HP OpenView Performance Insight

For the HP-UX Operating Systems

Software Version: 5.1.2

Installation and Upgrade Guide for Oracle Databases

hp invent

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Revision History

This manual's title page contains the following identifying information:

- Version number, which indicates the software version
- Print date, which changes each time the document is updated

To check for recent updates or to verify that you are using the most recent edition of a document, go to:

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You will also receive updated or new editions if you subscribe to the appropriate product support service. Contact your HP sales representative for details.

Contents

1 Planning Your OVPI Installation

The *Performance Insight Installation Guide* instructs you how to install OVPI in an operating environment that best serves your users.

This chapter describes:

- The overall installation process
- The software components that you will install
- The two types of operating environments that you can use
- The typical installation of components for each operating environment
- The types of configuration tasks that must be done after installation

OVPI Version 5.1.2 Information

OVPI version 5.1.2 supports only Itanium platform on HP-UX 11i v2 (B.11.23) systems and Oracle 9.2.0.6 (64 bit) database. OVPI 5.1.2 includes all fixes and enhancements through OVPI version 5.1 Service Pack 3.

Though this guide is released with OVPI 5.1.2, the installation instructions is applicable to OVPI 5.*x* versions too.

The Installation Process

Installing OVPI is a multi-stepped process. In order to use OVPI, you must install software for:

- Database management. This involves installing the relational database management system used to manage the OVPI performance data; creating the OVPI database instance — the actual repository for the data; and installing the OVPI Database Schema, the OVPI component that determines how the OVPI database instance will be structured.

- Data collection and processing. This involves installing OVPI Performance Manager, the OVPI component that provides tools for collecting, processing, and reporting on data.

- Web site hosting. This invloves installing OVPI Web Access Server, the OVPI component that supports web-based reporting and administration.

- System management. This involves installing the OVPI Clients, the OVPI component that supplies tools for user interaction with OVPI.

- Supplemental data collection, as necessary. This involves installing Remote Poller, the OVPI component that allows a remote polling system to collect performance data.

- Performance reporting. This involves installing Report Packs for specific types of reporting.

This guide shows you how to do the above installation tasks, with the exception of installing Report Packs. Because performance reporting varies by implementation, installing Report Packs is part of the post-installation configuration process that is covered in detail in the *Performance Insight Administration Guide*.

Components to Install

This section introduces each software component that you will install.

Database Management Software

The first step in installing OVPI is to create a *database server f*or your OVPI operating environment. You do this by installing database management software on your system and creating an OVPI database instance, and then installing the OVPI Database Schema on the system.

Relational Database Management System

OVPI uses a relational database management system (RDBMS). You must install an OVPI-supported RDBMS on your system, or upgrade an existing supported RDBMS to the version required by OVPI.

In addition to Oracle 9i Database Server Enterprise Edition release 9.2.0.6, OVPI also supports the Sybase relational database management system in version 5.1 and 5.1.1.

Installing the RDBMS creates an OVPI database instance — a named repository for the performance data that will be collected, processed, and reported on by OVPI. The database instance is assigned by default to the environment variable $ORACLE_SID. The database instance is initially empty.

OVPI Database Schema

Next you install the OVPI Database Schema. This OVPI component creates the actual tables that will hold the 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), adds device files, and tunes the OVPI database instance.

Together, the RDBMS and the OVPI database instance make up what is referred to as the OVPI database.

OVPI Performance Manager

Next you install OVPI Performance Manager.[1] This OVPI component provides tools for storing, processing, and reporting on the 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 (an OVPI Client component), giving OVPI users the tools for managing the OVPI environment. Also included is the Management Server which is a web application that provides web services for the OVPI Clients.

1.Not to be confused with OpenView Performance Manager, a separate HP product.

Usually, you install OVPI Performance Manager on the database server. 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.

However, you might decide to install OVPI Performance Manager on a system that will access a database server remotely. This is beneficial for installations that want to maintain central administrative control over their databases and are using database farms, for example, or for installations where database licensing is an issue (that is, you may already have purchased the RDBMS and do not need to purchase it again). You configure a remote database to support OVPI before installing OVPI.

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

OVPI Web Access Server

Installing 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, which are also installed with OVPI Web Access Server, as is the Management Server.

The OVPI Web Access Server requires significant memory and CPU resources and is usually not installed on a database server, 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 OVPIO Clients are available through the OVPI graphical user interfaces; most are also available as command line utilities.

You install the OVPI Clients as a group, with or without other OVPI components, on any networked system that can connect to the OVPI Web Access Server.

The OVPI Clients are:

- *Report Builder*: used to build and customize performance reports with multiple tables and graphs based on data from the OVPI Database

- *Report Viewer*: used to interactively view, modify, save, and print performance reports

- *Management Console*: used to perform administrative tasks by means of the following components:

  — Catalog Manager: used to manage the OVPI Report and Link catalogs, based on data from the OVPI database

  — MIB Browser: used to analyze, query, and troubleshoot SMI-compliant SNMP MIBs

  — SNMP Discovery: used to locate the nodes in your network and determine whether or not a node is SNMP-manageable

  — Type Discovery: used to determine the device type of a discovered node (for example, router, hub, switch)

  — Package Manager: used to install and uninstall packages and to deploy and undeploy them from the Web Access Server

  — Object Manager: used to view and change the managed objects on your system

  — System Manager: used to add, modify, and delete references to OVPI installations on other systems

  — Group Manager: used to create and manage polling groups

  — Polling Policy Manager: used to manage polling policies, import and manage nodes, and manage polling groups

  — Table Manager: used to monitor the database, view data and property tables, and set defaults for individual and global tables

Clients-Only

You may decide to install only the OVPI Clients on a system — independent of any other OVPI components. This is termed a "client-only" install and is done to provide certain reporting and administrative capabilities to users who are working from their local workstations and remotely accessing the OVPI Web Access Server.

It is important to note that full Management Console functionality is not available in a client-only installation. Specifically, the following components are *not* available from the Management Console "Tools" menu:

- Catalog Manager
- MIB Browser

- SNMP Discovery
- Type Discovery
- Package Manager

In addition, in a client-only install, users cannot register a new data table or property table, or automatically add a collection to the database. To have full Management Console functionality, OVPI Performance Manager must also be installed.

Remote Poller(s)

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 OVPI Performance Manager, giving installations the ability to poll nodes directly from a database server.

For polling situations that exceed about 20,000 managed objects, or sometimes for geographical reasons, you might decide to locate separate remote polling systems near target polled devices — for a particular building or for a defined group of users, for example.

In this case, 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 OVPI database and it does not perform any processing; it collects and uploads performance data to a database server.

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

Operating Environments

OVPI uses a modular client-server architecture that allows you to start with a single standalone system and add to it as needed. That is, 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 approximatelty 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, simply because there are fewer components to implement, coordinate, and maintain.

Figure 1 shows a standalone OVPI environment.

Figure 1   Standalone OVPI Environment
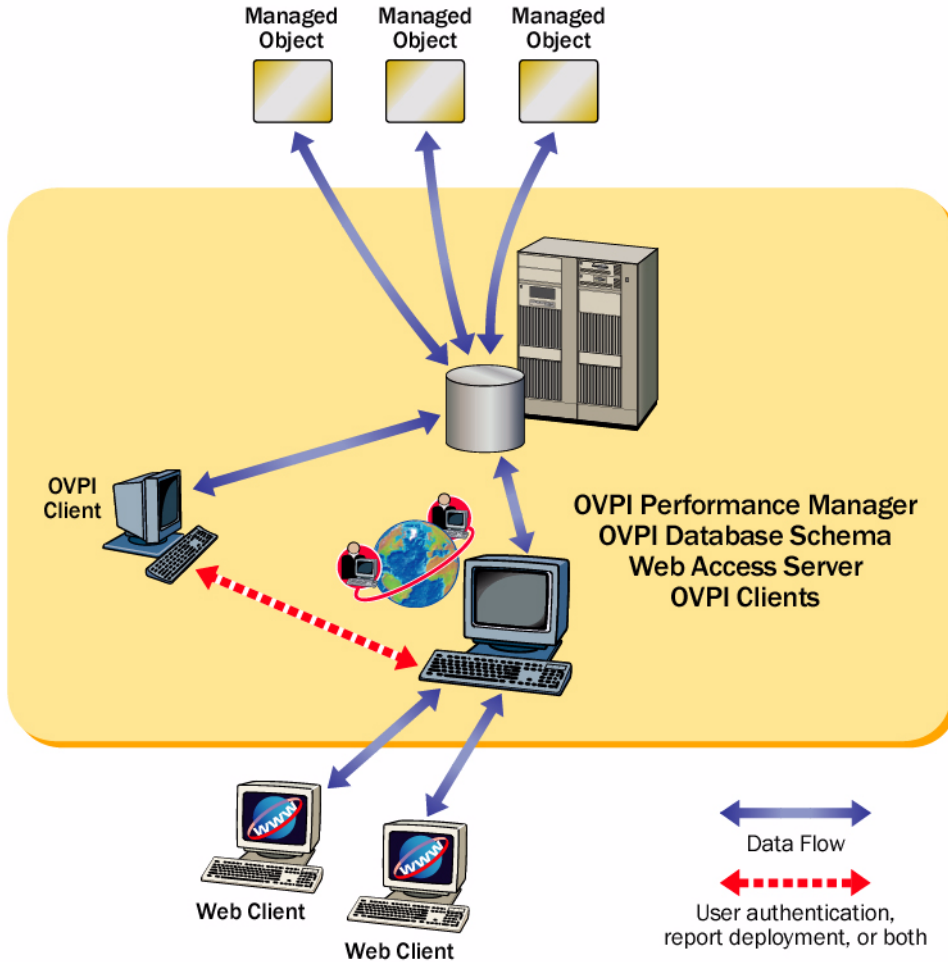
Distributed OVPI Environment

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

When OVPI components are installed across systems to create a network-wide configuration, it is termed a distributed OVPI environment. Although the OVPI components are installed on physically-separate 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 Functionalilty

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 this cooperation.

