HP OpenView Performance Insight

Installation Guide

Software Version: 5.1 Service Pack 1

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

Manufacturing Part Number: J5223-90039

March 2005

Legal Notices

Warranty

Hewlett-Packard makes no warranty of any kind with regard to this document, including, but not limited to, the implied warranties of merchantability and fitness for a particular purpose. Hewlett-Packard shall not be held liable for errors contained herein or direct, indirect, special, incidental or consequential damages in connection with the furnishing, performance, or use of this material.

A copy of the specific warranty terms applicable to your Hewlett-Packard product can be obtained from your local Sales and Service Office.

Restricted Rights Legend

Use, duplication, or disclosure by the U.S. Government is subject to restrictions as set forth in subparagraph (c)(1)(ii) of the Rights in Technical Data and Computer Software clause in DFARS 252.227-7013.

Hewlett-Packard Company
United States of America

Rights for non-DOD U.S. Government Departments and Agencies are as set forth in FAR 52.227-19(c)(1,2).

Copyright Notices

Trademark Notices

Java™ is a US trademark of Sun Microsystems, Inc. in the United States, other countries, or both. MS-DOS®, Windows®, and Windows NT® are U.S. registered trademarks of Microsoft® Corp. OpenView is a U.S. registered trademark of Hewlett-Packard Company. Oracle® is a registered US trademark of Oracle Corporation, Redwood City, California. Netscape Navigator is a U.S. trademark of Netscape Communications Corporation. UNIX® is a registered trademark of The Open Group.

All other product names are the property of their respective trademark or service mark holders and are hereby acknowledged.

Revisions

The version number on the title page of this document indicates software version. The print date on the title page changes each time this document is updated.

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

Support

Please visit the HP OpenView web site at:

www.managementsoftware.hp.com/

This web site provides contact information and details about the products, services, and support that HP offers.

You can go directly to the support web site at:

http://support.openview.hp.com/

HP OpenView online software support provides customer self-solve capabilities. It provides a fast and efficient way to access interactive technical support tools needed to manage your business. As a valuable support customer, you can benefit by using the support site to:

- Search for knowledge documents of interest
- Submit and track progress on support cases
- Manage a support contract
- Look up HP support contacts
- Review information about available services
- Enter discussions with other software customers
- Research and register for software training

Most of the support areas require that you register as an HP Passport user and log in. Many also require a support contract.

To find more information about access levels, go to the following URL:

http://support.openview.hp.com/access_level.jsp

To register for an HP Passport ID, go to:

https://passport.hp.com/hpp2/newuser.do

contents

1

OVPI Overview

HP OpenView Performance Insight (OVPI) is a comprehensive performance management solution that automates the collection and analysis of network data, placing the information into report formats that you specify.

With OVPI, the network administrator has the ability to manage service levels, optimize existing resources, accurately plan future growth, and predict network problems before they occur.

OVPI uses the following client applications for its reporting interface: Report Builder, Report Viewer, and the Web Access Server. The Management Console and the Web Access Server applications provide reporting and administrative capabilities.

OVPI supports the following operating systems: HP-UX, Solaris, and Windows. For specific information about supported versions and required patches, see System Requirements on page 27.

OVPI's modular, client-server architecture provides scalability, letting you:

- Install the applications on a single host system to create a single-user management station.

- Distribute the applications across systems to create a network-wide management structure encompassing multiple users, organizations, and locations.

Figure 1 shows the OVPI architecture.
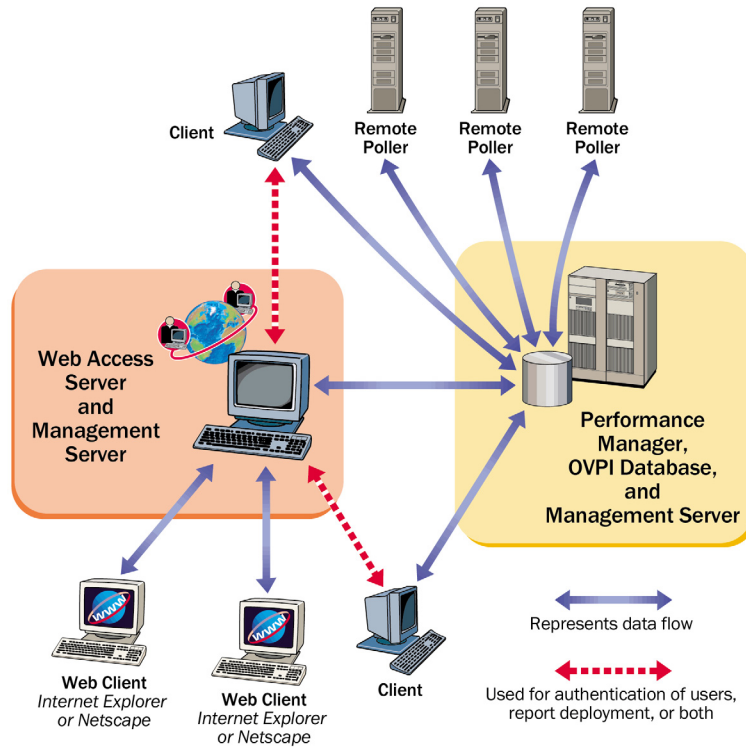
Figure 1   OVPI Architecture

▶ If you have a large enterprise network, a single host system may not provide either the power or the space for OVPI to optimally monitor the network.

OVPI Components

OVPI comprises the following components:

- OVPI database schema
- OVPI Performance Manager
- Web Access Server

- OVPI clients
- Management Server
- Remote Poller

OVPI Database

The OVPI database is the primary repository for the data that is collected, processed, and reported on by the other OVPI applications. This component configures the database server for OVPI and creates the OVPI schema. For Oracle, it allows tablespace creation or installs into existing tablespaces that have been set up for OVPI. For Sybase, it creates the database segments for OVPI. A Management Server is installed with this component.

Performance Manager

Performance Manager provides the engine for storing, processing, and accessing data collected from applications and network devices throughout your network. Data is automatically aggregated, summarized, and aged out by Performance Manager.

Performance Manager consists of a relational database and the server software. The database is the storage area that contains the data the OVPI server collects and processes. The size of the database depends on various factors, including the amount of data you want to store and the number of elements that you poll. The server contains the programs that collect, process, and report on data.

Performance Manager is available for one or more physical servers. One of the physical servers is the *central server*, which is the main location for the data and the OVPI system. Typically, the processing of the data occurs on this server, as does the reporting of the data. This system usually has a large amount of disk space, memory, and processing power. Typically, there is only one central server.

The other physical servers are *satellite servers*. These machines contain data and the OVPI system. Typically, only the first level of processing occurs on these servers before the transfer of the data to the central server. In some cases, you can transfer the data to the central server before processing it;

however, the amount of data to transfer may be very large. In other cases, you may transfer the data to the central server after the processing cycle is complete. A large deployment of OVPI can consist of multiple satellite servers.

Web Access Server

The Web Access Server component is both a service and an application. It is installed as a service, and the following OVPI client applications are automatically installed with it: Report Builder, Report Viewer, Web Access Server (application server), and Management Console.

As a service, the Web Access Server provides authentication and configuration services to the OVPI client. It provides web-based reporting and user administration utilities, which are described in the *Performance Insight Administration Guide*.

OVPI Clients

The clients provide the interface to OVPI. You can install a client on any networked system. The OVPI client applications are:

- Report Builder. Lets you build and customize reports with multiple tables and graphs based on data from the OVPI database. Refer to the *Performance Insight Guide to Building and Viewing Reports* for details.

- Report Viewer. Lets you interactively view, modify, save, and print reports. Refer to the *Performance Insight Guide to Building and Viewing Reports* for details.

- Web Access Server. This component contains a web-based application server, also called the Web Access Server. This application lets you view, schedule, generate, and deploy reports. It also lets you perform the administration tasks that pertain to the OVPI client applications and services. (For more information about supported Web browsers, see Installation Prerequisites Checklist on page 25.) Refer to the *Performance Insight Guide to Building and Viewing Reports* and the *Performance Insight Administration Guide* for details about the Web Access Server application and the service.

- Management Console. Lets you perform administrative tasks using the following applications:

- Database Tuner. Lets you set many database configuration parameters to improve overall data throughput.

- MIB Browser. Lets you analyze, query, and troubleshoot Structure of Management Information (SMI)-compliant SNMP MIBs.

- SNMP Discovery. Lets you find the nodes in your network and determine whether or not a node is SNMP manageable.

- Type Discovery. Lets you determine the device type of a node.

- Package Manager. Lets you install and uninstall packages and deploy and undeploy them from the Web Access Server.

- Object Manager. Lets you view and change the managed objects on your system.

- System Manager. Lets you add, modify, and delete database and Web Access Server systems.

- Group Manager. Lets you create groups from the managed objects referenced by the polling policies for your enterprise.

- Polling Policy Manager. Lets you manage polling policies, import and manage nodes, and manage polling groups.

- Table Manager. Lets you monitor your database, view data and property tables, and set defaults for tables, both individual and global.

> In a client-only installation, you cannot use Management Console applications that are normally available from the Tools menu following a complete OVPI installation: Database Tuner, MIB Browser, SNMP Discovery, Type Discovery, and Package Manager. Additionally, you will not be able to register a new data table, property table, or automatically add a collection to the database.

For full functionality you must install the Performance Manager.

Management Server

The role of the Management Server is to provide management services, as well as forms that are deployed during report pack installation, to the Management Console application.

Remote Poller

A *remote poller* system collects data from nodes in the network and then stores the data on a server running the OVPI database, which is usually a satellite server. Each OVPI database server may support multiple remote pollers.

OVPI System Roles and Tasks

The process of data collection, processing, and reporting can be divided into the following tasks:

- Data collection
- Raw data to rate data processing
- Rate data to hourly data summarization
- Hourly data to daily, monthly, forecasting summarization, or all
- Report request servicing
- Report viewing and building

The role of any OVPI system— Standalone System, Remote Poller, Satellite Server, Central Server, Web Access Server—is defined by the tasks it must perform, with each task requiring a particular set of OVPI components.

Standalone System

A *standalone* system is a single system that has all of the OVPI components installed. The standalone system is capable of gathering and processing data, producing reports that can be accessed from the Web server, and running the Report Viewer and Report Builder applications. The standalone system performs all the tasks listed in OVPI System Roles and Tasks on page 16.

Remote Poller

A r*emote poller* system collects data but stores it elsewhere. It does not have a database, and it does not perform any processing. The remote poller performs the data collection task listed in OVPI System Roles and Tasks on page 16.

Typically, the remote poller stores its data on the satellite server, but it is located close (in terms of network path) to the target/polled devices. This reduces the distance that unreliable and bulky SNMP packets must travel.

➤ The OVPI Administrator must ensure that duplicate polling is avoided when the remote pollers are configured. Duplicate polling occurs when the same device is polled by two or more pollers.

Satellite Server

A *satellite server* system usually has all OVPI components installed except the Web Access Server; it usually does not run processing routines on collected data above the hourly level. The partially aggregated data is copied to the central server, where aggregation is completed. One or more remote pollers can report to a satellite system.

The satellite server typically performs the raw data to rate data processing and the rate data to hourly data summarization tasks listed in OVPI System Roles and Tasks on page 16.

In some cases, the satellite server runs as a complete standalone system performing full data aggregation and reporting, yet still copies raw, rate, or partially aggregated data up to a central server. This allows regional reports to be displayed at each satellite server, while network-wide reporting is available on the central server.

Central Server

A *central server* system usually has all OVPI components installed except the Web Access Server. It receives partially processed data from one or more satellites, and it usually processes data from the hourly level through to completion. The central server performs the daily, monthly, and forecasting summarization task listed in OVPI System Roles and Tasks on page 16.

Web Access Server

The Web Access Server system hosts the OVPI Web site. It is also used by OVPI clients to authenticate their users.

► The Web Access Server often requires significant memory and CPU. HP recommends in all installations that you install the Web Access Server on a system that does not contain the other OVPI processes. This suggestion is not mandatory, but is highly recommended.

Understanding System Roles and Components

Table 1 shows which OVPI software components are typically installed for each system role.

Table 1   Typical Installation of the Software Components

System Role	Sybase or Oracle	OVPI Database	OVPI Performance Manager	Web Access Server	Clients	Remote Poller
Standalone	X	X	X	X	X	
Remote Poller						X
Satellite Server	X	X	X		X	
Central Server	X	X	X		X	
Web Access Server				X		

2

Preparing for Installation

This chapter discusses requirements and guidelines for installing HP
OpenView Performance Insight (OVPI). It provides the following information:

- OVPI installation configurations

- Supported operating systems, UNIX desktops, and database management
  systems

- Required patches for running Java

- Required HP-UX patches for OVPI

- Default memory and storage requirements for all OVPI components

- *UNIX systems only*: Kernel reconfiguration for Sybase, raw partition setup
  commands, and Sybase device size limitations

- Instructions for starting the setup program

▶ HP strongly recommends that you read the *Performance Insight Release Notes*
that came with your kit before you proceed with the installation. This
document provides an overview of the changes made to OVPI for the version
5.1 release.

OVPI Configurations

OVPI can operate as a standalone system involving a single server, or as a distributed system involving multiple servers.

In a *standalone configuration*, all of the OVPI components are installed on one system. In a *distributed configuration*, the OVPI components are installed on multiple physically separate systems and operate as a single, distributed system. In either configuration, users can view reports from any intranet or internet workstation that has access to the Web Access Server.

Reasons for Using a Distributed Configuration

There are various reasons for installing OVPI in a distributed manner. In particular, a distributed configuration could improve performance if one of the following conditions 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 objects to be processed than one server can handle— typically 20,000 objects for polling and summarization.

