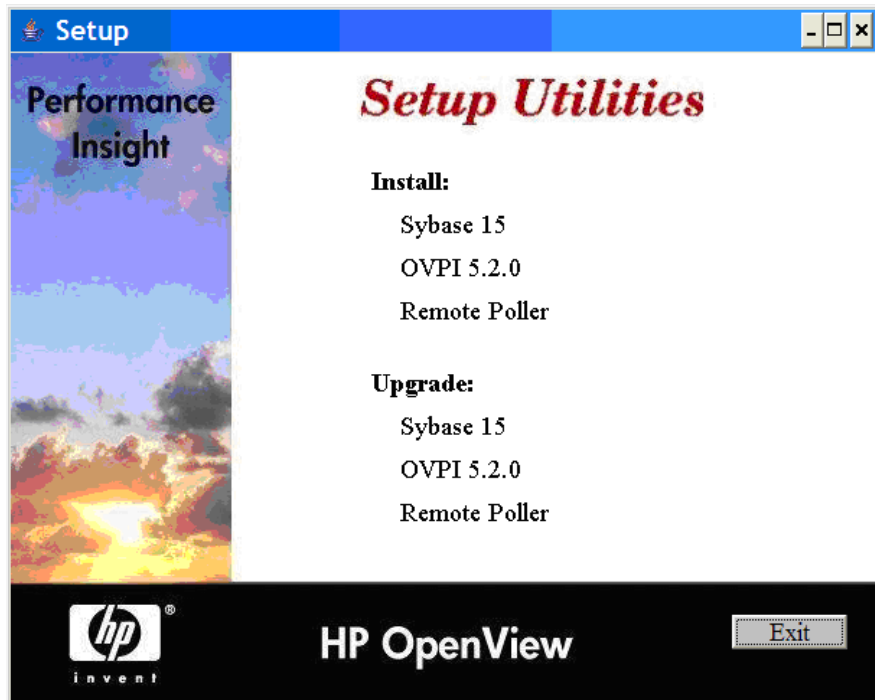
Required Java Patches for Your Operating System

OVPI 5.2 includes Java 1.4.2.13. Java will automatically load onto your system during the upgrade, replacing any previous Java versions that OVPI has installed.

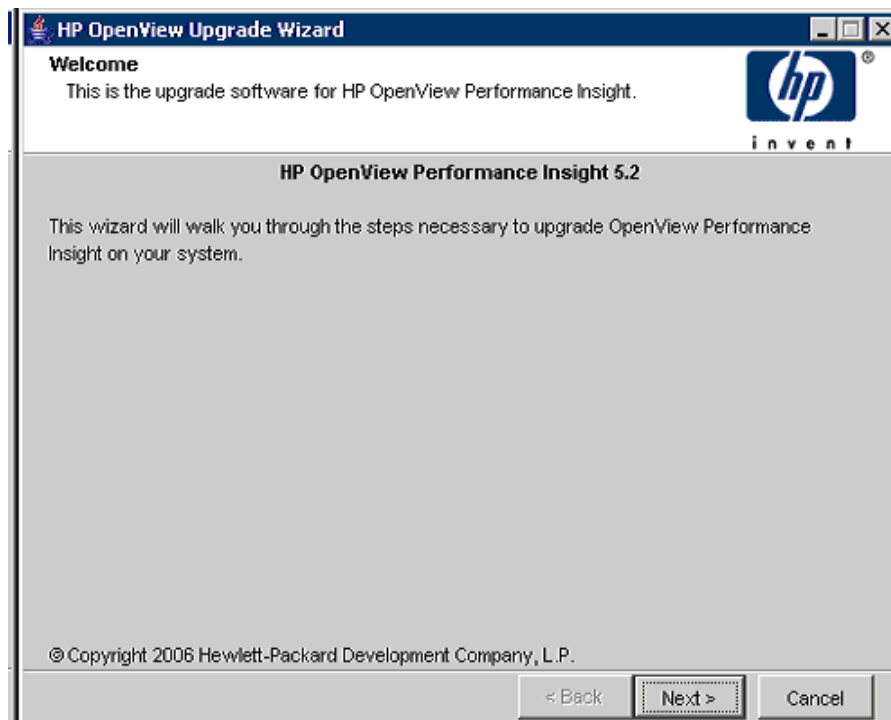
You must install the appropriate Java patches required for your operating system (see [Verify that patches are running for Java](#) on page 23).