Moreover, you can use different platforms to run the different functions, for the most cost-effective use of resources. For example, you could 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.

Figure 2 shows an example of a simple distributed OVPI environment, where the central database server is performing all functions except web hosting and remote polling.

Figure 2   Simple Distributed OVPI Environment
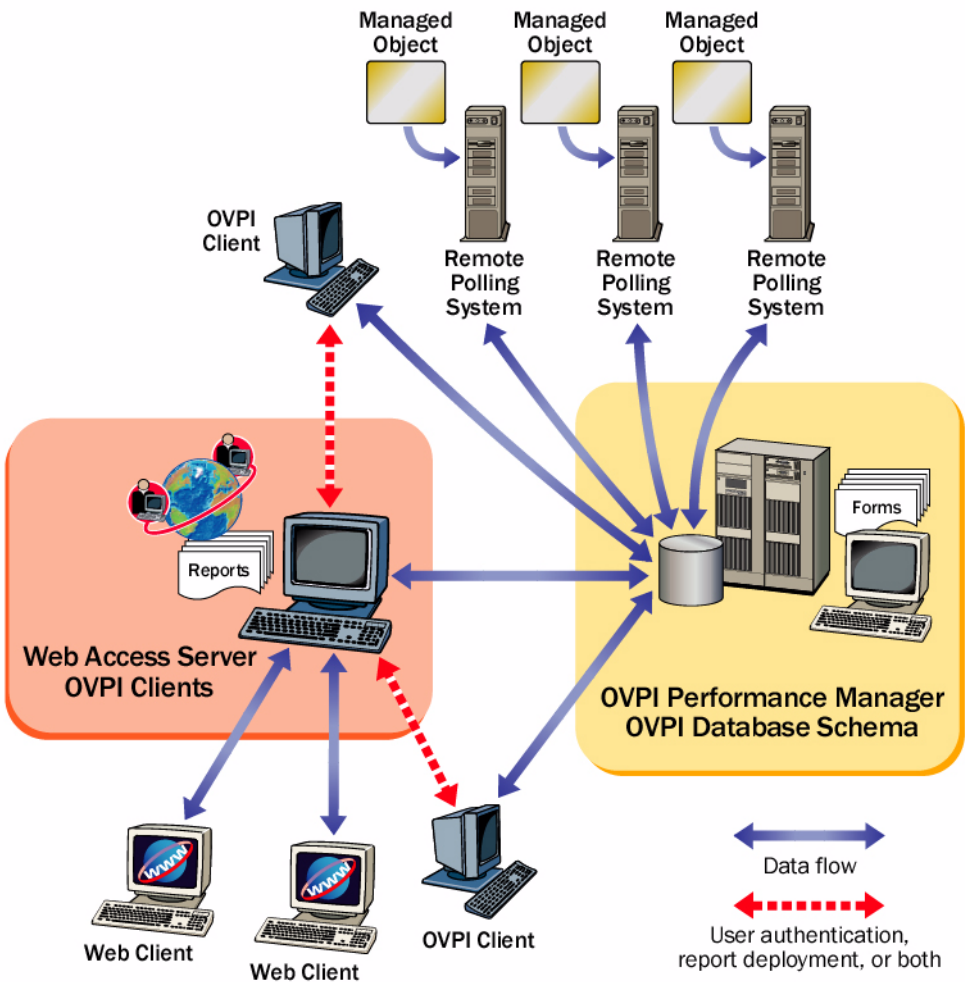
Figure 3 shows a more complex distributed OVPI environment that improves performance in a large, geographically-dispersed network. In this example, multiple satellite database servers serve individual regions. Collected performance data is compiled locally and uploaded to the central database server.

Both satellites are running as complete standalone systems performing full data aggregation and reporting, while copying some of their 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.

The figure also shows a remote database server, which takes advantage of an existing Oracle RDBMS.

Figure 3   Complex Distributed OVPI Environment
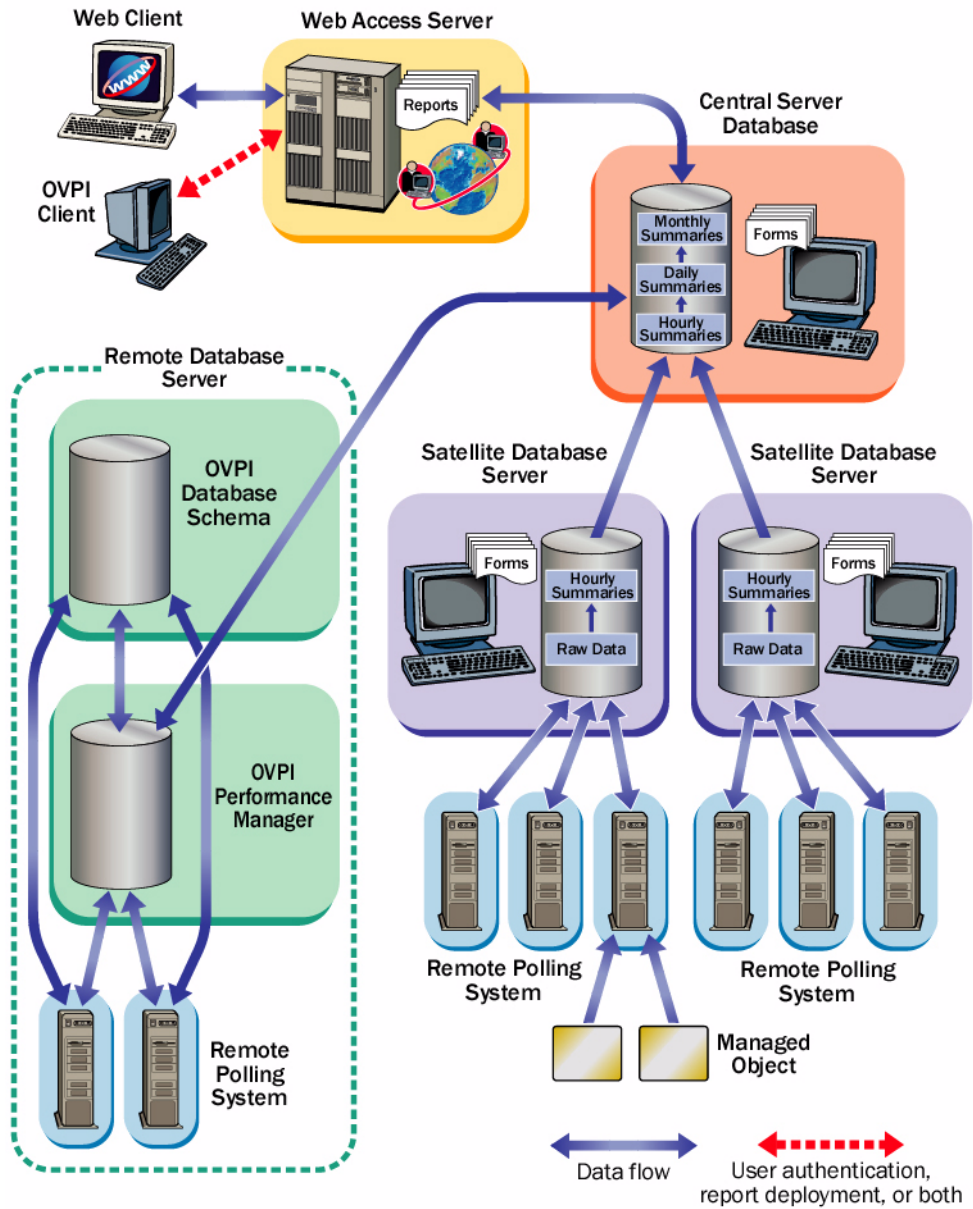
Questions to Help You Decide

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 forth.