Beside the sharing of processing load, there may be geographical, organizational, or functional reasons to consider. You can determine the correct balance only by examining the network that you want to monitor and the needs of your users.

Following is a list of questions that can help you determine the correct balance.

• How many managed elements are there?

Do I have enough processing power? The number of elements that OVPI needs to report on will have a direct effect on the number of systems required, perhaps ruling out the need for a distributed architecture completely, or requiring a minimum number of each type of system. See your HP sales representative for assistance with this matter.

• Where are the target devices?

How fast is my network management infrastructure? The geographical spread of the target devices has an effect on the need for remote pollers. If data collection is done using SNMP, as is most common, then installing

remote poller systems close to the devices can reduce the distance traveled (in terms of network path) by the bulky and unreliable SNMP packets. This decreases polling cycle times and improves data collection performance.

- Will reports be required at the satellite servers?

  Who are the users and what are their needs? If the network is large enough to warrant multiple satellite servers, then you need to consider other factors. Will the satellites each have a subset of devices assigned to them that is relevant to some subset of your users?

  For example, if a network is spread across several regions, then it may make sense to have one satellite per region. In this case, will users located in that region prefer to look at reports that are specific to their region?

  They could see the same reports by accessing the central server; however, for some users it may make more sense to access the reporting system locally. In these situations, the satellites must perform the full data-processing cycle, and they must also have an Web Access Server installed. This will place a higher processing load on the satellite server, but it could possibly reduce network traffic between regionally located users and a central Web Access Server.

- Will Near Real Time reports be required at the central server?

  Who are the users and what are their needs? Processing collected data to the hourly level at the satellite and then copying it to the central server is the most efficient configuration for data aggregation and transfer.

  The benefit of this configuration is that it reduces both the processing load on the central server and network traffic between the satellite and the central server. However, it reduces the granularity of the reports available at the central server. Some reports, such as the Near Real Time reports, rely on the most granular rate data for their display. In the absence of this data, the report will not operate correctly and must be removed from the system, reducing functionality.

  A user who wants to view these reports has the following options:

  — Transfer the rate data instead of the hourly data to the central server. This will reduce the processing load on the satellite server but will **greatly** increase the processing load on the central server. It will also increase the amount of network capacity used by the reporting system as it moves large quantities of polled data between satellites and the central system.

— Transfer the rate data *and* the hourly data to the central server. This will **greatly** increase the amount of network capacity used by the reporting system.

— Transfer only the hourly data to the central server, but switch on regional reporting on the satellite systems allowing Near Real Time reports to be available at each. This will increase the processing load of the satellites as they must now perform extra daily and monthly aggregations while also servicing report requests. It also means that the entire report pack is not available for the whole network from any one system; administrators must access regional servers for detailed reports of traffic in that region.

A Typical Distributed Configuration

OVPI is extremely flexible and configurable. As a guideline, the most common architecture for very large networks is to have multiple poller systems located close to their target devices (see Figure 1 on page 23). Each poller should communicate with its parent satellite system, which is most likely regionally based. Each device is polled by one poller, and the OVPI Administrator should ensure that duplicate polling of the same device does not occur.

Satellite systems process the data from the raw-polled form through to the hourly summarization level. This is the most costly in terms of CPU cycles because it involves a very large number of data samples. Typically, satellite systems do not perform aggregations above the hourly level.

The satellite server is configured to copy the hourly-summarized data across the network to the central server and the central server combines it with that of other satellite servers. The central server runs the final processing routines and aggregates the data from the hourly granularity level through to daily, monthly, or forecasting depending upon the reporting package.

A Web Access Server is installed on a separate system and is dedicated to servicing incoming report requests, using the database of the central server.

If this architecture does not suit your reporting needs, contact your HP sales representative.
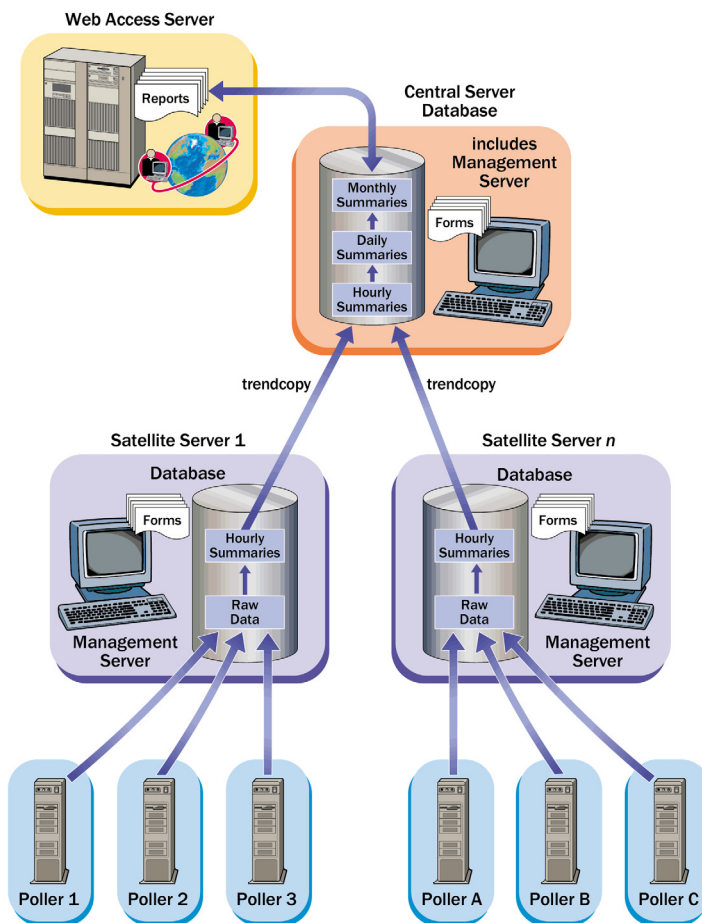
Figure 1   Common Distributed Architecture for SNMP Polling Systems

Issues to Consider Before Installation

The following sections describe some general issues that you should consider before you begin.

Dedicated System

OVPI is a CPU- and disk-intensive application. You should install it on a system that is dedicated to running OVPI exclusively.

Report Pack Updates

Unless you are installing OVPI for the first time, you may need to make changes to report packs. The changes differ for each report pack. See Upgrading Report Packs and Datapipes on page 236 and the report pack's associated User Guide for details.

Polling and SNMP Connectivity

Any system that gathers data from the network requires connectivity through intermediate firewalls to reach the network devices. In situations where a satellite server is controlling pollers, you may need to create specialized polling policies to help divide the devices to be polled between pollers. For more information about creating polling policies, refer to the *Performance Insight Administration Guide*.

Reporting Client Connectivity

If users will need to view reports using a Web browser, then all users must have HTTP connectivity between their systems and the Web Access Server. If users will use the Report Viewer or Report Builder applications, then there must be connectivity between the client system and the Web Access Server system and the database server on the appropriate ports.

General Network Connectivity

You need to identify a range of ports to open to allow connectivity between all OVPI systems. See Default Port Numbers on page 29 for details.

SNMP Security Pack

If you want to collect data from SNMPv3 nodes, you will need to install the SNMP Security Pack product, which is available from SNMP Research. See the following web site for more information:

http://www.snmp.com

Install the following version depending on your operating system:

- Version 16.1.0.19 (UNIX)

- Version 16.1.0.35 (Windows)

You will also need to configure your SNMPv3 nodes. Refer to Chapter 2 of the *Performance Insight Administration Guide* for details.

Internationalization and Localization

OVPI supports internationalization.

You can install OVPI on any language version of the supported operating systems. However, for version 5.1, OVPI is localized only for the following languages: Japanese, Korean, Simplified Chinese, and Traditional Chinese.

Database support is internationalized for Oracle. Sybase database systems must use English-based systems and do not support localized data.

Network Node Manager Integration

If OVPI and Network Node Manager (NNM) are to co-exist on the same machine, you must be using NNM 7.5 L10N or greater.

Installation Prerequisites Checklist

Use the following checklist to be sure that you have met OVPI installation prerequisites.

1   You have decided whether to install OVPI in a standalone or distributed configuration.

2   The system on which you will install OVPI has met the minimum installation requirements.

See System Requirements on page 27 for details.

3   You have stopped any Compaq Insight Manager services if you intend to install OVPI on a Compaq system.

4   Your database is installed and is running before you begin the OVPI installation.

See Chapter 3, Installing a Database to learn more about installing a database.

5   *UNIX systems with Sybase only*:

   a   You have configured the kernel to support Sybase.

      See Reconfiguring Your Kernel for Sybase on page 39 for details.

   b   An installation environment (that is, a raw partition or a UNIX file system) has been selected for installing the database.

      See Using a Raw Partition or a UNIX File System on page 44 for details.

6   *Windows systems running HP's proprietary memory management services only*:

      Disable the following services prior to installing OVPI:

      – HpComponent

      – HPEventLog

      – HPFpcSvc

      – HpLerSvc

      – HPSdnSvc

7   *Web Access Server only*:

   a   You must have one of the following Web browsers:

      – Microsoft Internet Explorer 5.5 or later

      – Netscape Navigator 6.0 or later

   b   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 your Web browser:

— Internet Explorer

From the browser's Tools menu, select **Internet Options**. The Internet Options dialog box opens. Select the Security tab. Click **Internet** for the Web content zone, and then click **Custom Level**. The Security Settings dialog box opens. Scroll down the list of settings and locate the Scripting settings. Select **Enable** under Active scripting. Click **OK** in the Security Settings dialog box. Click **OK** in the Internet Options dialog box.

— Netscape Navigator

From the browser's Edit menu, select **Preferences**. The Preferences dialog box opens. Scroll to Advanced, and then click **Scripts & Plugins**. Select **Navigator** in the Enable JavaScript for box. Click **OK** in the Preferences dialog box.

System Requirements

This section contains the system requirements necessary for installing and running the OVPI software, including:

- Supported operating and database management systems

- Internationalization and localization issues

- Default port numbers

- Required patches for running Java

- Required patches for HP-UX systems

- Hardware requirements

- Memory and storage requirements for all OVPI components

Supported Operating and Database Management Systems

Table 1 shows the operating systems and the database management systems (either Sybase Adaptive Server version 11.9.2.5 ESD 1 or Oracle 9.2.0.5) that OVPI supports, as well as the OVPI components that are supported on each operating system.

Table 1   Supported Software Configurations

Operating Systems	Database Management Systems	OVPI Components
HP-UX 11.11	Sybase and Oracle	All
Red Hat Enterprise Linux 2.1 Red Hat Enterprise Linux 3 SuSE Linux Enterprise Server 8	None	OVPI Client
Solaris 8	Sybase and Oracle	All
Solaris 9	Oracle	All
Windows 2000 Server and Advanced Server with Service Pack 4 and later	Sybase and Oracle	All
Windows 2003 Standard and Enterprise	Oracle	All
Windows XP	None	OVPI Client and Web Access Server

▶ *On Solaris systems only*, OVPI can execute in a high availability environment using the Veritas Cluster Server (VCS). For information, see the white paper, *OVPI High Availability with Veritas Cluster Server on Solaris*, located on the OVPI Solaris CD in the **$DPIPE_HOME/docs/WhitePapers** folder. Scripts described in the white paper are in the **$DPIPE_HOME/contrib/Veritas** folder.

Be aware that in a client-only installation, you cannot use any of the applications that are normally available from the Management Console's Tools menu when a complete OVPI installation is performed: Database Tuner, MIB Browser, SNMP Discovery, Type Discovery, and Package Manager.

Additionally, you will not be able to register a new data table, property table, or automatically add a collection to the database. Performance Manager must be installed for full functionality.

Supported Desktops for UNIX

OVPI supports the following UNIX desktop: CDE.

OVPI does not support OpenWindows.

Default Port Numbers

OVPI uses the following default port numbers for its components:

- OVPI database. The OVPI Database stores and processes raw and summarized data.

  — Sybase uses port 5000 (Windows) or port 2052 (UNIX).

  — Oracle uses port 1521 (Windows and UNIX).

- Web Access Server. The Web Access Server provides configuration information to Report Viewer and Report Builder, report viewing, scheduling, and administrative functions through a Web browser.

  The Web Access Server uses port 80 when SSL is not enabled, or port 443 when SSL is enabled.

  This port is also used for remote OVPI administration through the Management Console.

  If you are using the Web Access Server, you will also need to use the Management Server, which also uses port 80 (the default). The Management Server is used by remote OVPI processes to gather information about the current system in order to configure it. It is primarily used by the Management Console, but other OVPI applications use it also.