Using the Wizard to Upgrade

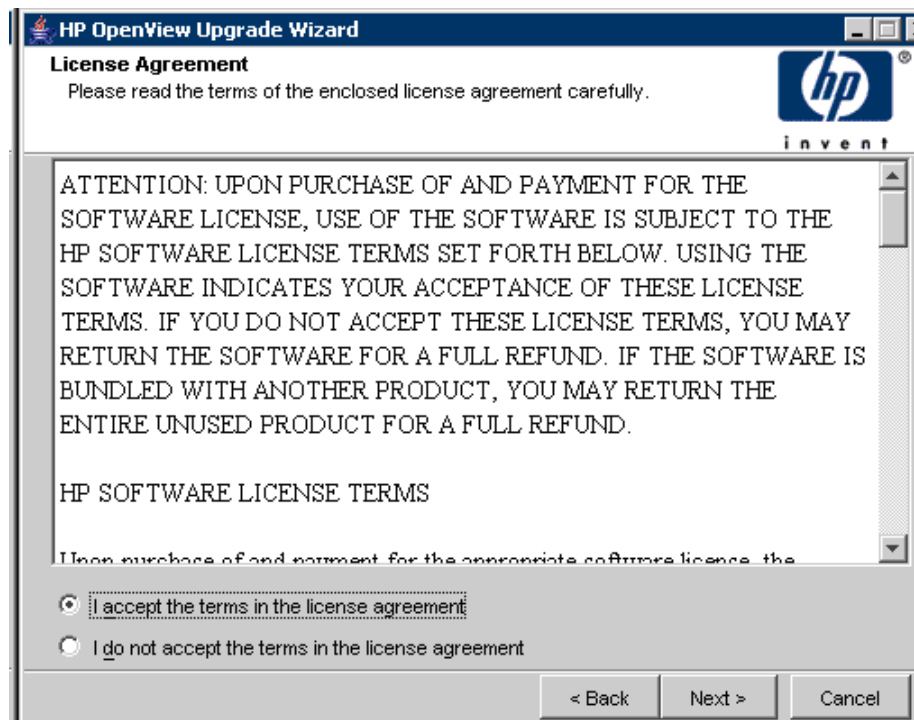
- 1 Run the Setup Utilities program from the product CD. The following screen appears:



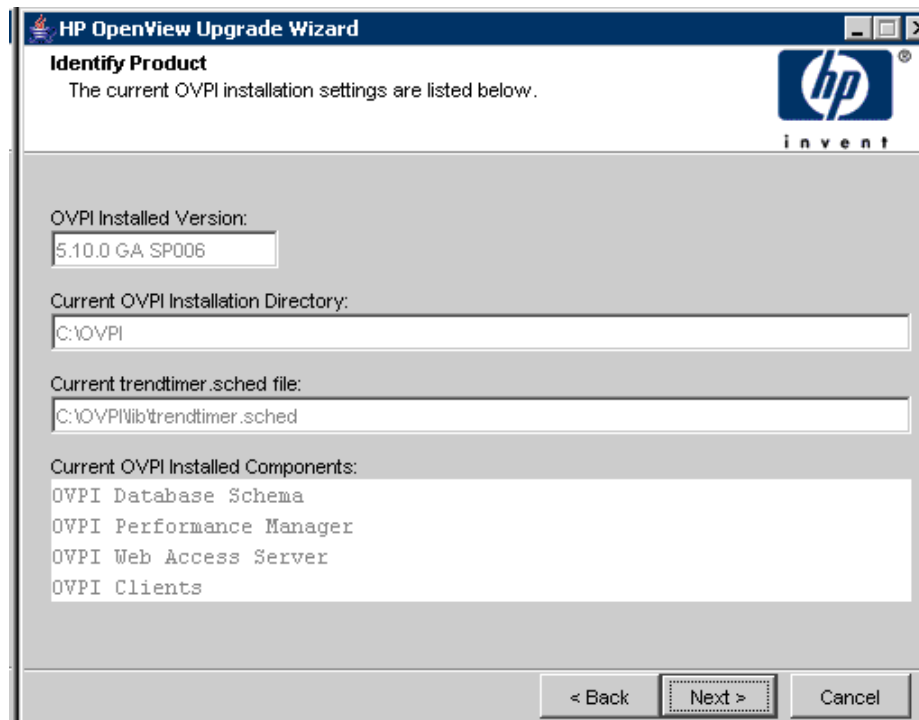
- 2 Select **Upgrade 5.2.0**. The installation wizard opens.