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 their display; if the data is not present on the central database server, it may be necessary to remove those reports.

Typical Installation by System Role

Once you have determined the appropriate network environment (standalone or distributed), you can install OVPI components accordingly.

The role a particular system serves in the environment — satallite 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.

OVPI processing comprises these discrete tasks:

- Data collection
- Data management
    - raw data to rate data processing
    - rate data to hourly data summarization
    - hourly data to daily, monthly, forecasting summarization (or all)

- Data reporting

  — request servicing

  — report viewing and building

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

In a distributed environment, systems take on specialized roles. A remote polling system performs data collection. A satellite database server performs raw data to rate data processing and rate data to hourly data summarization (it usually does not run processing routines on collected data above the hourly level, but copies partially aggregated data to the central database server where aggregation is completed). The central database server receives partially processed data from one or more satellites and processes data from the hourly level to completion; it performs the daily, monthly, and forecasting summarization task. A remote database server may be incorporated into the environment. A Web Access Server hosts the OVPI web site and handles reports requests and report viewing and building tasks from OVPI Clients.

OVPI Clients perform local reporting and administration through the Web Access Server in either environment.

Table 1 shows which OVPI components you would typically install for the type of environment and role.

Table 1   Typical Installation of OVPI Components

System Role	RDBMS	OVPI Database Schema	OVPI Perform. 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	

Post-Installation Tasks

Once installation is complete, you next configure your OVPI implementation so that it runs efficiently and provides the performance reporting users require.

This section is an overview of the general types of post-installation tasks you should do. More specific post-installation tasks are provided at the end of each installation chapter.

Check for Software Patches

Be sure to check for, download, and apply any available post-release software patches or updates for your RDBMS and for OVPI.

Discover Your Network

Discover your network to identify all the 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.

Install Report Packs and Datapipes

You must install report packs and datapipes in order for OVPI to collect data.

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, you use 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, you first should read the user guide for the report pack.

Other Configuration Tasks

Other types of configuration tasks involve scheduling and generating reports, configuring trendtimer (a utility that schedules 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, and others.

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

Performing Upgrades

The OVPI product is continually being improved and updated. Whenever a new release is available, existing OVPI installations may want to upgrade their system from a previous release. This guide provides instructions for upgrading the OVPI components, as well as for upgrading the RDBMS.

2 Installation Prerequisites

This chapter provides — for new OVPI installations — requirements and tasks that are essential before installing the RDBMS and OVPI. It covers the following:

- Installation media for supported software
- Supported system configurations
- Pre-installation tasks

A summary checklist is provided at the end of the chapter.

> ➤ HP strongly recommends that you read the *Performance Insight Release Notes* that came with your kit before you install. Release notes provide an overview of new features, bug fixes, and last-minute changes made to OVPI for the release.

Installation Media

In order to install OVPI, you must have the following:

- Installation CD-ROM for Oracle 9i Database Release 9.2.0.6. (OVPI supports Oracle Enterprise Edition 9.2.0.6 with Partitioning. Partitioning, as of this writing, is a separately purchased option from Oracle which is required to run OVPI.)
- OVPI 5.1.2 Installation CD for your operating system
- OVPI 5.1.2 Documentation Installation CD
- The latest release of the report packs CD

Supported OVPI Configurations

Table 2 lists the supported OVPI configurations of operating systems, RDBMSs, and OVPI components.

Table 2   Supported OVPI Configurations

Operating System	RDBMS	OVPI Component
HP-UX 11i V2 (B.11.23) (Itanium)	Oracle 9.2.0.6	All

Pre-Installation Tasks

This section describes tasks that you must do before you can install the RDBMS or OVPI components.

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.

Patches for Release Levels

Make sure that your operating system is at the correct release level. Then use the following commands to determine which patches have been installed.

- 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*)

- HP-UX Systems

Type the following command:

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

- Solaris Systems

  Type the following command:

  `showrev -p`

- 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.

HP-UX-Specific Patches

The minimum patch bundle level required for OVPI 5.1.2 release is the 11.23 patch bundle for Itanuim (IA), BUNDLE11i B.11.23.0409.3. This was released in September 2004. A later version of the patch bundle can also be used.

If you plan to install the OVPI Web Access Server on an HP-UX 11.23 system, you must install the HP-UX patch listed below. You can download the patch from:

http://www1.itrc.hp.com/

Patch Number	Description
PHSS_34201	s700_800 11.23 Aries cumulative patch. This patch provides defect fixes and performance updates for OVPI Web Access Server.

Patches for Running Java

OVPI includes Java 1.4.2_02; Java will automatically load onto your system during OVPI installation. However, Java may not run properly unless you have applied the patches required for your operating system.

Locate the latest operating system patches required for Java by going to the following Web site addresses:

- Windows Systems

  http://windowsupdate.microsoft.com
- HP-UX Systems

  http://www.hp.com/products1/unix/java/patches/index.html
- Solaris Systems

  http://java.sun.com/j2se/1.4/download.html

  Find the Solaris OS Patches section.

URLs are subject to change without notice.

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 5.1.2 release is not localized. If you require internationalization and localized languages, use OVPI 5.1.1. Note that OVPI 5.1.1 is not supported on Itanium platform.

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 and UNIX Systems)
Web Access Server[a]	80 (SSL not enabled) 443 (SSL enabled)
Management Console	80

a. The Web Access Server 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, i.e. port 8080.

➤ If you are using firewall software, you must open the OVPI ports in the firewall. Refer to your firewall documentation for instructions.

The following example shows an OVPI configuration using the default port numbers.
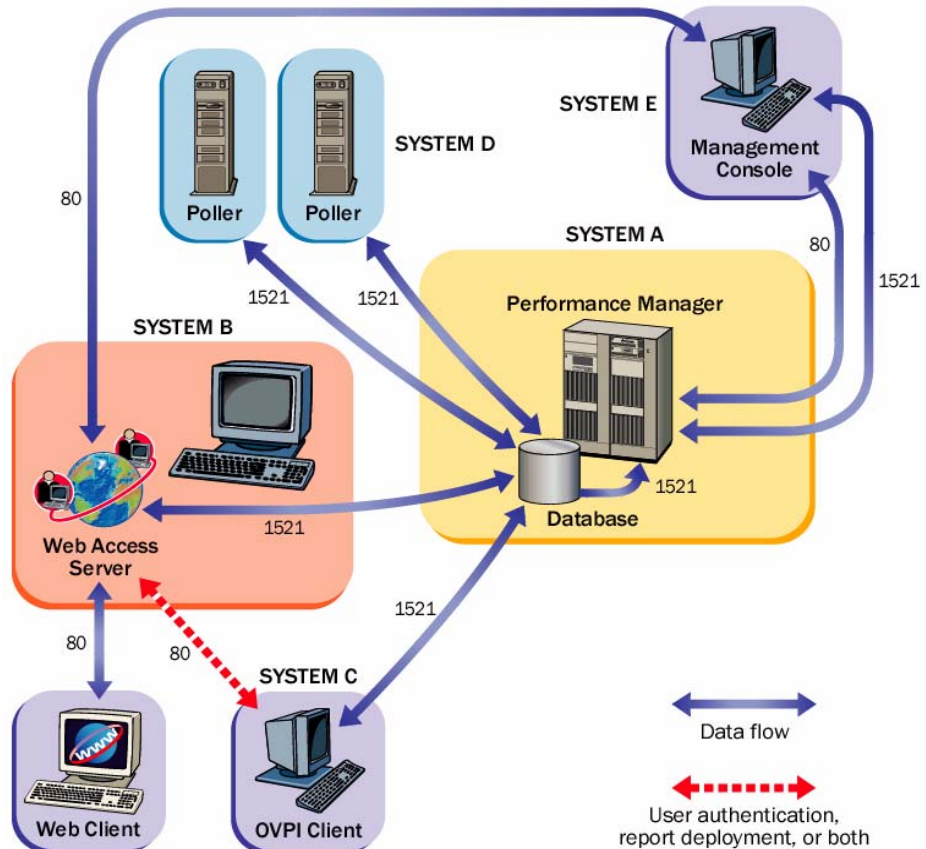
Polling and SNMP Connectivity

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 be outside the firewall along with the polled devices, and that the remote poller connect 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, refer to the *Performance Insight Administration Guide*.

Reporting Client Connectivity

If users will be viewing reports using a Web browser, they must have HTTP connectivity between their systems and the Web Access Server.

If users will use the Report Viewer or Report Builder applications, there must be 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.

Plan for Web Access

Web users must have one of the following Web browsers:

- Microsoft Internet Explorer 5.5 or later
- Netscape Navigator 6.0 or later

Your Web browser must have Java scripting enabled; otherwise, you will not be able to see 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.

- Netscape Navigator

  a From the browser's Edit menu, select **Preferences**.
  The Preferences dialog box opens.

  b Scroll to Advanced, and then click **Scripts & Plugins**.

  c Select **Navigator** in the Enable JavaScript for box.

  d Click **OK** in the Preferences dialog box.