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

Figure 2 shows an example OVPI configuration and the default port numbers used by OVPI.
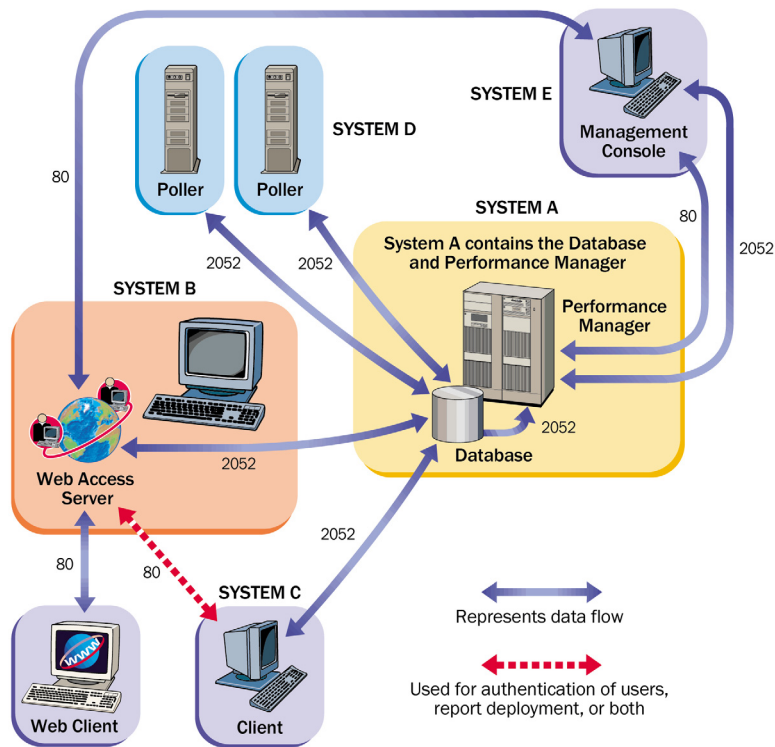
Figure 2   Default Port Numbers Used by OVPI

Required Patches for Running Java

OVPI includes Java 1.4.2_02. Java will automatically load onto your system during the installation, but most likely it will not run properly until you download the patches required for your operating system.

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

Viewing Installed Patches

Use *one* of the following commands to determine which patches have been installed on your system:

- *HP-UX*

  Type the following command:

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

- *Solaris*

  Type the following command:

  showrev -p

- *Windows*

  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*)

Required Java Patches

To locate the latest Java patches for your operating system, go to the following Web site addresses:

- *HP-UX*

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

- *Solaris*

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

  Find the Solaris OS Patches section.

- *Windows*

  http://windowsupdate.microsoft.com

These URLs are subject to change without notice.

Additional Patches Required for OVPI Components on HP-UX Systems

If you plan to install the Database Schema and Performance Manager components on an HP-UX system, you should install the HP-UX patches listed in Table 2 before you install the components on the HP-UX system.

▶ The patches can be found at:

http://www1.itrc.hp.com/service/index.html

This URL is subject to change without notice.

Table 2   HP-UX Patches Required by OVPI Components

Patch Number	Description
PHSS_14577	s700_800 11.00 HP aC++ runtime library components (A.03.10)
PHCO_29495	s700_800 11.11 libc cumulative patch
PHKL_27315	s700_800 11.11 Shared mutex hang; Shared synch perf support
PHSS_30966	s700_800 11.11 ld(1) and linker tools cumulative patch
PHCO_30544	s700_800 11.11 Pthread enhancement and fixes

Database Hardware Requirements

Table 3 shows minimum system recommendations based on database size.

The system load assumed in Table 3 is defined by the number of managed objects OVPI is collecting and reporting on. A *managed object* is one instance of data (for example, one frame relay PVC or one router interface).

A medium-sized standalone system (database size of 10 or 20 GB, based on the recommendations in Table 3) can poll up to 20,000 managed objects every 15 minutes.

A distributed configuration typically comprises a separate reporting server (Web Access Server), satellite servers, and a central server. The satellite server performs hourly roll-ups and transfers the hourly data to the central

server. A large-sized satellite server can poll up to 30,000 interfaces at 15-minute intervals, and a central server that is not polling can support four satellite servers without specific tuning.

For large systems, a second disk controller is recommended.

Table 3   System Recommendations by Database Size

Database Size[a]	CPU	Sybase Minimum[b] and Recommended Memory	Oracle Minimum and Recommended Memory	Drives 10 KB RPM or higher[c]	Drive Usage
2 GB	1	1 GB/2 GB	2 GB/4 GB	4	1 for OS and swap 1 for temporary database 1 for log file 1 for database
5 GB	1	1 GB/2 GB	2 GB/4 GB	4	1 for OS and swap 1 for temporary database 1 for log file 1 for database
10 GB	2	1 GB/4 GB	2 GB/8 GB	6	1 for OS and swap 1 for temporary database 1 for log file 3 for database with RAID 0
20 GB	2	1 GB/4 GB	2 GB/8 GB	6	1 for OS and swap 1 for temporary database 1 for log file 3 for database with RAID 0

Table 3   System Recommendations by Database Size (cont'd)

Database Size[a]	CPU	Sybase Minimum[b] and Recommended Memory	Oracle Minimum and Recommended Memory	Drives 10 KB RPM or higher[c]	Drive Usage
40 GB	4	1 GB/4 GB	4 GB/16 GB	8	1 for OS and swap 1 for temporary database 1 for log file 5 for database with RAID 0
80 GB	4	1 GB/4 GB	4 GB/16 GB	8	1 for OS and swap 1 for temporary database 1 for log file 5 for database with RAID 0

a.   You must have enough database disk space for twice the amount of data that you expect to store. The listed number of drives is the minimum number for acceptable performance and is based on the assumption that each drive is 36 GB. Note that using higher capacity drives (for example, 72 MB) does not reduce the number of drives recommended. If you are running four or more report packs simultaneously, HP recommends that you install the Web Access Server on a separate system.

b.   Minimum memory for both Sybase and Oracle means that you will be able to install OVPI and run with a limited number of objects; performance may be unacceptable under load.

c.   This does not include mirror drives if used.

Default Memory and Storage Requirements

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

It is not required that you install all of the components onto the same UNIX file system or Windows partition. However, when you install a specific component, it is required that its default space is from one system.

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

Minimum Storage Requirements

Table 4 lists the minimum storage requirements for Sybase. (For Oracle requirements, see the Oracle documentation.)

Table 4   Sybase Minimum Storage Requirements

Component	HP-UX	Solaris	Windows
Executables	367 MB	358 MB	99 MB
Master Database	50 MB	50 MB	30 MB
Stored Procedures Database	60 MB	60 MB	60 MB
Installation Total	477 MB	468 MB	189 MB

Database Memory Configurations

When determining the amount of memory Sybase requires to run, use a scaled algorithm that is based on the system total memory. Table 5 shows a scaled algorithm for running Sybase that is based on the system total memory. (For Oracle requirements, see the Oracle documentation.)

Table 5   Sybase Database Memory Configurations

If the physical memory for your system is...	Sybase will require...[a]
256 MB or less	50% physical memory
257 MB or greater	60% physical memory

a.   On HP-UX systems, the total database memory will not exceed 1GB due to the limitations of the operating system.

OVPI Database Minimum Storage Requirements

Database size is determined according to the number of devices polled, the amount of data objects collected, and the length of time the data will be stored.

Table 6 lists the minimum storage requirements for the OVPI database using Sybase.

Table 6   OVPI Database Minimum Storage Requirements for Sybase

Component	HP-UX	Solaris	Windows
Main Database	800 MB	800 MB	800 MB
Temporary Database[a]	400 MB	400 MB	400 MB
Log Database[b]	400 MB	400 MB	400 MB
Installation Total[c]	1600 MB	1600 MB	1600 MB

a.   The default amount for the Temporary Database is set to 50% of the Main Database. You can modify this value during the installation.

b.   The default amount for the Log Database is set to 50% of the Main Database. You can modify this value during the installation.

c.   The OVPI Database installation total value is based on the actual percentage value chosen; therefore; it is subject to change.

The OVPI Database Minimum Storage Requirements for Oracle are 800MB for the main database on all platforms: HP-UX, Solaris, and Windows.

OVPI Storage Requirements

Table 7 lists the minimum storage requirements for OVPI.

Table 7   OVPI Minimum Storage Requirements

Component	HP-UX	Solaris	Windows
OVPI Database Schema[a]	600 MB	500 MB	400 MB
Performance Manager	425 MB	330 MB	365 MB
Web Access Server	255 MB	190 MB	165 MB

Table 7   OVPI Minimum Storage Requirements (cont'd)

Component	HP-UX	Solaris	Windows
Client Applications	180 MB	105 MB	90 MB
Remote Poller	265 MB	200 MB	130 MB
Full (standalone) Install[bc]	900 MB	900 MB	1300 MB

a.   Assume an additional 800MB for Oracle and an additional 1600MB for Sybase.

b.   Assume an additional 800MB for Oracle and an additional 1600MB for Sybase.

c.   These are the storage requirements if you install all the components on a single system.

Device Size Limits

This section provides the device size limits for Sybase Adaptive Server 11.9.2.5 when supporting devices greater than 2 gigabytes (GB) in size.

Using a seek utility, Sybase is able to locate and support the largest device size allowable by the host system.

Table 8 lists the maximum device size and how it varies by operating system. (For Oracle requirements, see the Oracle documentation.)

Table 8   Maximum Device Size Supported for Sybase

Operating System	Sybase Version	
	11.9.2.5 File	**11.9.2.5 Raw**
HP-UX	32 GB	32 GB
Solaris	2 GB	32 GB
Windows	4 GB	N/A

Addressable Memory Limits

Table 9 lists addressable memory limits by operating system for Sybase Adaptive Server 11.9.2.5 and Oracle 9.2.0.5.

Table 9   Addressable Memory Limits for Sybase and Oracle

Operating System	Database		
	Sybase	Oracle (for 32-bit)	Oracle (for 64-bit)
HP-UX	1 GB	1 GB (max for kernel parameter SHMMAX) 1.75 GB (total Shared Global Area (SGA) for all Oracle instances)	Limited to the size that the operating system can handle.
Solaris	4 GB	2 GB	Limited to the size that the operating system can handle.
Windows	2 GB	2 GB	N/A

UNIX-Specific Requirements

If you are installing OVPI on a UNIX system, make sure that you meet all the requirements specified in this section.

▶ Make sure that you have also met all the requirements discussed in System Requirements on page 27.

On a UNIX system, you must do the following:

•   Reconfigure your kernel before you install Sybase.

    If you are installing Oracle, refer to the Oracle documentation for kernel settings.

- Determine whether you want to install the OVPI database on a UNIX file system or on a raw partition, and then set up the raw partitions before you install the OVPI database.

Reconfiguring Your Kernel for Sybase

You must install Sybase Adaptive Server on the system that will operate as the OVPI Server.

▶ On a UNIX system, you must reconfigure your kernel and reboot the system before you can install Sybase.

If Sybase is already installed on your system, you can begin to install OVPI. See Chapter 4, Installing OVPI on Sybase or Chapter 6, Installing OVPI in a Distributed Configuration for details.

Reconfiguring Your Kernel on HP-UX

You must reconfigure your kernel before you install Sybase. After you reconfigure your kernel, you can install Sybase and then OVPI.

To reconfigure the kernel on an HP-UX system, use either the System Administration Manager (SAM) utility or the command-line interface.

Using the SAM Utility

To reconfigure your kernel using the SAM utility, perform the following tasks.

Task 1:   Log on and start the SAM utility.

1   Log on as root.

2   Invoke the SAM utility (typically from the **/usr/sbin** directory). The System Administration Manager window opens.

3   Double-click the **Kernel Configuration** icon. The SAM Areas: Kernel Configuration area appears in the System Administration Manager window.

4   Double-click the **Configurable Parameters** icon. The Kernel Configuration window opens.

Task 2:   Configure the maximum number of threads per process.

1   Select **max_thread_proc** from the list of configurable parameters. The
    max_thread_proc entry is highlighted.

2   From the Action menu, select **Modify Configurable Parameter** . The Modify
    Configurable Parameter window opens.

3   Select **Specify New Formula/Value,** and then enter the following value in the
    Formula/Value box:

    1024

    ▶   If you are unable to set **max_thread_proc** to 1024, you may need to
         adjust other dependent kernel parameters (such as, but not limited
         to, **maxusers**) in order to set **max_thread_proc** to its recommended
         value.

4   Click **OK** to close the Modify Configurable Parameter window. The Kernel
    Configuration window opens.

Task 3:   Configure the maximum number of concurrent users.

1   Select **maxusers** from the list of configurable parameters. The maxusers
    entry is highlighted.

2   From the Action menu, select **Modify Configurable Parameter**. The Modify
    Configurable Parameter window opens.

3   Select **Specify New Formula/Value**, and then enter the following value in the
    Formula/Value box:

    124

4   Click **OK** to close the Modify Configurable Parameter window. The Kernel
    Configuration window opens.

Task 4:   Configure the maximum amount of RAM for Sybase.

1   Select **shmmax** from the list of configurable parameters. The shmmax
    entry is highlighted.

2   From the Action menu, select **Modify Configurable Parameter**. The Modify
    Configurable Parameter window opens.

3   Select **Specify New Formula/Value**, and then enter the following value in the
    Formula/Value box:

1073741824

This defines the maximum amount of your system's RAM that can be dedicated to Sybase. The value you entered (1073741824) is the total number of bytes in 1 gigabyte (GB). You can adjust this to a maximum of 2147483648 (2 GB) depending on your HP-UX patch installation. (For more information, contact Support.)

4   Click **OK** to close the Modify Configurable Parameter window. The Kernel Configuration window opens.

Task 5:   Enable asynchronous disk I/O.

> HP strongly recommends that you enable asynchronous disk I/O, whether or not you intend to use it. If you install the OVPI database on a raw partition, the database engine can use asynchronous I/O. The steps that follow describe how to do this.

1   From the SAM Kernel Configuration menu, select **Drivers**.

2   Select **asyncdsk** from the list of drivers. The asyncdsk driver is highlighted.

3   From the Action menu, choose **Add Driver to Kernel**.

The pending state for asyncdsk should be set to **In**.

Task 6:   Build the kernel, reboot, and install.