- 3 Click **Next**. The License Agreement window opens.

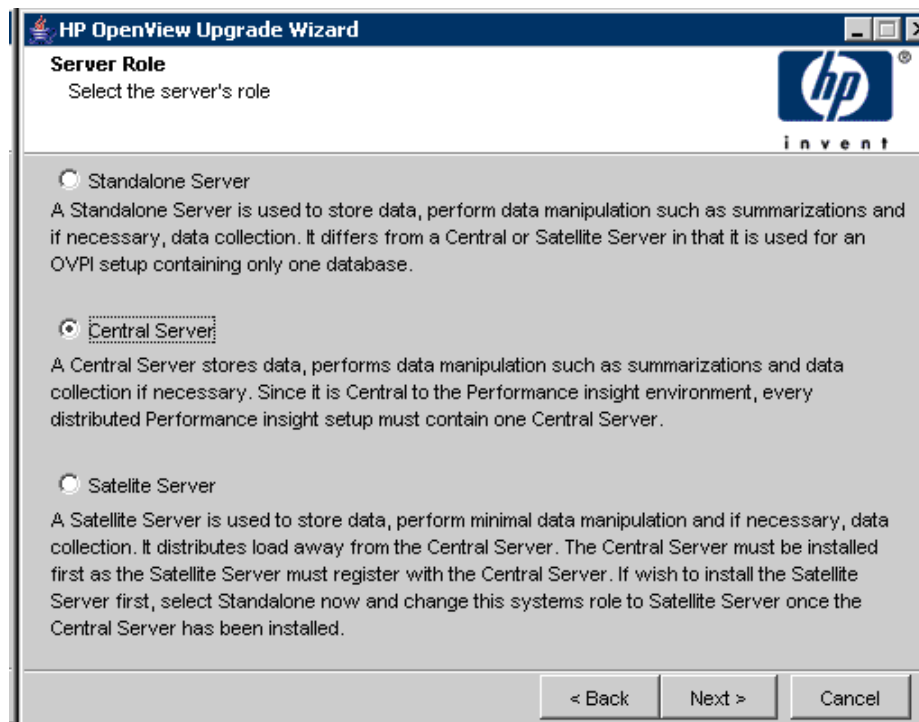


- 4 Accept the terms of the license agreement and click **Next**. The Identify Product window opens.