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. See the *Performance Insight Administration Guide* for configuring details.

Integrate with Network Node Manager

If your system is already running Network Node Manager (NNM) version 7.5, you can install OVPI on the system and 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 (at minimum) before installing OVPI.

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

Stop NNM processes before installing OVPI; otherwise, errors may occur during the installation.

To stop NNM processes, do one of the following:

- Windows Systems

  a   From the **Start** button on the Windows task bar, point to **Programs**, point to **HP OpenView**, point to **Network Node Manager Admin**, and select **NNM Services - Stop**.

  b   Verify that the NNM processes have stopped. From the **Start** button on the Windows task bar, point to **Programs**, point to **HP OpenView**, point to **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

Red Hat Linux Systems Only

Install with db3 Module

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.

HP Compaq Users Only

Stop Compaq Insight Manger Services

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

Windows Systems Only

Disable HP-Proprietary Memory Management Services

Windows systems running HP-proprietary memory management services must disable those services by using Services Manager to set them to "disabled". The services are:

- HpComponent
- HPEventLog
- HPFpcSvc
- HpLerSvc
- HPSdnSvc

UNIX Systems Only

Use Supported Desktops

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

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.

Operating Environments on page 17

□ You have all required installation CDs.

Installation Media on page 31

□ You are using a supported system configuration (operating system and RDBMS).

Supported OVPI Configurations on page 32

□ You have identified which OVPI components to install on each system

Typical Installation by System Role on page 26

Supported OVPI Configurations on page 32

□ You have installed the required patches for your operating system.

Update Your Operating System Software on page 32

□ You have identified port numbers for network and client connectivity.

Identify Ports for Network Connectivity on page 34

□ You have confirmed that your web clients are using a supported browser, and you have enabled Java scripting for the browser.

Plan for Web Access on page 36

□ If required, you have installed the SNMP Security Pack.

Install the SNMP Security Pack for SNMPv3 Nodes on page 37

□ 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.

Integrate with Network Node Manager on page 37

□ If you are installing on a Red Hat Linux system, you have installed with the db3 module.

Red Hat Linux Systems Only on page 38

□ If you are installing on a Compaq system, you have stopped any Compaq Insight Manager services.

HP Compaq Users Only on page 39

□ If you are running Windows with HP proprietary memory management services, you have disabled those services.

Windows Systems Only on page 39

□ If you are a UNIX user, you are using a supported desktop.

UNIX Systems Only on page 39

3 Installing an Oracle RDBMS

This chapter contains instructions for installing the Oracle relational database management system for use with OVPI. The Oracle RDBMS software is *not* provided as part of the OVPI media kit. You must purchase and install Oracle separately.

This chapter covers:

- Prerequisite tasks to do before installing Oracle

- How to troubleshoot Oracle installation problems

- The procedure for installing Oracle on Windows and UNIX systems

- The procedure for configuring a remote Oracle database for use in an OVPI installation

- Post-installation tasks

- How to start and stop Oracle

▶ The Oracle RDBMS must be installed and running before you can install OVPI.

Oracle Installation Prerequisite Tasks

Perform the following tasks before installing Oracle.

Review the Oracle Documentation

Before installing Oracle, you should read any Oracle documentation of interest, and consider printing out the *Oracle 9i Installation Guide* for easy reference during the installation. Oracle documentation is on the Oracle Install CD: click Browse Documentation and review the Release Notes,

Readmes, and Product Documentation as necessary. Oracle documents are also available online at http://docs.oracle.com and http://oracle.com/technology/documentation/oracle9i.html

URLs are subject to change without notice.

Consult with a Database Administrator

If you have an Oracle Database Administrator (DBA), consult with them before installing Oracle. A database administrator can help you design and set up the Oracle RDBMS, including the creation of the tablespaces, for optimal use by OVPI. If you do not have an Oracle DBA, the instructions in this guide will provide the information needed to get Oracle installed and a functional Oracle database in place for OVPI.

General Performance Recommendations

Whenever possible given the restrictions that apply to your situation, adhere to the following guideline when installing Oracle for use with OVPI. 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.

- 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.

Install Recommended Operating System Patches

Install all of the recommended operating system patches that pertain to Oracle. You can find this information in the Oracle Release Notes and other operating system-specific documentation. You must install operating system patches *before* installing the Oracle RDBMS.

To determine which patches have already been installed on your system, use one of the following commands:

- HP-UX Systems

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

- Solaris Systems

    showrev -p

- Windows Systems

    Do the following:

    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*)

Review Hardware Sizing Requirements

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 toal 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. Use this spreadsheet by entering values for each report pack you will install, and the number of objects (devices, interfaces, VPNs, and so forth) that will be managed to determine the overall database size required.

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

Memory and Storage for OVPI Database

This section provides the default memory and storage requirements for installing an OVPI database and OVPI.

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.

▶ See the *Performance Insight Administration Guide* for instructions to increase the size of the OVPI database after OVPI is installed.

Minimum OVPI Database Storage

See the Oracle installation guide for the minimum storage requirements for the database server. After initial installation is complete, you can access Oracle's Enterprise Management console and use its suggestions for setting up those memory regions for which columns provide recommendations (Cache, PGA, and so forth).

The OVPI database size is determined by many factors. If you used the spreadsheet 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.

Set the COMPATIBLE Parameter

Be sure the COMPATIBLE parameter is set to 9.2.0. For information about setting this parameter, see the Oracle documentation.

Troubleshooting an Oracle Installation Problem

The error log file in the Oracle installation directory (for UNIX systems, it's located in $ORACLE_BASE/oraInventory/logs) can help you determine the cause of an installation failure. Orace writes messages to the log file each time the system is booted and each time an Oracle error occurs.

See the *Oracle 9i 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.

Oracle Installation Procedure

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

This section does not provide step-by-step instructions for installing Oracle. For that information, refer to the *Oracle 9i Installation Guide* and follow the procedures for your operating system.

The general order of steps to install and configure Oracle are as follows:

1   Install the Oracle Database Server.

2   Create an Oracle database for use with OVPI.

3   Configure the Oracle database for OVPI.

4   Install the patch for Oracle 9.2.0.6

5   Create Oracle tablespaces. 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.

6   Install OVPI.

Install the Oracle Database Server.

Follow the instructions for installing Oracle on your operating system in the *Oracle 9i Installation Guide*. During the installation process, you will be required to decide what to install and what settings to specify. Use the following items for guidance during the installation. Read through the list to familiarize yourself with its contents before starting the Oracle installation process.

- Install Oracle 9.2.0.1.0; you will apply an upgrade patch later in the process.

- Choose Custom installation instead of installing the Enterprise Edition. This results in fewer components being installed, but reduces the overhead and time to edit components.

- When installing Oracle 9i, the following are the **minimum components** necessary for OVPI, shown as grouped during the installation. Additional components may 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.

  — Oracle 9i 9.2.0.1.0

  — Enterprise Edition Options 9.2.0.1.0

    – Oracle Partitioning 9.2.0.1.0

    – Oracle OLAP 9.2.0.1.0

  — Oracle Net Services 9.2.0.1.0

    – Oracle Net Listener 9.2.0.1.0

  — Oracle Enterprise Manager Products 9.2.0.1.0

    – Oracle Management Server 9.2.0.1.0 (optional)

    – Oracle Intelligent Agent 9.2.0.1.0

    – Enterprise Manager Client 9.2.0.1.0

    – Oracle Change Management Pack 9.2.0.1.0 (optional)

    – Oracle Diagnostics Pack 9.2.0.1.0 (optional)

    – Oracle Tuning Pack 9.2.0.1.0 (optional)

— DESELECT Oracle HTTP Server 9.2.0.1.0 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.

Once you have selected/deselected the appropriate components, proceed with the installation.

Create the Oracle Database

When the Create Database window opens:

• Click **Yes**.

You must create a database before you can install OVPI.

Configure 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 forthe OVPI database. If your sitedoes not permit you to do this, see Edit the tnsnames.ora File on page 61 for additional instructions.

When the Database Configuration Assistant Welcome window opens:

1   Step 1 of 7: Operations: Click to check **Create a database**, and click **Next**.

2   Step 2 of 7 : Database Templates: Click to check **General Purpose** and click **Next**.

3   Step 3 of 7 : Database Identification: Type the Global Database Name and SID and click **Next**.

   If the Global Database Name differs from the SID, you will need to modify the resulting tnsnames.ora file later for OVPI. OVPI will install successfully, but report packs will not.

4   Step 4 of 7 : Database Connection Options: Select **Dedicated Server Mode** and click **Next**.

5   Step 5 of 7 : 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   Step 6 of 7 : Database Storage: Click **Next**. This allows you to distribute the physical files that make up the OVPI database across filesystems. Refer to the Oracle documentation for recommendations.