1   From the Action menu, choose **Process New Kernel** and then reboot the system.

2   Click **Yes** to rebuild the kernel and to reboot the system.

3   Because the user ID of the user booting Adaptive Server and Backup Server must be the owner of the **/dev/async device** file, type the following commands as root at the UNIX command prompt:

/etc/mknod /dev/async c 101 4
chmod 0660 /dev/async

4   Continue with the installation process by installing Sybase.

5   *After* you successfully install Sybase, type the following command at the command line:

chown sybase /dev/async

6 Continue with the installation process by installing OVPI.

Using the Command Line

To reconfigure your kernel using the command line, perform the following tasks.

Task 1: Log on.

1 Log on as `root`.

2 Type the following at the UNIX command prompt:

`cd /stand/build`

`/usr/lbin/sysadm/system_prep -v -ssystem`

This command extracts the system file from the running kernel.

Task 2: Configure parameters.

1 Edit the "Tunable Parameters" section of the system file by adding or modifying the parameters `shmmax`, `maxusers`, and `max_thread_proc`. For example, you might use the following settings:

`shmmax 1073741824`

This defines the maximum amount of your system's RAM that can be dedicated to Sybase. The value you entered (1073741824) is the total number of bytes in 1 gigabyte (GB). You can adjust this to a maximum of 2147483648 (2 GB) depending on your HP-UX patch installation. (For more information, contact Support.)

`maxusers 124`

`max_thread_proc 1024`

> ▶ If you are unable to set `max_thread_proc` to 1024, you may need to adjust other dependent kernel parameters (such as, but not limited to, `maxusers`) in order to set `max_thread_proc` to its recommended value.

Task 3:   Enable asynchronous I/O.

1   Find the "Drivers/Subsystems" section of the file.

> ▶   HP strongly recommends that you enable asynchronous disk I/O,
> whether or not you intend to use it. If you install the OVPI
> database on a raw partition, the database engine can use
> asynchronous I/O. Use the following steps to enable asynchronous
> I/O.

2   Add the following line:

asyncdsk

Task 4:   Build the kernel.

1   Build a system kernel in the current directory using the following
command:

/usr/sbin/mk_kernel -ssystem

2   Enter the following command sequence to complete the process:

mv /stand/system /stand/system.prev

mv /stand/vmunix /stand/vmunix.prev

mv /stand/build/system /stand/system

mv /stand/build/vmunix_test /stand/vmunix

Task 5:   Reboot and install.

1   Reboot your system.

2   Because the user ID of the user booting Adaptive Server and Backup
Server must be the owner of the /dev/async device file, type the
following commands as root at the UNIX command prompt:

/etc/mknod /dev/async c 101 4
chmod 0660 /dev/async

3   Continue with the installation process by installing Sybase.

4   *After* you successfully install Sybase, type the following command at the
command line:

chown sybase /dev/async

5   Continue with the installation process by installing OVPI.

Reconfiguring Your Kernel on Solaris

You must reconfigure your kernel before you install Sybase. After you reconfigure your kernel, you can install Sybase and then OVPI.

To reconfigure the kernel, edit the `/etc/system` file as follows:

1   Modify the following command to reflect the total number of bytes (*nnnnnnnnnn*) that will be allocated to Sybase:

`set shmsys:shminfo_shmmax=`*nnnnnnnnnn*

See Table 5 for information about how much memory you need to allocate for Sybase. The total number of bytes must meet or exceed the requirements listed.

For Solaris 8 and 9, you can specify up to 4294967295 (4 GB) whether or not you physically have this amount of memory available.

> ▶   One gigabyte equals 1024^3; therefore, the total number of bytes is calculated as follows: *Number of gigabytes* x 1024^3. For example, the calculation for 4 GB would be as follows: $4 \times 1024^3 =$ 4294967295.

2   Modify the **`maxusers`** parameter. By default, this parameter is set to the number of megabytes of physical memory or 1024, whichever is lower. You cannot set it higher than 2048.

3   Reboot your system.

Using a Raw Partition or a UNIX File System

This section describes the differences between installing the OVPI Sybase database on a raw partition (S0 and Veritas raw partitions are supported) or on a UNIX file system.

To install Sybase on a raw partition, see for details before you install OVPI. To install Sybase on a UNIX file system, see Chapter 4, Installing OVPI on Sybase for details.

Users who want to install the Oracle database on a raw partition must set up the tablespaces themselves (and then choose the **Use existing tablespaces on Oracle** option during installation). Refer to Creating Tablespaces on page 84, and to the Oracle documentation.

When you install OVPI, the database is installed on a UNIX file system by default.

Comparing a Raw Partition to a UNIX File System

A *raw partition* on a UNIX system is a part of the disk where no file system has been created. Even though the Sybase Adaptive Server can use UNIX files for database devices, Sybase recommends using raw partitions instead.

Most UNIX systems use a buffer cache for disk I/O. Writes to disk are stored in the buffer and may not be written to disk immediately. If the Sybase Adaptive Server completes a transaction and sends the result to a UNIX file, the transaction is considered complete, even though the UNIX buffer cache may not have been written to disk. If the system crashes before this buffer cache is written, you lose data. In this situation, the Sybase Adaptive Server has no way of knowing that the write to disk eventually failed, and the transaction is not rolled back. In addition, some UNIX operating systems do partial writes. In that case, if the system crashes, the Sybase device is corrupted.

Using raw partitions for Sybase devices allows the Sybase Adaptive Server to process its own I/O requests without having to go through the UNIX buffering scheme. Using this method, Sybase Adaptive Server knows exactly what portions of a transaction completed or failed in the event of a system crash.

Using a Raw Partition

If you use a raw partition, the effect is to partition or isolate your database from any other information that may be stored on that server. Such partitioning has important performance implications.

Advantages

All of the stored data resides in a single location. This can increase database efficiency and processing speed. In addition, in the event of a system crash, a partitioned database can be somewhat easier to recover. It is also much more difficult for an outside influence to interfere with the database.

Disadvantages

Some OVPI users find that the performance advantages of installing Sybase on a raw partition are not significant for their systems. The installation process is more involved and may be unnecessary. In addition, installing Sybase on a raw partition requires more of your server's available disk space. Moreover, you cannot use standard UNIX backup utilities to back up a raw partition. You must use Sybase's backup and archive utilities to make a copy of the database.

Using the UNIX File System

If you use the UNIX file system, your database may be surrounded by and interspersed with other applications. Again, this has advantages and disadvantages.

Advantages

Installing Sybase on the UNIX file system is a simpler process that you accomplish as part of the OVPI installation. Sybase can still operate at 80%+ of peak efficiency. Some database administration tasks are also easier to perform. Since Sybase installation automatically reserves disk space for its own use, there is often no need to create a physical partition.

Disadvantages

If you install Sybase on the UNIX file system, Sybase components on your hard disk are dispersed. This means that Sybase will sometimes need to search several different locations on the disk to find the information it needs. This can slow down Sybase processing somewhat. Since Sybase is not physically isolated from other applications, it is marginally more susceptible to outside influences.

In the final analysis, HP cannot make a blanket recommendation about how you should install Sybase. This issue needs to be decided on a case-by-case basis, preferably in consultation with an HP systems engineer.

Setting Up Raw Partitions

You must set up the raw partitions needed before you install the OVPI database, the transaction log, and `tempdb` (if you decide to install `tempdb` on a raw partition).

Sybase executables, libraries, installation, and configuration files reside on a file system. The OVPI executables, reports, demo database, and documentation also reside on a file system.

You can set up as many raw partitions as necessary to accommodate the size of your OVPI database, transaction log, and tempdb.

Suggested guidelines for setting up the database are as follows:

- Place tempdb on a raw partition or on a file system. HP recommends that you place tempdb on a file system. The size of tempdb should be 50% of the size of the OVPI database.

- Place the OVPI database on either a raw partition or file system.

- Place the transaction log the same way you place the OVPI database; that is, place it on either a raw partition or on a file system. If you place the transaction log on a raw partition, place it on a different disk spindle from the OVPI database. The size of the transaction log should be 50% of the size of the OVPI database.

▶ Do not install any Sybase database components on a raw partition that contains the partition map. Typically, this is found on the first sector of the first cylinder.

Setting Up a Raw Partition on Solaris

This section contains the procedure you need to set up a raw partition on Solaris using the command-line interface.

In the procedure, partitions c0t3d0s3 and c0t3d0s4 could represent the following:

- c0t3d0s3: OVPI Database (10 GB)

- c0t3d0s4: tempdb (5 GB)

You can repeat this procedure, as needed, substituting partition name and size for the raw partitions that you could be using to comprise either the OVPI database, the transaction log, or tempdb (if you are placing tempdb on a raw partition).

To create raw partitions, perform the following tasks.

Task 1:   Execute the format command.

1   At the command prompt, type the following:

format

2   Select the number of the disk on which the raw partition will be created. A list of command options appears.

Task 2:   Assign partition slices.

1   Type the following command:

partition

A list of command options appears.

2   Type the following command:

print

A table of the slices on the selected disk appears.

3   Select the number of an available slice.

4   Enter a valid tag (for example, **home**) when prompted.

5   Keep the default permissions (**wm**).

6   Enter the starting cylinder by adding 1 to the highest ending cylinder other than backup.

7   Enter the partition size (for example, **20g** for 20 GB; **35m** for 35 MB).

8   Repeat Step 2 through Step 7 for each partition that you want to create on this disk.

Task 3:   Label the disk.

1   After the last partition is assigned, type the following command:

label

2   Type **Y** at the prompt.

3   Type **quit** at the prompt.

4   Type the following command (for the second partition in the example used):

label

5 Type **Y** at the prompt.

6 Type **quit** at the prompt.

Task 4: **Create a raw partition on another disk, if necessary.**

Repeat Task 1 through Task 3 to create a raw partition on another disk.

Task 5: **Change the character block.**

For each disk, you must also change the character block. To change the group ID (using the example partitions), type the following

```
chgrp sybase /dev/dsk/c0t3d0s3

chgrp sybase /dev/rdsk/c0t3d0s3

chgrp -h sybase /dev/dsk/c0t3d0s3

chgrp -h sybase /dev/rdsk/c0t3d0s3

chgrp sybase /dev/dsk/c0t3d0s4

chgrp sybase /dev/rdsk/c0t3d0s4

chgrp -h sybase /dev/dsk/c0t3d0s4

chgrp -h sybase /dev/rdsk/c0t3d0s4
```

Setting Up a Raw Partition on HP-UX

This section contains the procedure you need to set up raw partitions on HP-UX using Application Manager and the command-line interface.

In the procedure, lv01and lv02 could represent the following:

- lv01: OVPI Database (10 GB)
- lv02: tempdb (5 GB)

You can repeat this procedure, as needed, substituting partition name and size for the raw partitions which you could be using to comprise either the OVPI database, the transaction log, or tempdb (if you are placing tempdb on a raw partition).

Using the SAM Utility

▶ The interface shown in the following procedure will differ slightly, depending on the version of HP-UX that you are using.

To set up a raw partition, perform the following tasks.

Task 1: Log on and start the SAM utility.

1 Log on as root.

2 Invoke the SAM utility (typically from the **/usr/sbin** directory). The System Administration Manager window opens.

3 Double-click the **Disks and File Systems** icon. The Disk and File Systems dialog box opens.

Task 2: Decide whether to create a volume group.

- If you *do not* need to create a volume group, do the following:

  a Double-click the **Logical Volume** icon.

  b From the Actions menu, select **Create**. The Create New Logical Volumes window opens.

  c Click **Select Volume Group**.

  d From the pop-up box, select the volume group.

  e Click **OK**.

  f Click **Define New Logical Volume(s)**.

- If you *do* need to create a volume group, do the following:

  a Double-click the **Volume Groups** icon.

The `Scanning the Hardware` message appears in the Disks and File Systems dialog box, and then the following window opens. (In this example, an existing volume group is listed.)

File List View Options Actions				Help

Volume Groups   0 of 1 selected

Name	Mbytes Available	Physical Volumes	Logical Volumes
vg00	296 of 4092	1	9
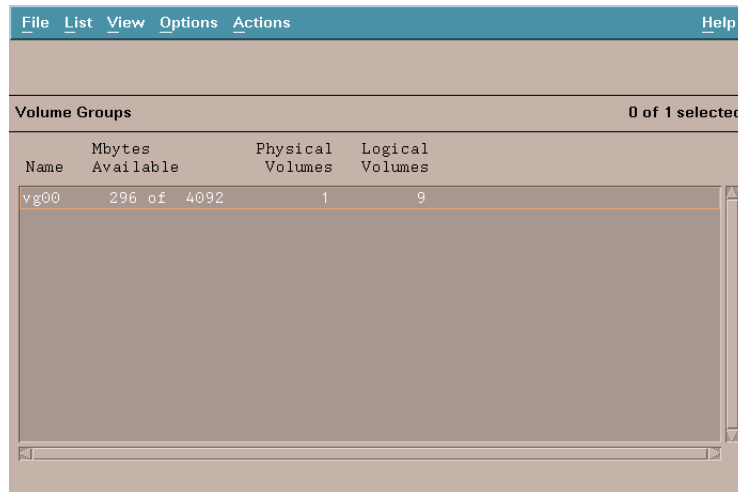
b Select **Actions, Create**, or **Extend**. The Select a Disk dialog box opens.

Select a Disk (aucilla)

Unused Disks:

Hardware Path	Description	Total Mbytes
8/0/19/0.15	IBM DDRS-39130W	8715

Diagnose Missing Disk...