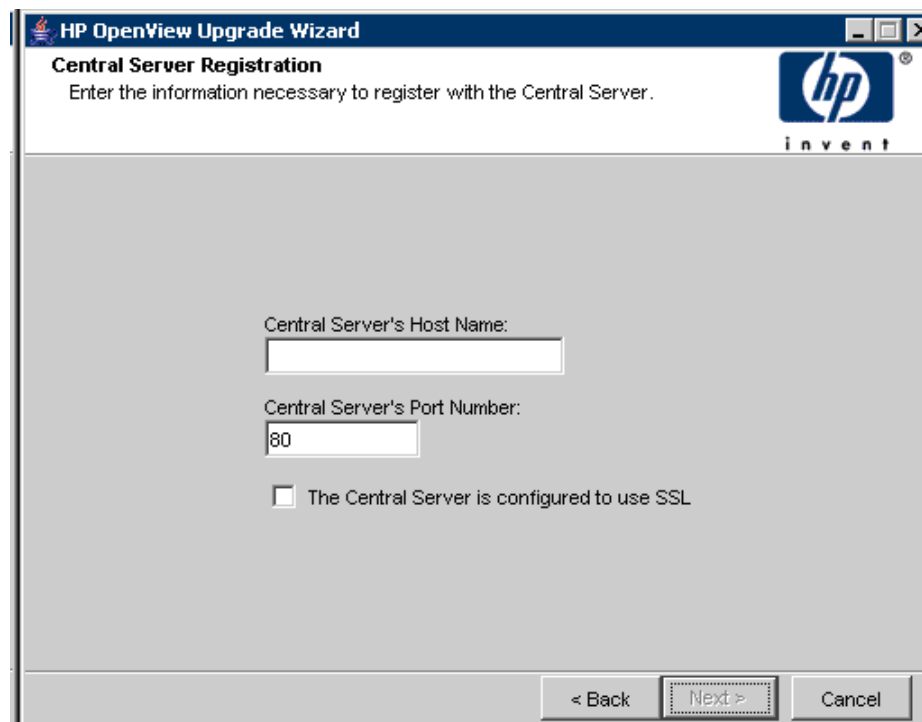
The Identify Product window displays information for the product currently installed, including the existing installed components. If you have OVPI version 5.1 SP 6 or above, you can upgrade to version 5.2.

- 5 Click **Next**. The Server Role window opens.



- 6 Select the environment on which you want to install OVPI.

If you select Satellite Server, the Central Server Registration window opens.



The image shows a screenshot of the 'HP OpenView Upgrade Wizard' window, specifically the 'Central Server Registration' step. The window has a blue title bar with the text 'HP OpenView Upgrade Wizard'. Below the title bar, the text 'Central Server Registration' is displayed, followed by the instruction 'Enter the information necessary to register with the Central Server.' The HP logo and the word 'invent' are visible in the top right corner. The main area of the window contains three input fields: 'Central Server's Host Name:' with an empty text box, 'Central Server's Port Number:' with a text box containing '80', and a checkbox labeled 'The Central Server is configured to use SSL' which is currently unchecked. At the bottom right, there are three buttons: '< Back', 'Next >' (which is highlighted with a dashed border), and 'Cancel'.

- 7 Enter the host name and port number. Check if SSL is enabled.

- 8 Click Next. The Oracle Reference Using OVPI Database User window opens.

HP OpenView Upgrade Wizard

Oracle Reference Using OVPI Database User

Please enter the following information to locate and connect to the Oracle database.

Server Settings

Oracle Instance ID (SID):
openview

Oracle Database Host:
pidw4.ind.hp.com

Oracle TCP/IP Port Number:
1521

User Settings

OVPI Database User:
dsi_dppe

Password:

Oracle Home Directory:
C:\Ora10g Browse

< Back Next > Cancel

Enter the Oracle Home Directory (Oracle must first be upgraded to version 10g).

- 9 Click Next. The Oracle Tablespace Creation window opens.

The screenshot shows the 'HP OpenView Upgrade Wizard' window with the title 'Oracle Tablespace Creation.' Below the title, it says 'Please enter the information necessary to create the new OVPI tablespaces.' The HP logo is in the top right corner. A text block explains: 'If you wish to customize each tablespace that will be created, select the Advanced button. Modifying the Database Size or Data File Folder fields on this page will override any Tablespace settings that have been entered via the Advanced button.' Below this is a section titled 'OVPI Tablespace Settings' containing a 'Total Size' field with '1024' and 'MB' units, and a 'Data File (.dbf) Folder:' field with 'C:\Ora10g\dfs' and a 'Browse' button. At the bottom right of the settings area is a 'Click for advanced settings. Advanced...' button. The bottom of the window has three buttons: '< Back', 'Next >' (which is highlighted with a dashed border), and 'Cancel'.