7   Step 7 of 7: Creation Options: Click to check **Create Database**, and click **Finish**.

Review the database summary and finish installation.

1   The Summary window opens, showing a summary of the database to be created. Click **OK**.

2   The Database Configuration Assistant window opens when database creation is complete. Type the SYS and SYSTEM account passwords, and click **Exit**.

3   The End of Installation window opens. Click **Exit**.

Apply the Oracle 9.2.0.6 Patch Set

You must upgrade the installed Oracle version to 9.2.0.6 before you can install or run OVPI. When you download the patch, open the README file and follow its directions for your operating system.

To apply the Oracle patch set, perform the following tasks:

Task 1:   Download the patch set.

1   Go to the Oracle web site (**www.oracle.com),** click the **MetaLink** icon, and log on. You must have a current product support contract to access this website.

2   Download the 9.2.0.6 patch set.

3   Read and study the README.html file included in the zip file containing the patch set.

Task 2:   Stop all processes.

Stop all Oracle related processes, including:

- The database (use the SQLplus "shutdown immediate" command)
- The listener
- Oracle's Apache server
- Oracle's database agent

Task 3:   Install the patch set.

Set the SHARED_POOL_SIZE and JAVA_POOL_SIZE Initialization Parameters as descibed in the patch release notes. Not setting these values high enough can result in the patch installation failing.

1   Start the Oracle Universal Installer.

> Windows Systems only: Use the setup.exe file found in the install directory (not in the 9.2.0.6 directory).

2   The Specify File Locations window opens. Verify the name and click **Next**.

Be sure that the Destination File Name matches that used during the Oracle database installation.

3   The Select a Product to Install window opens. Click **Oracle 9iR2 Patch Set**, and click **Next**.

4   The End of Installation window opens.

5   If they are not already running, start the listener and database as appropriate for your operating system.

6   Log on as sysdba using SQL*PLUS by typing:

>**sqlplus/nolog**

SQL>**connect sys/<*password*> as sysdba**

7   Start the database by typing:

SQL>**startup migrate**

8   Type the following to run the catpatch script:

```
SQL>@?/rdbms/admin/catpatch.sql
```

▶ This script may require up to an hour to run.

9　Shutdown and then start the database by typing:

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

10　Type the following to login again and run the utlrp script:

```
>sqlplus/nolog
SQL>connect sys/<password> as sysdba
SQL>@?/rdbms/admin/utlrp.sql
```

11　Exit SQL*Plus by typing:

```
SQL>exit
```

12　Before you install OVPI, make sure that the listener for the OVPI database is running.

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 of Oracle's 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 adminstrator.

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 section describes the guidelines for creating tablespace relative to the amount of disk space you want for the OVPI database. These guidelines 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 Changing Specific Oracle Configuration Parameters (Parameters Tab) on page 99 for details..

Table 3 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.

Table 3   Relative Sizing of Oracle Tablespaces for OVPI

Tablespace	Percent of Total Database
dpipe_default_seg	5%
dpipe_property_ind_seg	2%
dpipe_property_seg	2%
dpipe_upload_ind_seg	6%
dpipe_upload_seg	7%
dpipe_rate_ind_seg	12%
dpipe_rate_seg	12%
dpipe_summary_ind_seg	12%
dpipe_summary_seg	12%
dpipe_overflow_seg	30%
Total Size of the Database	**100%**

Table 4 is an example that shows how you would set up a 10GB database using the ratios listed in Table 3 and the extent size rule.

Table 4   Tablespace Size for a 10 GB Database

Tablespace	Initial Tablespace Size	Extent[a]
dpipe_default_seg	500 MB	250 MB
dpipe_property_ind_seg	200 MB	100 MB
dpipe_property_seg	200 MB	100 MB
dpipe_upload_ind_seg	600 MB	300 MB
dpipe_upload_seg	700 MB	350 MB
dpipe_rate_ind_seg	1200 MB	600 MB
dpipe_rate_seg	1200 MB	600 MB
dpipe_summary_ind_seg	1200 MB	600 MB
dpipe_summary_seg	1200 MB	600 MB
dpipe_overflow_seg	3 GB	1 GB
Total Database	10 GB	Default
temp	40 GB	Default
undo	10 GB	Default

a. The extent size rule is the lesser of 50% of the initial tablespace size and 1GB. 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%).

Creating the Tablespaces

To create tablespaces, do the following (you can also use Oracle Enterprise Manager to perform any of the steps in this procedure):

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
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;
```

Note that 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 provileges 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

Grant <privilege>	To <name>
select any table	dsi_dpipe
select any dictionary	dsi_dpipe
execute ON sys.dbms_lock	dsi_dpipe

In addition, 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

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
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 55.

Table 5 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.

Table 5   Recommended Values for Oracle Configuration Parameters

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]

Table 5 Recommended Values for Oracle Configuration Parameters (cont'd)

Parameter and Description	Recommended Value
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]
PARALLEL_AUTOMATIC_TUNING If TRUE, Oracle determines the default values for parameters that control parallel execution.	TRUE

a. See Determine Stripe Size on page 60

b. See Determining the Database Block Size on page 60.

c. See Determining Cache Size on page 61.

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.

Determining 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';
```

Determining 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_COMPO NENTS dc
WHERE   dc.COMPONENT = 'buffer cache';
```

Completing the Oracle Database Server Installation

Once you have completed installing and configuring the Oracle RDBMS using the parameters listed above, you can proceed to install OVPI. Additional information in this chapter describes how to edit the tnsnames.ora file if the SID name and OVPI database name do not match, how to configure a remote Oracle database, and some post-installation tasks.

Edit 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. To edit the tnsnames.ora file, do the following:

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. (Alternatively, you can 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 for any reason 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 db1.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)
    )
  )
```

Save the tnsnames.ora file.

Using a Remote Oracle Database

Often the OVPI Database and OVPI Performance Manager are 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 be using Oracle 9.2.0.6. Earlier levels of the Oracle database (9.2.0.1 through 9.2.0.5) must be upgraded to the 9.2.0.6 level for use with OVPI 5.1.2. Do this by installing the 9.2.0.6 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 Client.

On the system where OVPI will be installed:

1   Start the Oracle Universal Installer and click **Install/Deinstall Products**.

2   The Welcome window opens. Click **Next**.

3   The File Locations window opens. Type the requested source and destination information, and click **Next**.

4   The Available Products window opens. Click **Oracle9i Client 9.2.0.1.0,** and click **Next**.

5   The Installation Types window opens. Click **Runtime,** and click **Next**.

6   The Summary window opens. Click **Install**.

    When prompted during the installation, remove the Oracle9i disk 1 and insert the Oracle9i disk 2.

7   The Configuration Tools window opens and reports that it has started the Oracle Net Configuration Assistant.

Task 2:   Configure Oracle Client to point to the remote Oracle database.

1   The Net Configuration Assistant Welcome window opens. Select **No** and click **Next**.

2   The Net Service Name Configuration, Database Version window opens. Click **Oracle8i or later database or service** (the default), and click **Next**.

3   The Net Service Name Configuration, Service Name window opens. Type the database's service name in the Service Name field, and click **Next**.

   If the Net Service name does not match the SID name, follow the procedures described in Edit the tnsnames.ora File on page 61.

4   The Net Service Name Configuration, Select Protocols window opens. Click **TCP** (the default) and click **Next**.

5   The Net Service Name Configuration, TCP/IP Protocol window opens. 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**.

Task 3:   Test the connection to the Oracle database.

1   The Net Service Name Configuration, Test window opens. Select **Yes, perform a test**, and click **Next**.

2   The Connecting window notifies you whether the test was successful.

   •   Normally the test fails the first time.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.

   •   If the test is successful, click **Next**.

Task 4:   Finish the installation.

1   The Net Service Name Configuration, Net Service Name window opens. Type the net service name, and click **Next**.

2   The Another Net Service Name window opens. Click **No**, and click **Next**.

3   The Net Service Name Configuration Done window opens. Click **Next**.

4   The Oracle Net Configuration Assistant Done window opens. Click **Finish**.

5   The End of Installation window opens. Click **Exit**.

6   Continue to Task 5 if you need to upgrade your Oracle database to 9.2.0.6. Otherwise continue to Task 6.

Task 5: Upgrade to Oracle 9.2.0.6 by applying the 9.2.0.6 patch set to your Oracle database.

Follow the procedures described in Apply the Oracle 9.2.0.6 Patch Set on page 52 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 54.

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

See Chapter 4, Installing OVPI on Oracle for details.

▶ 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.

Oracle Post-Installation Tasks

This section describes tasks that you must do following the Oracle install.

▶ Once you have completed the tasks in this section, you are ready to install OVPI. See Chapter 4, Installing OVPI on Oracle.