OK	Cancel	Help
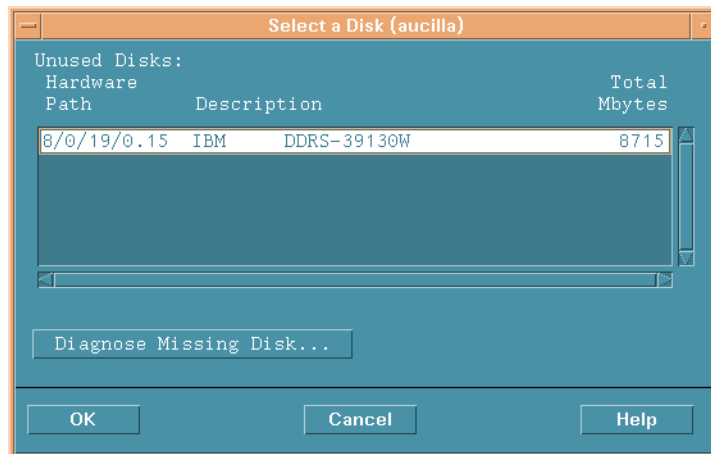
This window identifies the disk's hardware path, the disk's location on the SCSI chain, and total disk capacity in MB.

c Click **OK**. The Add a Disk using LVM dialog box opens. *(*LVM is the Logical Volume Manager.
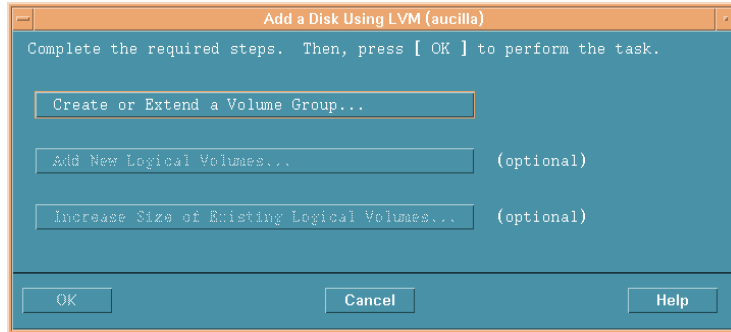
d Click **Create or Extend a Volume Group**. The Create a Volume Group dialog box opens.
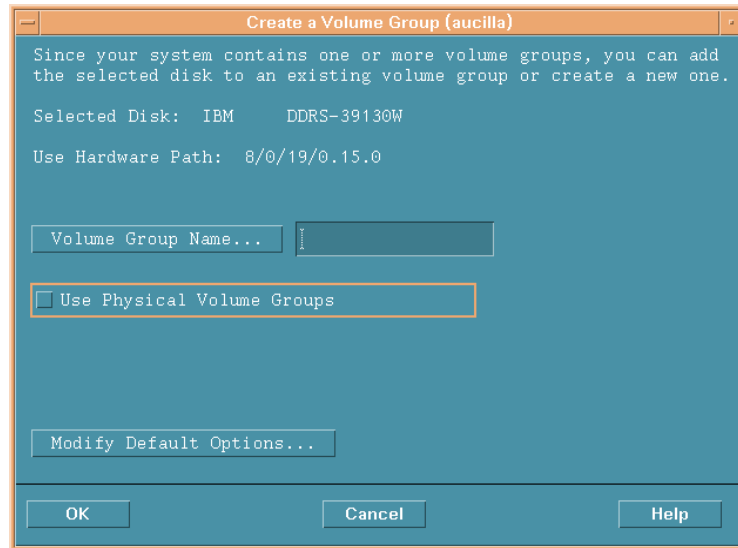
e Type the name of the volume group in the Volume Group Name box (in this example rn00).

f   Click **OK**. The Add a Disk Using LVM dialog box opens.
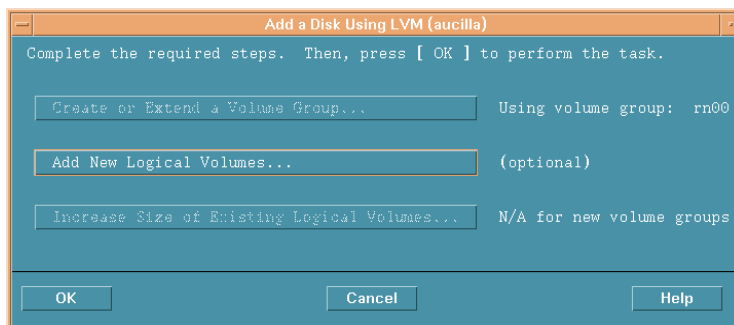
g   Select the **Add New Logical Volumes** button. The Create New Logical
Volumes dialog box opens.

▶   Do not click the **OK** button during this procedure; this will start the
physical volume creation task, which is an unrelated procedure.

Task 3:   Create a new logical volume.

1   In the LV Name box, type the name of the logical volume (**1v01** in this
example).

2   In the LV Size (Mbytes) box, type the size of the logical volume (**10240** in
this example).

▶   The physical extent size for the volume group must be a multiple of
4. If you enter a value in the LV Size (Mbytes) box that is not a
multiple of 4, a message appears to notify you that the system will
round the value up to the nearest multiple of 4. Click **OK** to dismiss
the message and continue.

3   Select **None** from the Usage list.
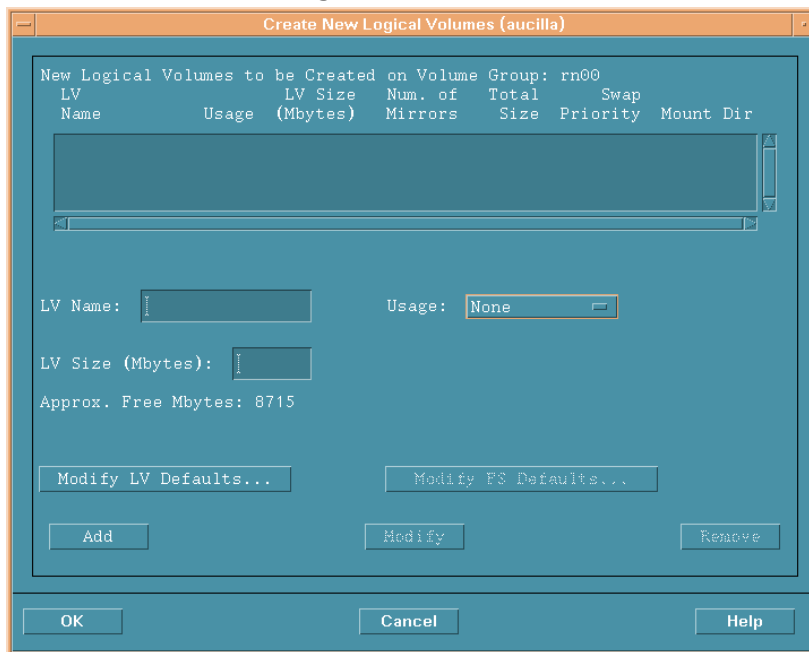
4   Click **Add**. The parameters appear in the dialog box.

The Create New Logical Volumes dialog box reopens with the newly created logical volume listed.

5   In the LV Name box, type the name of the logical volume (**lv02** in this example).

6 In the LV Size (Mbytes) box, type the size of the logical volume (**5120** in this example). The Create New Logical Volumes dialog box appears as follows:

```
┌──────────────────────────────────────────────────────────────────────┐
│ ─              Create New Logical Volumes (aucilla)                  . │
├──────────────────────────────────────────────────────────────────────┤
│                                                                        │
│  New Logical Volumes to be Created on Volume Group: rn00               │
│    LV                 LV Size   Num. of   Total      Swap              │
│    Name        Usage  (Mbytes)  Mirrors   Size   Priority  Mount Dir   │
│   ┌──────────────────────────────────────────────────────────────┐    │
│   │ lv01        None      36       0        36       --    --     │    │
│   │                                                              │    │
│   │                                                              │    │
│   │                                                              │    │
│   │ ◁ ───────────────────────────────────────────────────── ▷  │    │
│   └──────────────────────────────────────────────────────────────┘    │
│                                                                        │
│  LV Name:   │ lv02 │                 Usage:  │ None        ▭ │        │
│                                                                        │
│  LV Size (Mbytes):   │ 60 │                                            │
│                                                                        │
│  Approx. Free Mbytes: 8679                                             │
│                                                                        │
│                                                                        │
│   ┌─────────────────────────┐         ┌─────────────────────────┐      │
│   │  Modify LV Defaults...  │         │  Modify FS Defaults...  │      │
│   └─────────────────────────┘         └─────────────────────────┘      │
│    ┌──────────┐              ┌──────────┐              ┌──────────┐     │
│    │   Add    │              │  Modify  │              │  Remove  │     │
│    └──────────┘              └──────────┘              └──────────┘     │
│                                                                        │
├──────────────────────────────────────────────────────────────────────┤
│  ┌──────────┐              ┌──────────┐              ┌──────────┐       │
│  │    OK    │              │  Cancel  │              │   Help   │       │
│  └──────────┘              └──────────┘              └──────────┘       │
└──────────────────────────────────────────────────────────────────────┘
```

7 Ensure that the Usage box is set to **None**, and then click **Add**.

The two logical volumes that were created in this procedure are listed.

8   Repeat Step 5 through Step 7 for each raw partition. Adjust the name and size for each partition.

All of the logical volumes you create during the actual procedure will be listed.

9   Click **OK**.

The Add a Disk Using LVM dialog box reopens.

Task 4:   Add the logical volumes.

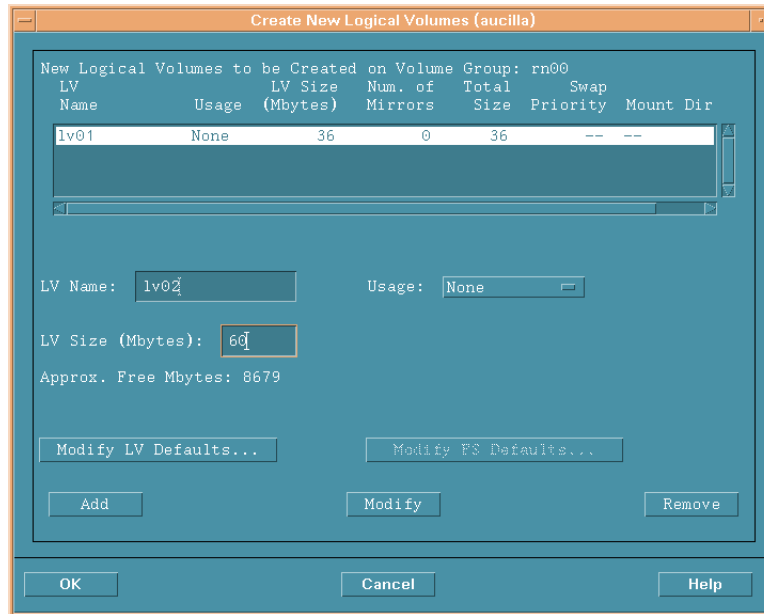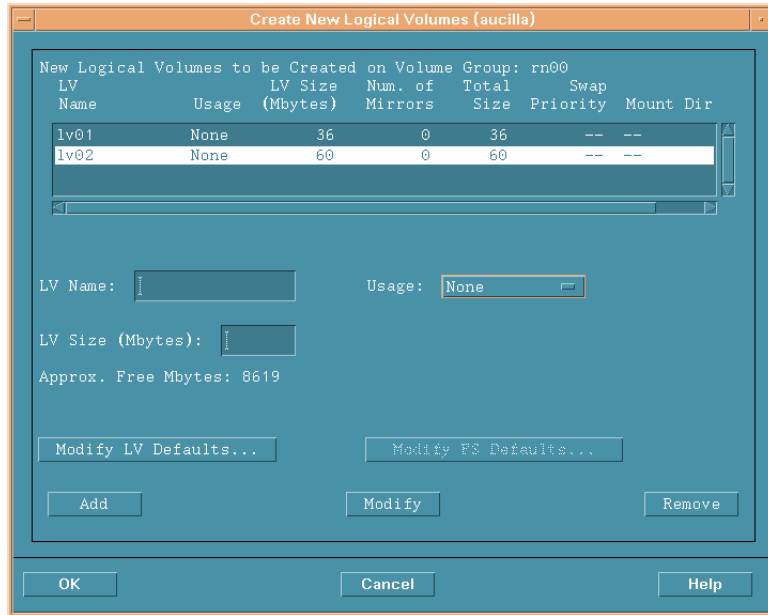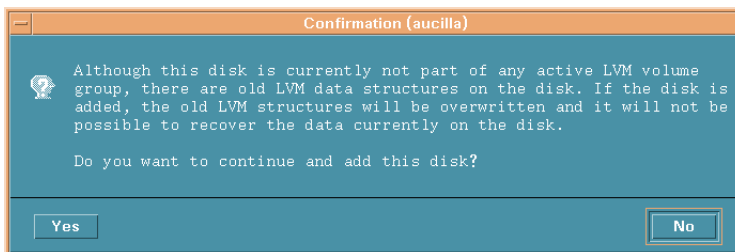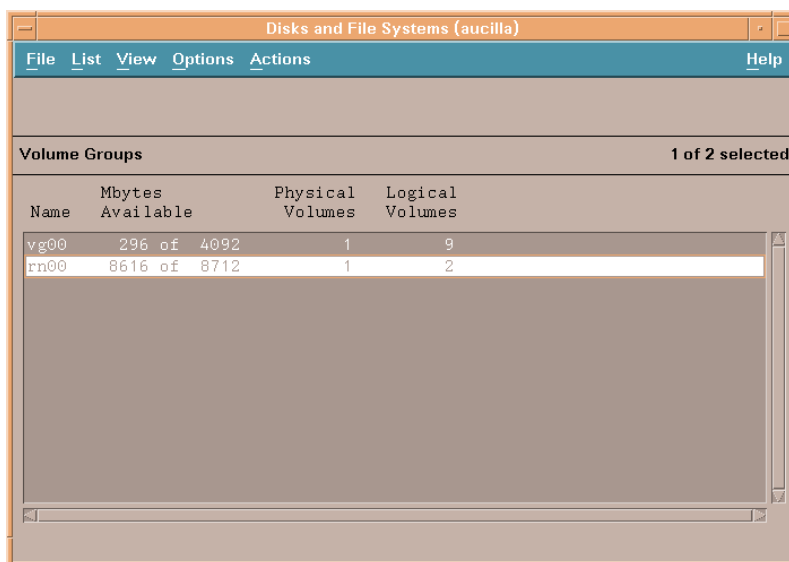**1**   Click **OK** to add the additional logical volumes.