This window displays only when Oracle is installed on the local machine.

For a remote Oracle installation, you must create tablespaces for Archive and Event on the Remote Oracle database explicitly. The following is an example of how you would use SQL*Plus to create the `dpipe_archive_seg` tablespace:

```
CREATE TABLESPACE dpipe_archive_seg DATAFILE
'dpipe_archive_sef.dbf' SIZE 10M REUSE AUTOEXTEND ON NEXT
10M MAXSIZE UNLIMITED LOGGING ONLINE PERMANENT EXTENT
MANAGEMENT LOCAL AUTOALLOCATE SEGMENT SPACE MANAGEMENT
AUTO;
```

Repeat to create the remaining tablespaces:

- `dpipe_archive_ind_seg`
- `dpipe_event_seg`

— dpipe_event_ind_seg

- 10 Click **Next**. The Advanced Configuration window Event tab opens.

Advanced DWPI Configuration

Event | Archive

Enter the tablespace properties. If you wish to turn AUTOEXTEND off, enter a value of 0.

Primary

Tablespace Name:
dpipe_event_seg

AUTOEXTEND Size:
102 MB

Block Size:
8 KB

Data Files:

File Name	Size (MB)
C:\Ora10g\ldbs\dpipe_event_seg_001.dbf	205

Add Modify Remove

Index

Tablespace Name:
dpipe_event_ind_seg

AUTOEXTEND Size:
51 MB

Block Size:
8 KB

Data Files:

File Name	Size (MB)
C:\Ora10g\ldbs\dpipe_event_ind_seg_001.dbf	102

Add Modify Remove

OK Cancel Apply

Use this window to add or modify the data files associated with the Event tablespaces dpipe_event_seg and dpipe_event_ind_seg.

Click the Archive tab.

The image shows the 'Advanced OVPI Configuration' window with the 'Archive' tab selected. The window is divided into two main sections: 'Primary' and 'Index'. Each section contains settings for a tablespace and a list of data files.

Primary Tablespace: dpipes_archive_seg

- AUTOEXTEND Size:** 179 MB
- Block Size:** 8 KB

Data Files:

File Name	Size (MB)
C:\Ora10g\ldbs\dpipes_archive_seg_001.dbf	358

Index Tablespace: dpipes_archive_ind_seg

- AUTOEXTEND Size:** 179 MB
- Block Size:** 8 KB

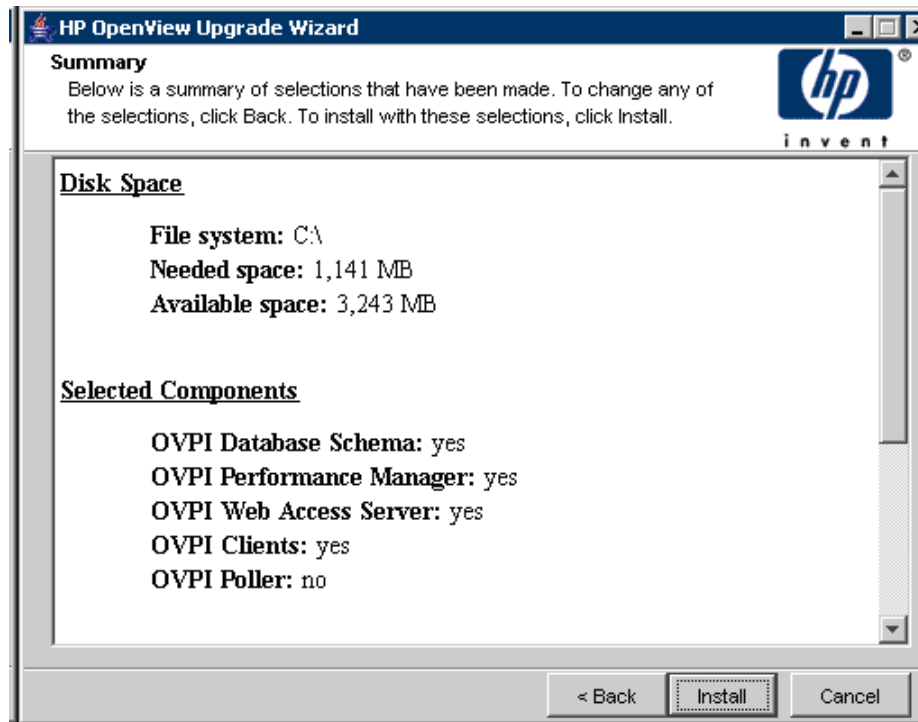
Data Files:

File Name	Size (MB)
C:\Ora10g\ldbs\dpipes_archive_ind_seg_001.dbf	358

At the bottom of each section are buttons for 'Add', 'Modify', and 'Remove'. At the bottom right of the window are 'OK', 'Cancel', and 'Apply' buttons.

Use this window to add or modify the data files associated with the Archive tablespaces dpipes_archive_seg and dpipes_archive_ind_seg.

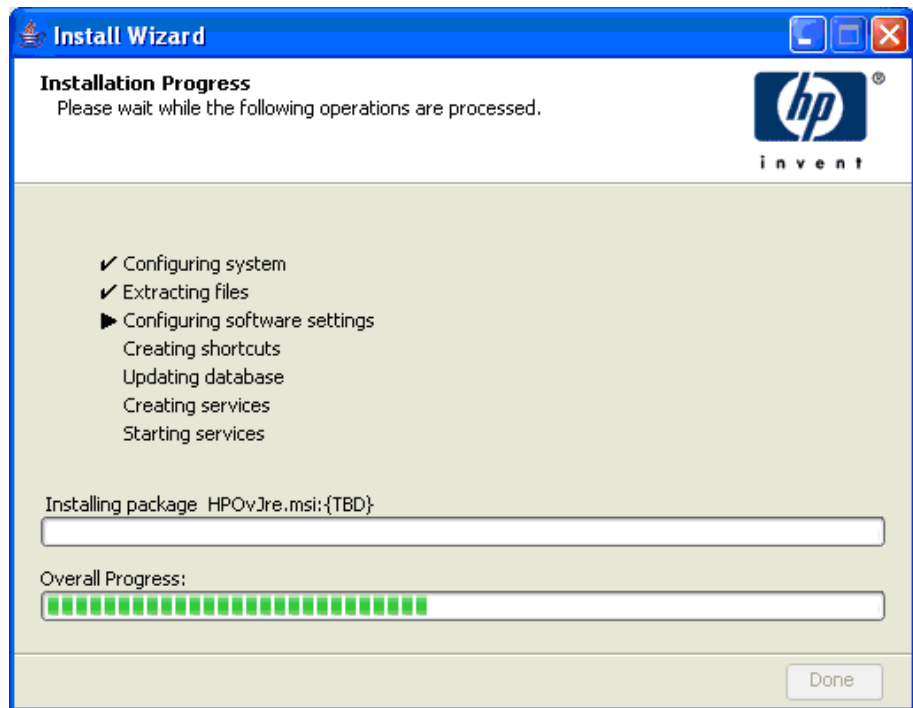
- 11 Click **OK**. The Summary window opens.



The Summary window displays information about the install that will be performed. You can make changes at this time by using the Back button.

You can choose to install only certain components of OVPI by making certain selections in the wizard. Your selections control the list of actions performed by the installer and the list of windows displayed by the wizard.

- 12 Click **Install**. The Installation Progress window opens.



The installation is complete.

Upgrading Report Packs

After you upgrade OVPI, you must upgrade the report packs to RNS 12.

Upgrading the Remote Poller

OVPI provides the ability to install or upgrade a remote poller separately from the OVPI installation.

The installation process for upgrading the remote poller is the same as the process for upgrading OVPI, except that the Database Role window does not appear.

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