Start the Oracle Listener Program and Database

Before you can install OVPI, you must ensure that the listener is running and that the database has been started. If you are using a remote database, you need to ensure that the database and listener are running on the Oracle database server, and that listener is running on the OVPI client system, and that connectivity has been verified.

You must perform the following steps *after* applying the 9.2.0.6 patch set and *before* installing OVPI; otherwise, OVPI will display an error regarding a missing system table, IND_ONLINE$.

1   Start the listener:

   • Windows Systems

   a   From the Control Panel window, double-click **Administrative Tools**. The Administrative Tools window opens.

   b   Double-click **Services**. The Services window opens.

   c   Select and start the listener program and the database server, and then continue to Step 2.

   • UNIX Systems

   a   From the command prompt, start the listener program by typing:

   >**lsnrctl start**

   b   Continue to Step 2.

2   Log on as sysdba using SQL*PLUS by typing:

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

3   Start the database by typing:

   SQL>**shutdown**
   SQL>**startup migrate**

Confirm that Oracle is Running

To verify that Oracle is running on your system, do the following:

   • 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 92 TNSListener**
> **OracleService *<db name>***

The Status should say **Started**.

- UNIX Systems

    Type the following at the command line:

    ps -ef | grep -i oracle

    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 each case, *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

This section describes how to start and stop Oracle.

Starting Oracle

To start Oracle, perform the following steps.

- Windows Systems

    a   From the Control Panel window, double-click the **Administrative Tools**
        icon. The Administrative Tools window opens.

    b   Double-click the **Services** icon. The Services window opens.

    c   Right-click the service name:

    > **Oracle OraHome 92 TNSListener**
    > **OracleService *<db name>***

where *<db name>* is the name of the OVPI database.

This is the minimum set of services required for OVPI to run.

d   Select **Start** from the shortcut menu.

> To make the Oracle service start automatically whenever you reboot your system, do the following:
>
> 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, perform the following steps:

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

        sqlplus

  b   Enter the username:

        sys as sysdba

  c   Enter the appropriate password.

  d   Type the following command:

        startup

  e   This starts up the database specified by $Oracle_SID.

Stopping Oracle

To stop Oracle, perform the following steps.

- Windows Systems

  a   From the Control Panel window, double-click **Administrative Tools**. The Administrative Tools window opens.

  b   Double-click **Services**. The Services window opens.

  c   Right-click the service names:

        Oracle OraHome 92 TNSListener
        OracleService *<db name>*

  where *<db name>* is the name of the OVPI database.

d　Select **Stop** from the shortcut menu.

- UNIX Systems

  To stop Oracle on UNIX systems, perform the following steps:

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

  　　sqlplus

  b　Enter the username:

  　　sys as sysdba

  c　Enter the appropriate password.

  d　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.

  e　Type **exit** to exit from sqlplus.

4 Installing OVPI on Oracle

This chapter contains instructions for installing OVPI for use with an Oracle RDBMS in either a standalone or distributed environment. The chapter covers:

- Prerequisite tasks to do before installing OVPI
- How to troubleshoot OVPI installation problems
- How to use the OVPI Installation Program
- The procedures for installing OVPI in a standalone environment and a distributed environment
- The procedure for installing OVPI client applications
- The procedure for installing the OVPI documentation
- Post-installation tasks

OVPI Installation Prerequisite Tasks

Perform the following tasks before installing OVPI on Oracle.

Determine Memory and Storage Requirements

This section lists minimum requirements for memory and storage.

Minimum Storage for OVPI Components

Table 6 shows the minimum storage requirements for OVPI components, based on disk, by operating system.

Table 6   Minimum Storage Requirements

Component	HP-UX		Solaris	Windows
	PA-RISC	**Itanium**		
OVPI Database Schema	600 MB	1500 MB	500 MB	400 MB
OVPI Performance Manager	425 MB	500 MB	330 MB	365 MB
Web Access Server	255 MB	500 MB	190 MB	165 MB
OVPI Clients	180 MB	425 MB	105 MB	90 MB
Remote Poller	265 MB	450 MB	200 MB	130 MB
Full Standalone	900 MB	1600 MB	900 MB	1300 MB

Minimum Memory Requirements

Table 7 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.

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. Be sure that this space is large enough to handle polling and data loading.

Table 7   Minimum Memory 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
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 would be the minimum memory requirement. In a standalone installation, the Web Access Server and ManagementServer use the same Java Virtual Memory (JVM); therefore, the minimum is still 256 MB.

b.   Usually, command-line utilities use far less memory.

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

Start the Oracle Listener Program and RDBMS

Make sure that the instance for the Oracle listener program created for OVPI is running, and that the Oracle database is installed and running. You cannot install OVPI unless the RDBMS has been started.

See , and .

▶ If you want to install OVPI so that it will access a remote Oracle database, see for installation information.

Determine Installation Parameter Values

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

Table 8 lists parameters whose defaults you might decide to change. Unless noted, parameters apply to both standalone and distributed installs.

Table 8   Oracle Installation Paramaters

Parameter and Description	Default Value	
	Windows Systems	**UNIX Systems**
Destination Folder The directory where the OVPI software will be installed.	C:\OVPI	/usr/ovpi
Oracle TCP/IP Port Number The TCP/IP port number that Oracle uses to communicate with clients and servers on other systems.	1521	1521
Oracle Home Directory The directory into which you installed Oracle.	$ORACLE_HOME	$ORACLE_HOME
Database Size[a] (For existing tablespaces.) The size of the database (the minimum is 500MB).	1024 MB	1024 MB
Data File (.dbf) Folder[a] (For existing tablespaces.) The directory in which the database files (.dbf(are created.	$ORACLE_HOME\dbs	$ORACLE_HOME/dbs

Table 8   Oracle Installation Paramaters

Parameter and Description	Default Value	
	Windows Systems	UNIX Systems
Cache Folder The cache directory used to store collected data before it is placed in the database.	*OVPI_directory* `\collect`	*OVPI_directory*/ `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
Oracle Instance ID The name of an Oracle database instance. The instance name corresponds to the Oracle System Identifier (SID) of the instance.	none	none
SSL Port The port number used for SSL communication	443	443
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

Table 8   Oracle Installation Paramaters

Parameter and Description	Default Value	
	Windows Systems	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 datbase host system.	80	80

a.   Displays only if you select the **Create new tablespaces on Oracle** option in the Database Selection window.

Troubleshooting OVPI Installation Problems

OVPI Log Files

All OVPI log files are located at:

$DPIPE_HOME/log/

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

For information about how to use OVPI log files, see the *Performance Insight Troubleshooting Guide*, available online through the Support web site.