2 If the following confirmation dialog box opens, click **Yes** to continue the creation of the new logical volume process.

```
┌─────────────────── Confirmation (aucilla) ───────────────────┐
│                                                              │
│   ⚲   Although this disk is currently not part of any active LVM volume │
│       group, there are old LVM data structures on the disk. If the disk is │
│       added, the old LVM structures will be overwritten and it will not be │
│       possible to recover the data currently on the disk.    │
│                                                              │
│       Do you want to continue and add this disk?             │
│                                                              │
│  ┌───────┐                                        ┌───────┐  │
│  │  Yes  │                                        │  No   │  │
│  └───────┘                                        └───────┘  │
└──────────────────────────────────────────────────────────────┘
```

The Disks and File Systems dialog box opens. The newly created logical volumes are listed.

```
┌──────────────── Disks and File Systems (aucilla) ─────────────┐
│  File  List  View  Options  Actions                    Help  │
│                                                              │
│                                                              │
│  Volume Groups                              1 of 2 selected  │
│                                                              │
│          Mbytes           Physical   Logical                 │
│   Name   Available        Volumes    Volumes                 │
│  ┌──────────────────────────────────────────────────────┐   │
│  │ vg00    296 of  4092          1         9            │   │
│  │ rn00   8616 of  8712          1         2            │   │
│  │                                                      │   │
│  │                                                      │   │
│  │                                                      │   │
│  │                                                      │   │
│  │                                                      │   │
│  │                                                      │   │
│  │                                                      │   │
│  │                                                      │   │
│  └──────────────────────────────────────────────────────┘   │
│                                                              │
└──────────────────────────────────────────────────────────────┘
```

Using the Command Line

To set up raw partitions on an HP-UX system using the command line interface, perform the following tasks.

Task 1: Log on.

1 Log on as `root`.

2 Before creating a logical volume, run the `ioscan` command to determine the disks attached to the system and their device file names:

```
ioscan -f -n
```

Task 2:   Initialize each disk.

1   Initialize each disk as an LVM disk by using the pvcreate command. For example, enter:

pvcreate /dev/rdsk/c0t15d0

> ▶ Using the pvcreate command results in the loss of all data currently on the physical volume, and you use the character device file for the disk. Once a disk is initialized, it is called a physical volume.

2   Create a directory for the volume group. For example:

mkdir /dev/rn00

3   Create a device file named group in the above directory using the mknod command. The basic syntax is:

mknod /dev/rn00/group c 64 0x010000

The c following the device file name specifies that group is a character device file. The 64 is the major number for the group device file; it will always be 64. The 0x010000 (0x020000, etc.) is the major number for the group file in hexadecimal. Note that each particular 01, 02, etc. must be a unique number across all volume groups.

Use the pvdisplay command to get information about your drive. For example:

pvdisplay /dev/dsk/c0t15d0

Task 3:   Create a volume group.

Create the volume group specifying each physical volume to be included using the vgcreate command. For example:

vgcreate /dev/rn00 /dev/dsk/c0t15d0

The following messages appear as a result of this command:

```
Increased the number of physical extents per physical volume to
2178
```

```
Volume group "dev/rn00" has been successfully created
```

Task 4:   Create a logical volume.

Once you have created the volume group, create a logical volume using the
lvcreate command. For example:

lvcreate /dev/rn00

When LVM creates the logical volume, it creates the block and character
device files and places them in the directory **/dev/rn00/lvol1**.

The following message appears as a result of this command:

```
/dev/rn00/lvol1 has been successfully created with character device
"/dev/rn00/rlvol1".
```

Task 5:   Repeat as needed.

Repeat Task 2 through Task 4 for each raw partition to be created.

Task 6:   Allocate disk capacity.

The following commands illustrate how to allocate (extend) disk capacity for
the specific lvol.

For the OVPI database:

lvextend -L 36 /dev/rn00/lvol1

For the Temporary Database:

lvextend -L 60 /dev/rn00/lvol2

▶   Repeat the entire procedure, as needed, substituting partition name and size
for the raw partitions that you could be using to comprise either the OVPI
database, the transaction log, or tempdb (if you are placing tempdb on a raw
partition).

Starting the Setup Program

The OVPI setup program runs the installation wizard, which contains options
for installing Sybase, OVPI's components, and Remote Poller and upgrading
OVPI and the Remote Poller.

This section describes how to start the setup program on both Windows and
UNIX operating systems.

To start the setup program:

1   Log on to the local system.

— *Windows*

Log on as a user with administrative privileges.

— *UNIX*

Log on as root.

2   Insert the installation CD in the CD-ROM drive. If you are a UNIX user, you must also mount the CD.

Table 10 provides instructions for mounting the CD on each of the UNIX platforms:

Table 10   Mounting the OVPI CD on UNIX

Operating System	Command
Sun Solaris	The CD should mount automatically when you insert it in the CD-ROM drive. If the CD-ROM mounts automatically, the File Manager window opens. 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	You can use the SAM utility to mount the CD-ROM, *or* you can 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.

3   *Solaris systems only*: Do the following:

a   To display the cd_label, type the following command:

ls -l /cdrom

b   To change directory, type the following command:

cd /cdrom/cd_label

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

4   Do *one* of the following to start the setup program:

— *Windows*

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*

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

`./setup`

The Setup window opens.

► *Windows only.* If the wizard windows display incorrectly, see
Appendix A, Troubleshooting.

3
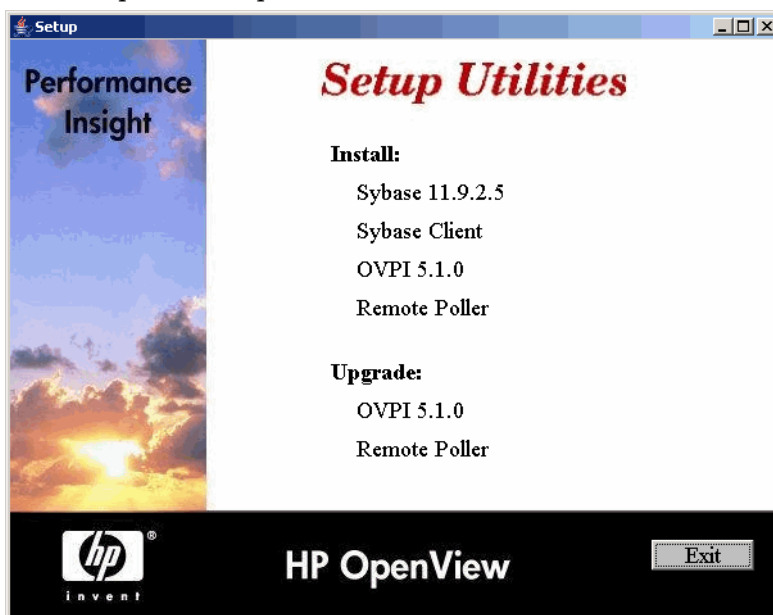
Installing a Database

The data that HP OpenView Performance Insight (OVPI) collects is stored in a database. You must install a database and have it running on your system *before* you install OVPI.

OVPI supports the following databases:

- Sybase Adaptive Server 11.9.2.5 ESD 1

    Sybase is OVPI's embedded database; the Sybase software is provided on the OVPI product CD-ROM. See Installing Sybase 11.9.2.5 on page 64 for more specific information.

- Oracle 9.2.0.5

    The Oracle software is *not* provided with the OVPI media kit. You must purchase and install Oracle separately. For installation guidelines, see Installing Oracle 9.2.0.5 on page 80.

    To use an existing 9.2.0.5 Oracle database and install OVPI so that it will access the database remotely, see Using an Existing Remote Oracle Database on page 89.

For the list of operating systems that each database supports, see Supported Operating and Database Management Systems on page 28.

▶ The OVPI installation program installs on both databases with default configurations, sizing, and so on. To optimize the installation of OVPI for your particular environment, you may want to consult with a database administrator.

Installing Sybase 11.9.2.5

This section contains instructions for installing the following Sybase software:

- Sybase Adaptive Server 11.9.2.5 ESD 1 (Windows and UNIX systems)
- Sybase Client (Windows only)

  Installing the Sybase Client software is optional. The Sybase client software installs SQLAdvantage, which is a tool you can use to view the contents of the Sybase database.

  The Sybase Client has the same installation procedure as Sybase Adaptive Server on Windows. To install Sybase Client, follow the procedure in Installing and Starting Sybase on Windows on page 64.

Sybase uses a file called an interfaces file to locate the SQL Servers on the network. Use the dsedit utility to create or modify this file. See Appendix B for details.

Installing and Starting Sybase on Windows

▶ When you installed Windows, the process created the paging file at the recommended size (approximately 1.5 to 2 times the amount of RAM on your system), assuming that your hard disk had enough space. Adaptive Server requires the Windows virtual-memory paging file to be at or above its recommended size; otherwise, Adaptive Server fails to start and gives no indication as to what caused the problem. For more information about the paging file and how to change its size, see your Windows operating system documentation.

To install and start Sybase on Windows, perform the following tasks.

Task 1:   Log on and start the Setup program.

    1   Log on to the local system as a user with administrative privileges.

    2   Insert the OVPI Installation CD in the CD-ROM drive and start the Setup program (see Starting the Setup Program on page 59).

        The Setup window opens (see page 61).

    3   Do *one* of the following:

        — Click **Sybase 11.9.2.5** to install Sybase Adaptive Server.

        — Click **Sybase Client** to install Sybase Client.

        The Welcome dialog box opens.
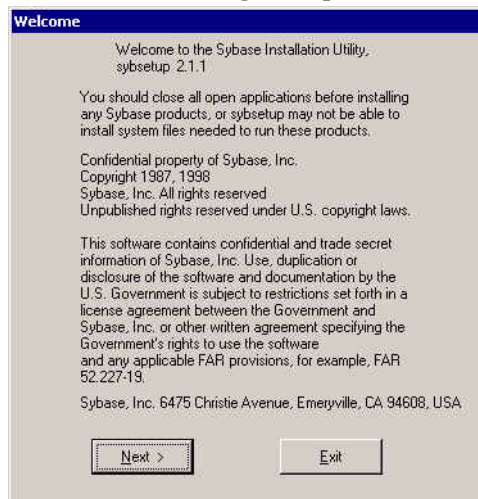
    4   Click **Next**.

Task 2:   Select the type of installation that you want to perform.

1   The Select Installation Type dialog box opens and displays the name of the application that you are installing.
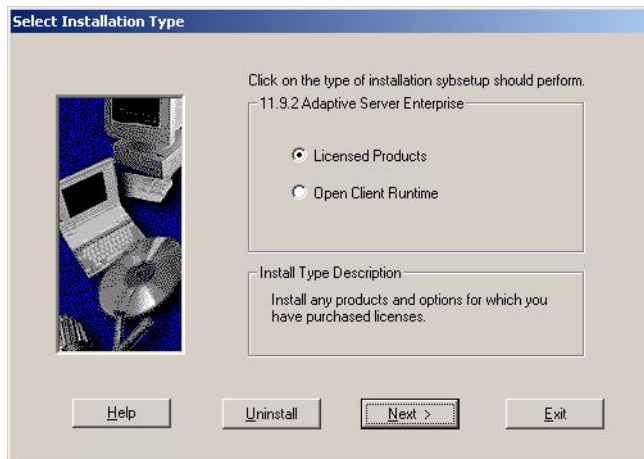
2   Select the installation type that you want to perform.

3   Click **Next**.

Task 3:   Select the path and program folder.

The Select Sybase Installation Directory window opens.
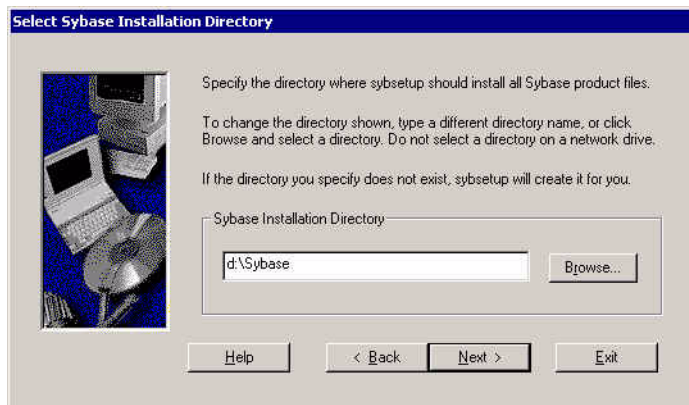
1   Click **Next** to accept the default path.

If you enter a different path, it cannot contain any blank spaces.