Windows Only: NNM Integration

On Windows systems only, when installing OVPI on a system running Network Node Manager, 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:{48C97C18-5AF
A-40FE-B51D-A4EECBE02808}
```

The OVPI Installation Program

The OVPI Installation Program contains options for installing the OVPI components and remote pollers, and for upgrading the OVPI components and remote pollers.

To start the OVPI Installation Program:

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.

3   UNIX Systems only: Mount the CD using the instructions provided in the table.

Operating System	Command
Solaris	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: **`mkdir /cdrom`** **`mount -r /dev/dsk/cd_devicename /cdrom`** In this instance, *cd_devicename* is the name of the CD-ROM device.
HP-UX	Use the SAM utility to mount the CD-ROM, *or* type the following commands: **`mkdir /cdrom`** **`mount /dev/dsk/cd_devicename /cdrom`** In this instance, *cd_devicename* is the name of the CD-ROM device.

4   Solaris systems only:

   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.

5   Start the Installation Program:

   —   Windows Systems

      Inserting the OVPI Installation CD should automatically start the setup program. If not, from the top level folder on the CD, double-click `setup.exe.`

   —   UNIX Systems

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

      `./setup`

The Setup window opens.
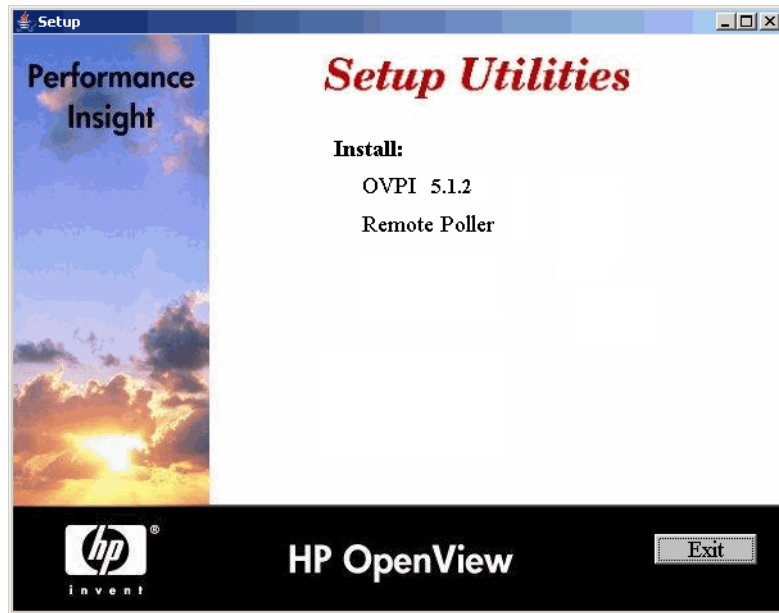
▶ Windows Systems only: If the window does not display correctly, change the text size of the Windows font by doing the following:

   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.

6   Install OVPI. To install in a standalone environment, continue to the instructions on OVPI Installation Procedure: Standalone Environment on page 80. To install in a distributed environment, go to the instructions on OVPI Installation Procedure: Distributed Environment on page 93.

OVPI Installation Procedure: Standalone Environment

This section describes how to install OVPI on Oracle in a standalone environment. 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 on

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 5.1.2** 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 OVPI components to install; they include:

- OVPI Database Schema
- Performance Manager
- Web Access Server
- OVPI Clients

1. Click to select *all* components. All components are required for a standalone installation.

2. Click **Next** to continue.

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

The Destination Folder window opens. Use the window to specify the directory where 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.

Task 4: Select the RDBMS on which the OVPI Database instance will be installed.

The Database Selection window opens. Use the window to identify the RDBMS on which the OVPI Database instance will be installed, 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. 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

- **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, and adjusted the recommended
    Oracle parameters, as described in Create Tablespaces.

  > 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 5 on
  page 82.

- If you clicked **Use existing tablespaces on Oracle,** go to Task 7 on
  page 86.

Task 5:   Locate and connect to the database.

The Oracle Reference Using Database Administrator User window opens. Use
the window to 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 into 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.

Task 6:   Create the Oracle user account and the new tablespaces.

The Oracle User and Tablespace Creation window opens. Use the window to create the OVPI database user account and 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.

2   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. See Modifying the Default Tablespaces.

- Change specific Oracle configuration parameters. See Changing Specific Oracle Configuration Parameters (Parameters Tab).

3   Click **Next** to continue and go to Task 8 on page 87.

Modifying the Default Tablespaces

⚠   Once 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 from the installation program and start the installation again.

For tablespace sizing guidelines, see Chapter 3, Installing an Oracle RDBMS.

To modify the tablespaces:

1   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

2   Accept the default values or type values for the tablespace parameters. In each case, the parameters are:

- **AUTOEXTEND SIZE**: Type the size of the extent in MB. Specifying 0 for the extent size disables Oracle's autoextending 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** to return to the Oracle User and Tablespace Creation window.

3 Click **Apply** to make the changes take effect.

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

Changing Specific Oracle Configuration Parameters (Parameters Tab)

The Parameters tab contains parameters for changing the Oracle configuration.

1 Accept the default values or type values for the following parameters; Table 5 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.

2   Click **Apply** to make your changes take effect.

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

Task 7:   Locate and connect to the database.

The Oracle Reference Using Database Administrator User window opens. Use the window to 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 into 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.

Task 8: 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.

4   Do one of the following:

— Windows Systems: Go to Task 10 on page 89.

— UNIX Systems: Continue with Task 9.

Task 9: UNIX systems only: Create or modify the operating system account.

The Operating System User for Performance Manager window opens. Use the window to 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. See Creating the Operating System Account.

- If the operating system account and group do exist, the Existing OS User window opens. See Modifying the Operating System Account User Environment.

Creating the Operating System Account

To create the operating system account and group:

1 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.

2 Click **Next** to continue.

Modifying the Operating System Account User Environment

To modify the operating system account's 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 paramenter 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.

2 Click **Next** to continue.

Task 10: 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. Refer to the *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.

4   Go to Task 11 on page 92.

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. Refer to the *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. Refer to the *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. Refer to the *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; 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.

    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".

c Click **Apply.**

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

Task 11: Review the installation information.

The Summary window opens. Use the window to review the selections you have made for installation.

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.

Task 12: Finish the installation.

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

• 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 Progess window for additional information.

b Contact Support.

Task 13: Continue by installing OVPI documentation.

To install OVPI documentation, go to Installing the OVPI Documentation on page 118.

OVPI Installation Procedure: Distributed Environment

There are numerous ways to install OVPI in a distributed environment. The instructions provided in this section describe how to individually install the OVPI components in the representative complex distributed configuration shown in Chapter 1, Planning Your 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.

  At this point, you can 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, and install report packs and datapipes on each satellite database server. You can defer this task until the installation is complete.

- 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 Using a Remote Oracle Database on page 63 before beginning.

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 window opens. Select **OVPI 5.1.2** 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 you want to install.

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

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: Specify an installation directory for the OVPI software.

The Destination Folder window opens. Use the window to specify the directory where 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.

Task 4: Select the RDBMS on which the OVPI Database instance will be installed.

The Database Selection window opens. Use the window to identify the RDBMS on which the OVPI Database instance will be installed, 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 55. 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

- **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 55, and adjusted the recommended Oracle parameters, as described in Create Tablespaces on page 54.

    ▶ 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 5.

- If you clicked **Use existing tablespaces on Oracle,** go to Task 7 on page 100.

Task 5: Locate and connect to the database.

The Oracle Reference Using Database Administrator User window opens. Use the window to 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 into 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.

Task 6:   Create the Oracle user account and the new tablespaces.

The Oracle User and Tablespace Creation window opens. Use the window to create the OVPI database user account and 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.

2   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. See Modifying the Default Tablespaces.

- Change specific Oracle configuration parameters. See Changing Specific Oracle Configuration Parameters (Parameters Tab).

3 Click **Next** to continue and go to Task 8 on page 101.

Modifying the Default Tablespaces

⚠ Once 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 from the installation program and start the installation again.

For tablespace sizing guidelines, see Chapter 3, Installing an Oracle RDBMS.

To modify the tablespaces:

1 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

2 Accept the default values or type values for the tablespace parameters. In each case, the parameters are:

- **AUTOEXTEND SIZE**: Type the size of the extent in MB. Specifying 0 for the extent size disables Oracle's autoextending 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** to return to the Oracle User and Tablespace Creation window.

3 Click **Apply** to make the changes take effect.

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

Changing Specific Oracle Configuration Parameters (Parameters Tab)

The Parameters tab contains parameters for changing the Oracle configuration.

1 Accept the default values or type values for the following parameters; Table 5 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.

2 Click **Apply** to make your changes take effect.

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

Task 7: Locate and connect to the database.

The Oracle Reference Using Database Administrator User window opens. Use the window to 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 into 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.

Task 8: 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.

4 Do one of the following:

    — Windows Systems: Go to Task 10 on page 103.

    — UNIX Systems: Continue to Task 9.

Task 9: UNIX systems only: Create or modify the operating system account.

The Operating System User for Performance Manager window opens. Use the window to 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. See Creating the Operating System Account.

- If the operating system account and group do exist, the Existing OS User window opens. See Modifying the Operating System Account User Environment.

Creating the Operating System Account

To create the operating system account and group:

1 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.

2 Click **Next** to continue.

Modifying the Operating System Account User Environment

To modify the operating system account's 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 paramenter 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.

2 Click **Next** to continue.

Task 10: Specify the port for the Management Server.

The Management Server window opens. At this point, the OVPI Installation Program starts the Management Server, which runs in the background on the system. The Management Server lets you manage the OVPI components on this system using the Management Console application, and it enables the components in an OVPI distributed configuration to communicate with each other.

The Management Server is named as follows on the supported operating systems:

— Windows Systems: OVPI HTTP Server

— Solaris Systems: `/etc/init.d/ovpi_httpd` and `/etc/rc3.d/ S99ovpi_httpd` startupscripts

— HP-UX: Systems `/sbin/init.d/ovpi_httpd` and `/sbin/rc3.d/ S99ovpi_httpd` startup scripts

1   Accept the default value or type a new value for the HTTP Port on which the Management Server will communicate.

2   Click **Next** to continue.

Task 11: Specify information about 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 12: Review the installation information.

The Summary window opens. Use the window to review the selections you have made for installation.

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.

Task 13: Finish the installation.

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

- 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 Progess window for additional information.
  - b Contact Support.

Task 14: Continue by installing other OVPI components as necessary.

To install Web Access Server, go to Web Access Server on page 104.

To install Remote Pollers, go to Remote Poller Component on page 113.

To install Client Applications, go to OVPI Clients on page 110.