The Select Program Folder window opens.
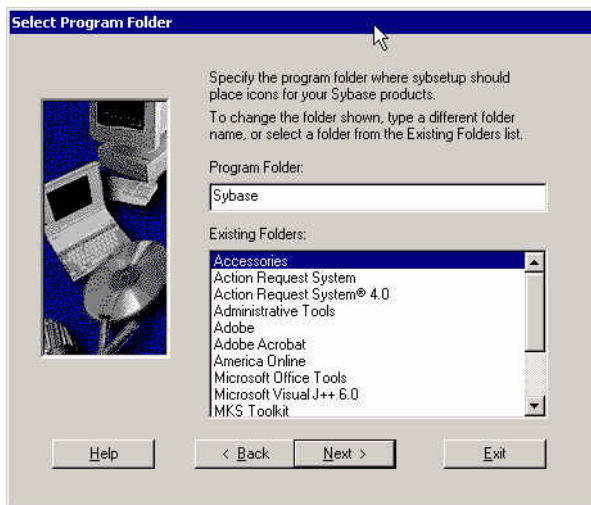
2 Click **Next** to accept the default program folder for Sybase.

The Product Selection window opens.
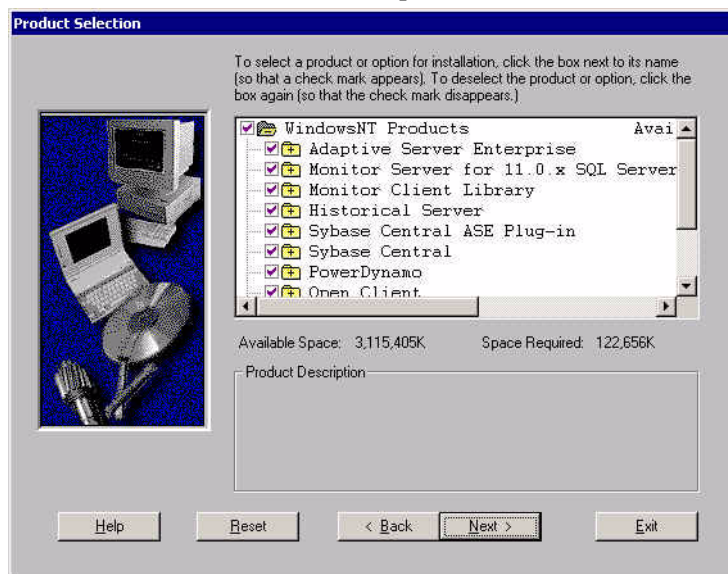
Task 4:   Accept a set of product features.

By default, all of the Sybase product options are selected; however, you do not need to install all of the options.

Do *one* of the following:

- To install all of the Sybase products and continue the installation, click **Next**.

- To select the minimum product options needed, click to clear all of the options **except** the following, and then click **Next**:

  — Adaptive Server Enterprise

  — Sybase Central ASE Plug-in

  — Sybase Central

  — Open Client

  — Language Modules

▶ If you do not choose the Historical Server option, there will be no backup server. Refer the *Performance Insight Administration Guide* for information about creating a backup server.

The Installation Summary window opens.
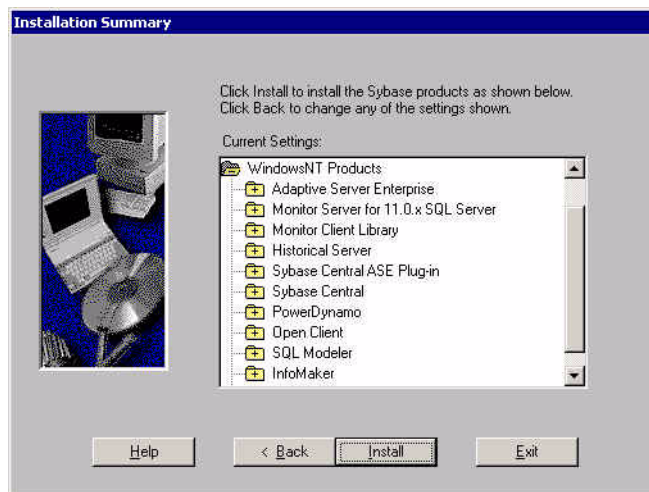
Task 5:   Review the summary of the options that will be installed.

1   Review the summary of installation options. To change an option, click **Back** until you reach the window that contains the option you want to change.

2   Click **Install** to continue with the installation.

A Verification message opens.
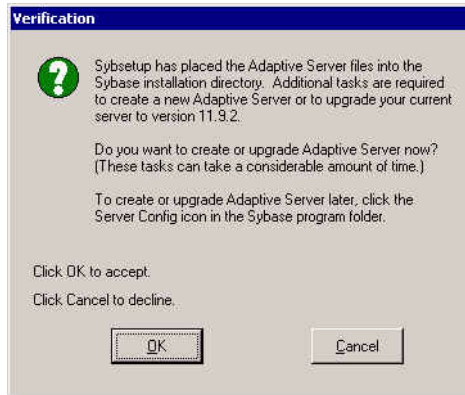
3   Click **OK**.

Task 6: Create and configure the adaptive server.

The Create an Adaptive Server window opens.
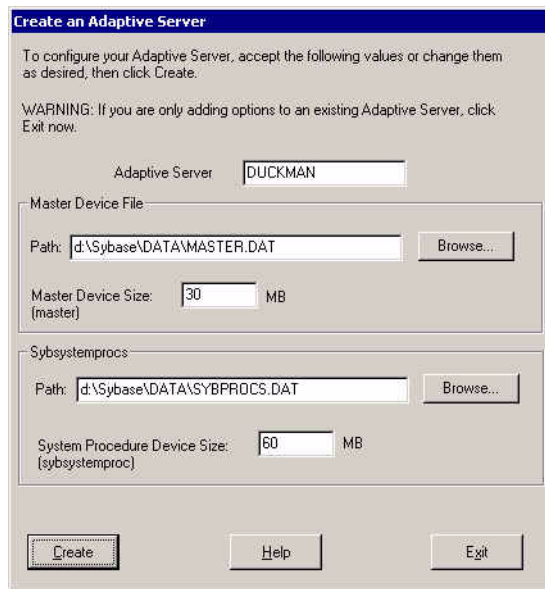
The options on the Create an Adaptive Server window are:

— Adaptive Server

  The server's name, which must be a valid server name identifier. Server names can be no more than 31 characters long. The first character must be alphabetic. Characters following the first character can include letters, numbers, or an underscore. You cannot use embedded spaces or hyphens.

— Master Device File

  The default path for the master device file

— Sybsystemprocs

  The default path for Sybase System Procedures

— System Procedure Device Size (sybsystemproc)

  A default value of 60 MB for the System Procedure Device Size

1 Do *one* of the following:

— Review the configuration options for creating the Adaptive Server, make any changes you want, and then click **Create** to create the Adaptive Server.

— Click **Exit** if an Adaptive Server already exists, and all modifications to the existing server have been made.

2   When the installer successfully completes, the Installation Complete window opens.
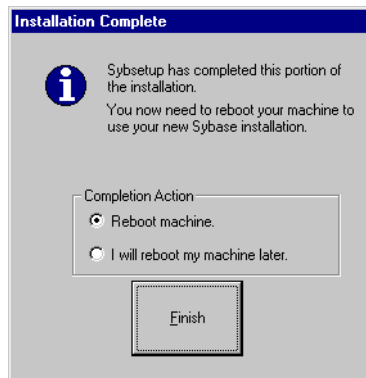
Task 7:   Reboot your system.

You must reboot your system before you can use Sybase.

Reboot your system by doing *one* of the following:

•   Select **Reboot Now** to immediately reboot your system, and then click **Finish**.

•   Select **Reboot Later** to reboot your system at a later time, and then click **Finish**.

Task 8:   Start your system.

After your system reboots, you *must* start Sybase before you can install OVPI.

To start Sybase, do the following:

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

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

3 Select **Sybase SQLServer_*server*,** where *server* is the name of your Sybase SQL Server.

4 Right-click the service name, and then select **Start** from the shortcut menu.

> ➤ You can make the Sybase service start automatically whenever you reboot your system by doing the following:
>
> **a** Right-click the service name, and then select **Properties**.
>
> **b** From the Startup type list, select **Automatic**.

5 Close the Services window.

You can now install OVPI. See Chapter 4, Installing OVPI on Sybase, or Chapter 6, Installing OVPI in a Distributed Configuration.

Task 9: Set a Sybase sa password (optional).

To set a Sybase sa password, login to isql as the "sa" user with a null password, and specify a new password, represented by *<sa_password>*:

```
isql -Usa -P
1> sp_password NULL, <sa_password>
2> go
```

Installing and Starting Sybase on UNIX

To install and start Sybase on a UNIX system, perform the following tasks.

Task 1: Log on and start the Setup program.

1 Log on to the local system as root.

2 Insert the OVPI Installation CD in the CD-ROM drive and srat the Setup program. See Starting the Setup Program on page 59.

3 The Setup window opens (see page 61).

Task 2: Select the OVPI installation option.

1 Select **Sybase 11.9.2** from the Setup window.

2   Read the Welcome message.

3   Click **Next**.

Task 3:   Specify the information needed to configure Sybase.

The Sybase Settings window opens.

1   Type the name of the Sybase SQL server in the Server Name (DSQUERY) box.

The Sybase SQL server is where the client applications will look for information by default. The default server name is <*hostname*>_SYBASE. In this instance, *hostname* is the name of your Sybase SQL server.

> ▶   Ensure that you enter the Sybase SQL server's name in uppercase and that it is a valid server name identifier. Server names can not be more than 31 characters. The first character must be alphabetic. Characters following the first character can include letters, numbers, or an underscore. You cannot use embedded spaces or hyphens.

2   Type the port number for the Sybase server in the TCP/IP Port Number box.

The default port number is 2052. Sybase uses assigned TCP ports to communicate with Sybase clients and servers on other systems. It knows how to find them by the combined IP address of the remote system and the TCP Port of the application it needs on that system. This information is stored in the interfaces file in the Sybase directory. Sybase uses only one TCP port. It can be any port numbered higher than 1024 that is not already used by another application. The installation wizard will use the port number you enter here for Sybase.

If you change the TCP Port, check the **/etc/services** file to make sure that no other application is using your port number or the one after it.

3   In the Sybase Administrator (SA) Password box, type a password for the SA account, and then retype this password in the Confirm box.

When you create the Sybase Administration password, adhere to the following rules:

- It must be at least 6 characters long.

- It can contain any printable letters, numbers, or symbols.

- It cannot exceed 30 characters. If your password exceeds 30 characters, Sybase will only use the first 30 characters and ignore the remaining characters.

4   Do *one* of the following:

— In the Installation Directory box, type the name of the directory in which Sybase is to be installed. (By default, this is /usr/Sybase.)

— Click **Browse** to display the Choose Directory dialog box, which lets you select a directory other than the default. After you select a directory, click **OK** to return to the Sybase window.

5   If necessary, click **Advanced** to modify the installation's configuration.

The Sybase Advanced Configuration dialog box opens and contains the following tabs:

— General. Lets you specify the location of the Sybase `error.log` file.
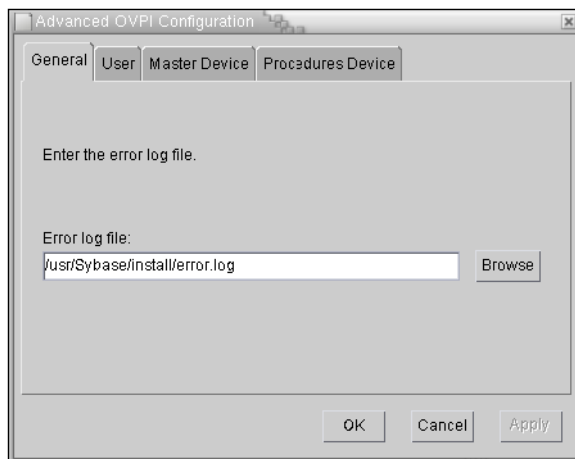
— User. Lets you create or modify the `sybase` operating system account.

On UNIX systems, the Performance Manager component requires an operating system user and group named `sybase`. Depending on whether the user account exists, one of two windows will open.
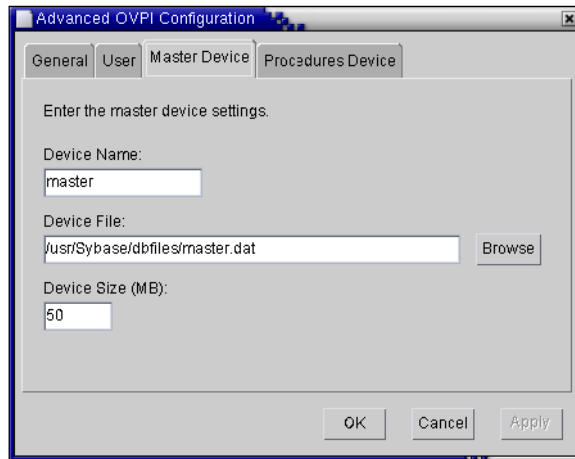
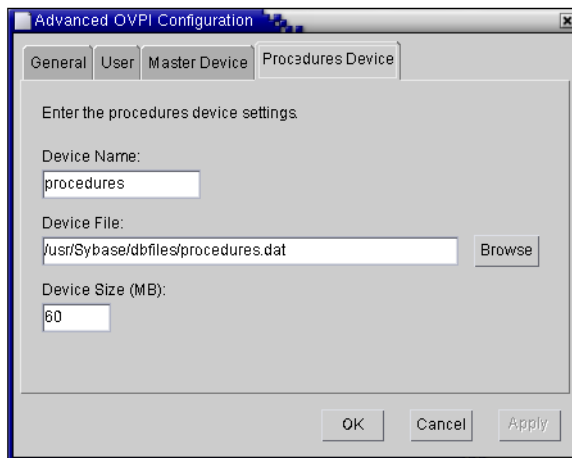If the user account *does not* exist, you must create an account.
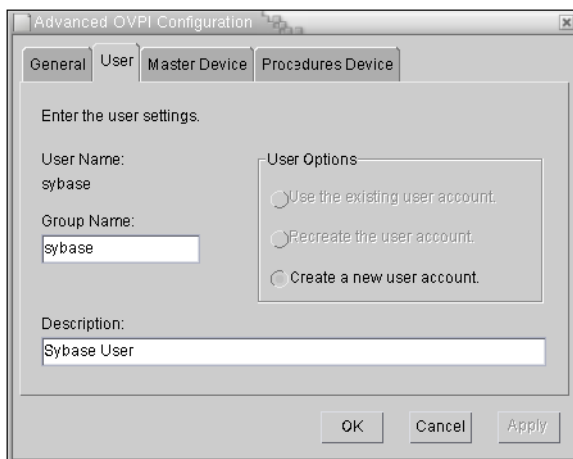
If the user account *does* exist, you can modify the account.
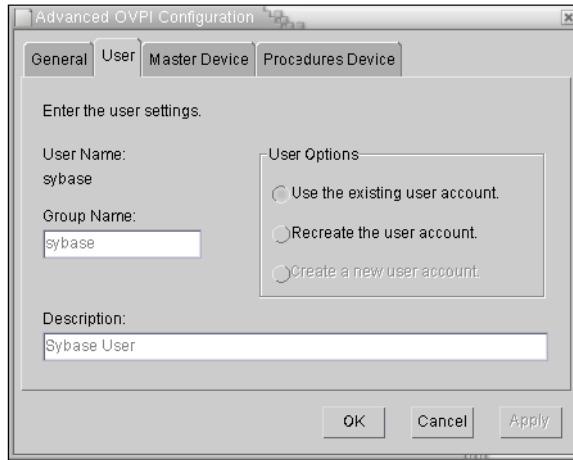
— Master Device. Lets you specify the master device name, location, and size.