Web Access Server

This section describes the steps necessary for installilng the Web Access Server component in a distributed environment.

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

During installation, you are asked to provide the database host and port number; this enables the Installation Program to download database information from the database system. If you have not installed 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.

1 If you have not already started the OVPI Installation Program, start it now.

2 The Setup window opens. Select **OVPI 5.1.2** 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.

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.

> ► If you have already installed another OVPI component on this system, you have provided directory information. Continue to Task 4.

The Destination Folder window opens. Use the window to specify the directory where 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 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. Refer to the *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. Refer to the *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. Refer to the *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. Refer to the *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; 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.

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".

c   Click **Apply.**

d   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 onnect 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.

The Summary window opens. Use the window to review the selections you have made for installation.

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.

Task 6: Finish the installation.

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

- 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 Progess window for additional information.
    - b Contact Support.

▶ 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. Refer to the *Performance Insight Reference Guide* for more information about the deploytool command.

Task 7: Continue by installing other OVPI components as necessary.

To install Client Applications, see OVPI Clients on page 110.

To install Remote Pollers, see Remote Poller Component on page 113.

OVPI Clients

This section describes the steps necessary for 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 15.

Complete the following tasks to install the OVPI Clients.

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 5.1.2** 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.

The Destination Folder window opens. Use the window to specify the directory where 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.

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.

The Summary window opens. Use the window to review the selections you have made for installation.

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.

Task 6:   Finish the installation.

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

  • 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 Progess window for additional information.

    b   Contact Support.

Task 7:   Continue by installing other OVPI components as necessary.

To install Remote Pollers, go to Remote Poller Component on page 113.

Remote Poller Component

This section describes the steps necessary for installing the Remote Poller component on a remote polling system in a distributed environment.

▶ If you have 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.

Complete the following tasks to install the Remote Poller component.

Task 1:   Start the OVPI Installation Program.

1   If you have not already started the OVPI Installation Program, start it now. See The OVPI Installation Program on page 77.

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.

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: Specify an installation directory for the OVPI components.

If you have already installed another OVPI component on this system, you have provided directory information. Continue to Task 3.

The Destination Folder window opens. Use the window to specify the directory where 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.

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 onnect 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.

4   Do one of the following:

   —   UNIX Systems: Continue to Task 5.

   —   Windows Systems: Go to Task 6 on page 117.

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 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. See Creating the Operating System Account.

- If the operating system account and group do exist, the Existing OS User window opens. See Modifying the Operating System Account User Environment.

Creating the Operating System Account

To create the operating system account and group:

1 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.

2 Click **Next** to continue.

Modifying the Operating System Account User Environment

To modify the operating system account's 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 paramenter 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.

2 Click **Next** to continue.

Task 6: Review the installation information.

The Summary window opens. Use the window to review the selections you have made for installation.

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.

Task 7: Finish the installation.

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

• 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 Progess window for additional information.

b   Contact Support.

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▶ The Remote Poller does not poll devices until you configure its polling policy. This configuration task is described in the *Performance Insight Administration Guide*.

Installing OVPI Clients Only

You can install only the OVPI Cients 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. Additionally, 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 OVPI Clients on page 110.

Installing the OVPI Documentation

The OVPI documentation is available in Portable Document Format (PDF), which you can view using Adobe Acrobat Reader. Once you have installed OVPI, you can install the documentation.

▶ If you do not install the documentation, you will not be able to use the OVPI online help.

After you install the OVPI documentation, it is available in the docs folder, which is located under the OVPI installation directory. For example, on a Windows system, the documentation is available in the following location:

***installation_directory*\docs**

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

To install the OVPI documentation:

• UNIX Systems

   a   Log on as root.

b   Insert the Documentation CD in the CD-ROM drive.

c   Mount the CD.

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

./setup

The Welcome page opens. Follow the instructions in the installation wizard.

- Windows Systems

a   Log on as the Administrator account.

b   Insert the Documentation CD in the CD-ROM drive.

Inserting the OVPI Documentation CD should automatically start the installation program. If not, from the top level folder on the CD, double-click setup.exe.

c   The Welcome page opens. Follow the instructions in the installation wizard.

Post-Installation Tasks

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.

To locate the most recent Service Pack for this release

1   Go to the following website:

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, be sure that
all database instances and OVPI Clients utilize a common character set.

Install Java Patches

Check the Release Notes to see if any Java patches need to be applied and
apply them if necessary.

Perform Configuration Tasks

The immediate configuration tasks that you must perform include the
following:

•   Install the Report Packs on the central database server and deploy them
    to the Web Access Server. 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.

•   Discover the network on the satellite database servers for those nodes
    that you plan to poll.

•   Install report packs and datapipes on the satellite database servers, but
    do not deploy them. Be 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.

•   Run type discovery on the satellite database servers.

- 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.

- Configure polling policies for remote polling systems.

Refer to the *Performance Insight Administration Guide* for instructions for these tasks, and for information about other configuration and administrative tasks that you may need to perform.

Backup Your System

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

Confirming that OVPI is Running

Verify that OVPI is running and collecting data by following these steps:

1 Wait until one or two polling periods have passed.

2 Open Table Manager and verify that the rate tables are being populated with data.

Starting and Stopping OVPI

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

A Uninstalling OVPI

This chapter contains instructions for uninstalling OVPI. The chapter covers:

- Prerequisite tasks to do before uninstalling OVPI
- The procedure for uninstalling OVPI
- The procedure for manually uninstalling OVPI from Windows systems, when necessary
- Post-uninstall tasks

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

Uninstalling OVPI removes all OVPI-related tablespaces and the dsi_spipe Oracle user from the database used by OVPI. The database itself will remain.

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 will have to 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.

To uninstall OVPI, perform the following tasks.

Task 1: Start the OVPI Uninstall Wizard.

1 Log on to the local system.

- Windows Systems:

    — Log on using the Administrator account.

    — From the Windows Desktop, click **Start**. Point to Programs, point to HP OpenView, point to Performance Insight, and click **Uninstall.**

- UNIX Systems:

    — Log on as root.

    — 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.

Task 2: 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 3: 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-Uninstall Tasks on page 128.

*   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 3).

Task 4: Remove left over directories

Manually remove the directories that contain the following environment variablesl:

*   DPIPE_HOME

*   DPIPE_TMP

*   TREND_LOG

*   COLLECT_HOME

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.

To uninstall OVPI manually, perform the following tasks.

Task 1:   Stop OVPI services.

Stop the OVPI Timer and Web Access Server.

1   From the Services window, right-click **OVPI Timer** and select **Stop** from the menu.

2   From the Services window, right-click **OVPI HTTP Server** and select **Stop** from the menu.

Task 2:   Remove the Web Access Server.

To 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.

To remove the OVPI Timer:

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 certain environment variables.

To remove environment variables:

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

2   The System Properties dialog box opens. Click the **Advanced** tab, and then
    click the **Environment Variables** button.

3   The Environment Variables dialog box opens. 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:   Finish the uninstall.

1   Restart your system.

2   Continue to

OVPI Post-Uninstall Tasks

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

- The OVPI directory
- The .ovpi directory

Delete the OVPI 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 have been placed in this directory. I

⚠️   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, do the following:

- UNIX Systems:

  a   Open a new shell window on the system where OVPI was installed.

  b   Type the following command:

  rm -rf *OVPI_directory* **/ovpi**

In this instance, *OVPI_directory* 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: do 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 *OVPI_directory*

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

Delete the .ovpi Directory

The .ovpi directory stores a user's custom settings. It is present only if the user has run Report Builder, Report Viewer, or Web Access Server.

▶ Each user should remove their own .ovpi directory.

The .ovpi directory is a hidden file. Therefore, you need to make it visible to remove it. On Windows, modify the directory view to show hidden files and directories by setting Tools->Folder Options, View tab, select '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 Appendix B, Uninstalling an Oracle RDBMS.

B Uninstalling an Oracle RDBMS

This chapter contains guidelines for uninstalling the Oracle RDBMS and Oracle client. For specific instructions, follow the procedures provided in the Oracle documentation for removing Oracle from your system. The chapter covers:

- Prerequisite tasks to do before uninstalling Oracle

- The procedure for uninstalling Oracle on Windows and UNIX systems

- Post-uninstall tasks

▶ Do not uninstall the Oracle RDBMS unless you have first uninstalled OVPI. See Appendix A, Uninstalling OVPI.

Oracle Uninstall Prerequisite Tasks

Perform the following tasks before uninstalling Oracle.

Stop Oracle

To stop Oracle, see Starting and Stopping Oracle on page 67.

Oracle Uninstall Procedure

To uninstall Oracle on Windows and UNIX systems, perform the following tasks. Follow this same procedure to uninstall both the RDBMS and the Oracle client.

Task 1: Log on to the local system.

- Windows Systems

  Log on using the Administrator account.

- UNIX Systems

  Log on as `root`.

Task 2: Start the Oracle uninstall procedure.

1 Start the Oracle Universal Installer.

   The Welcome window opens.

2 Click the **Deinstall Products** button.

   The Inventory window opens.

3 Check all items to remove, and click the **Remove** button.

   The Confirmation window opens.

4 Confirm the items to remove, and click **Yes**.

   The Remove window confirms the deinstall of the products you selected.

Oracle Post-Uninstall Tasks

Remove undeleted directories

Remove any remaining Oracle directories that the uninstall tool was unable to remove.

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