— Procedures Device. Lets you specify the procedures device name, location, and size.

Click **OK** to apply any changes you make, or **Cancel** to return to the Sybase Settings window.

6 Click **Next**.

If the installation program detects either of the following conditions, it will display a message:

— An existing database: If you continue, the installation will overwrite your current database. Click **Yes** to overwrite the existing database and proceed with the installation.

— Insufficient disk space: If the system has insufficient disk space, the installation will most likely fail. Click **OK** to dismiss the message, and click **Cancel** in the Selection Summary window. Free up the necessary disk space and restart the installation.

Task 4: Review the installation information and install.

Figure 18 on page 123 shows the Selection Summary window.

1 Review the Selection Summary window and, 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 Selection Summary window.

2 Click **Install** to continue the installation.

Task 5: **Close the Setup program.**

The Progress window opens, showing the installation status. See Figure 19 on page 124.

Do *one* of the following:

- If the Sybase installation was successful, click **Done**.

- If the Sybase installation was unsuccessful, click the **Details** button at the bottom of the Progress window. See Troubleshooting a Sybase Installation Failure on page 79 for details.

Task 6: **Verify that Sybase is running on your system.**

▶ After you install Sybase successfully, it should automatically be running on your system. If it is not, you must manually start it *before* you can install OVPI.

To verify if Sybase is running on your system, enter the following at the command line:

`ps -ef | grep -i sybase`

Task 7: **Start Sybase, if necessary.**

If Sybase is *not* running, enter *one* of the following commands:

- *Solaris*

   `/etc/init.d/Sybase start`

- *HP-UX*

   `/sbin/init.d/Sybase start`

You can now install OVPI. See Chapter 4, Installing OVPI on Sybase or Chapter 6, Installing OVPI in a Distributed Configuration.

Task 8: **Make Sybase the owner of the /dev/async directory.**

After you successfully install Sybase, type the following command at the command line as `root`:

`chown sybase /dev/async`

Task 9:   Set a Sybase sa password (optional).

To set a Sybase sa password, login to isql as the "sa" user with a null password, and specify a new password, represented by *<sa_password>*:

```
isql -Usa -P
1> sp_password NULL, <sa_password>
2> go
```

Shutting Down Sybase

If you ever need to shut down Sybase, type the following commands:

isql -Usa -P *<sa_password>* -S<DSQUERY>

1>**shutdown**

2>**go**

<sa_password> is needed only if you have set a Sybase sa password.

Troubleshooting a Sybase Installation Failure

Use the error.log file in the Sybase installation directory to determine the cause of an installation failure. Sybase writes messages to this file each time the system is booted and each time a Sybase error occurs. The name of the error log file is as follows:

- *UNIX*

    $SYBASE/install/*servername*_SYBASE.log

- *Windows*

    $SYBASE/install/errorlog

After you identify the cause, consult the Sybase documentation.

Installing Oracle 9.2.0.5

This section offers general guidelines for installing Oracle 9.2.0.5 on a new OVPI installation.

► This section does not explain how to install and tune Oracle. For your convenience, the OVPI installation program does provide defaults for Oracle tuning parameters and tablespace creation. Before you install OVPI, you may want to have your Oracle database administrator design and set up the Oracle database, including the creation of the tablespaces needed by OVPI.

To use OVPI with an Oracle database, perform the following tasks.

Task 1: Purchase and install Oracle.

OVPI supports Oracle Enterprise Edition 9.2.0.5 with Partitioning. Partitioning, as of this writing, is a separately purchased option from Oracle.

Task 2: Start the Oracle installation program and install it according to the Oracle documentation.

Make the following selections when the specified window is displayed:

- *Installation Types window.* Select either of the following:
    - **Enterprise Edition** for a full installation.
    - **Custom** for a custom installation, where you can select the minimal number of Oracle components necessary for OVPI.
- *Available Product Components window* (Custom installation only):

    At a minimum, you must select at least the following options:
    - Oracle9i Database 9.2.0.1.0. Select **Oracle9i 9.2.0.1.0**.
    - Enterprise Edition Options. Select **Oracle Partitioning**.
    - Oracle Net Services 9.2.0.1.0. Select **Oracle Net Listener**.

    You can choose to clear the other installation options without affecting the OVPI installation.
- *Database Configuration Assistant Step 5 of 7 (Initialization Parameters) window.*

    Do the following:

> — Select the **Typical** option.

> — Select the Character Sets tab and make sure you select the AL32UTF8 character set to support wide character data storage (for example, for Japanese).

Task 3: Apply the Oracle 9.2.0.5 patch set.

1 Go to Oracle's web site (**www.oracle.com**), click the **MetaLink** icon, and log on.

> ▶ You need to have a current product support contract to access this website.

2 Download the 9.2.0.5 patch set.

> ⚠ Before you install the patch set, be sure to read the README.html file included in the zip file containing the patch set.

3 Install the 9.2.0.5 patch set

> ▶ Be sure to install all pieces of the patch set, starting with the Oracle Universal Installer (OUI) shipped with the patch set in **ORACLE_HOME**.

In the Specify File Locations window, be sure that the destination File Name contains the existing Oracle home location.

4 *HP-UX only*: During the patch set install, you are prompted to run root.sh. Before doing so, you must edit the root.sh script. Change the following lines:

```
CHMODF="/bin/chmod -f"
CHMODRF="/bin/chmod -fR"
```

to

```
CHMODF="/bin/chmod "
CHMODRF="/bin/chmod -R"
```

⚠ Due to a defect in the Oracle patch installation, you must perform the following steps *after* installing the patch set and *before* installing OVPI; otherwise, OVPI will display an error regarding Oracle's missing system table, IND_ONLINE$.

5 Assuming that the database and the listener program are *not* running, and that your database password is *manager*, do one of the following:

    — *Windows*

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 Select and start the listener program and the database server, and then continue to Step 6.

    — *UNIX*

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

    >**lsnrctl start**

b Continue to Step 6.

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

>**sqlplus/nolog**

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

7 Start the database by typing:

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

8 Run SQL scripts by typing:

SQL>**@?/rdbms/admin/catpatch.sql**
SQL>**@?/rdbms/admin/catcio.sql**

> The first script may require up to an hour to run.

9 Shutdown and then start the database by typing:

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

10 Exit SQL*Plus by typing:

SQL>**exit**

11 Before you install OVPI, make sure that the instance for the Oracle listener program created for OVPI is running.

Task 4: Edit the tnsnames.ora file on the system where Oracle client is installed.

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

- *Windows*

  oracle_install_dir\network\admin

- *UNIX*

  oracle_install_dir/network/admin

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

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)
    )
  )
```

4 Save the tnsnames.ora file.

Creating Tablespaces

When you install OVPI on Oracle, the installation wizard asks whether you want to create new tablespaces or use existing tablespaces (see Figure 5 on page 134). You can create the tablespaces at that time, or you can create them now by following the steps in this section. By creating them now, you will be able to choose "use existing tablespaces" during OVPI installation.

⚠ It is recommended that an Oracle database administrator perform the following task.

To create tablespaces now, you *must* do the following *before* you install OVPI:

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

```
SQL> CREATE TABLESPACE dpipe_default_seg
DATAFILE 'dpipe_default_seg.dbf' SIZE 10M REUSE
AUTOEXTEND ON NEXT 10M 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;
```

➤ Alternatively, you can use Oracle Enterprise Manager to perform any of the steps in this procedure.

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

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 10M REUSE
AUTOEXTEND ON NEXT 10M MAXSIZE UNLIMITED
LOGGING ONLINE PERMANENT
EXTENT MANAGEMENT LOCAL AUTOALLOCATE
SEGMENT SPACE MANAGEMENT AUTO;
```

Repeat this procedure to create the remaining tablespaces.

This example creates a tablespace that is 10MB, which is relatively small. For information about how you should determine the proper size for your tablespaces based on the size of your database, see Tablespace Sizing Guidelines on page 87.

3   Adjust Oracle parameters

Because Oracle includes the ability to optimize itself automatically, it is only necessary to set a minimum number of parameters to allow full optimization of the database.

Table 1 lists these parameters and the recommended value for each. You can obtain the current list of values for the parameters in Table 1 by querying the V$SYSTEM_PARAMETER table. For a description of each parameter, see Changing Specific Oracle Configuration Parameters on page 140.

Table 1   Recommended Values for Oracle Parameters

Parameter	Recommended Value
SGA_MAX_SIZE shared memory = 40% of SGA size buffer cache = 40% of SGA size large pool = 12% of SGA size java pool = 8% of SGA size	60% of the total system memory
PGA_AGGREGATE_TARGET (M)	200M
DB_FILE_MULTIBLOCK_READ_COUNT	stripe size (KB)[a] / DB_BLOCK_SIZE (KB)[b]
WORKAREA_SIZE_POLICY	AUTO
DB_CACHE_SIZE (Windows) DB_32K_CACHE_SIZE (UNIX)	95% of available buffer cache[c]
PARALLEL_AUTOMATIC_TUNING	TRUE
COMPATIBLE	9.2.0

a.   See Determining Stripe Size

b.   See Determining the Database Block Size.

c.   See Determining Cache Size.

Determining 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 your System 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';
```

Tablespace Sizing Guidelines

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 during the OVPI installation. See Changing Specific Oracle Configuration Parameters on page 140 for details.

Table 2 shows the Oracle tablespaces and the percentage of the database that they should occupy.

Table 2   Size of Oracle Tablespaces in dpipe

Tablespace	Percent of Total Database
dpipe_default_seg	5%
dpipe_property_ind_seg	2%
dpipe_property_seg	2%
dpipe_upload_ind_seg	6%

Table 2   Size of Oracle Tablespaces in dpipe (cont'd)

Tablespace	Percent of Total Database
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 3 is an example that shows how you would set up a 1GB database using the ratios listed in Table 2 and the extent size rule.

Table 3   Tablespace Size for a 1 GB Database

Tablespace	Initial Tablespace Size	Extent[a]
dpipe_default_seg	50 MB	25 MB
dpipe_property_ind_seg	20 MB	10 MB
dpipe_property_seg	20 MB	10 MB
dpipe_upload_ind_seg	60 MB	30 MB
dpipe_upload_seg	70 MB	35 MB
dpipe_rate_ind_seg	120 MB	60 MB
dpipe_rate_seg	120 MB	60 MB
dpipe_summary_ind_seg	120 MB	60 MB
dpipe_summary_seg	120 MB	60 MB
dpipe_overflow_seg	300 MB	150 MB

Table 3   Tablespace Size for a 1 GB Database (cont'd)

Tablespace	Initial Tablespace Size	Extent[a]
Total Database	1 GB	Default
temp	4 GB	Default
undo	1 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%).

Using an Existing Remote Oracle Database

If you have an existing Oracle 9.2.0.5 database and plan to install OVPI, keeping the database on a system separate from the OVPI installation, you must perform the following tasks.

➤ Earlier levels of the Oracle database (9.2.0.1 through 9.2.0.4) must be upgraded to the 9.2.0.5 level for use with OVPI 5.1. You can do this by installing the 9.2.0.5 patch set where noted in the following procedure.

Task 1:   Install Oracle Client and configure it to point to the remote Oracle database.

1   Start the Oracle Client installation program, and select **Install/Deinstall Products**. The Welcome window opens.

2   Click **Next**. The File Locations window opens.

3   Click **Next** to accept the default file locations *or* change the defaults, and then click **Next**. The Available Products window opens.

4   Select Oracle9i **Client xxxx** (where xxxx is the version number). The Installation Types window opens.

5   Select **Runtime**, and then click **Next**. The Summary window opens.

6   Click **Install**.

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

The Configuration Tools window will open during the installation saying that it has started the Oracle Net Configuration Assistant and will display the Configuration Assistant's Welcome window.

8 In the Configuration Assistant's Welcome window, select **No, I will create the net service names myself**, and then click **Next**. The Database Version window opens.

9 Accept the default (Oracle8i or later database or service), and click **Next**. The Service Name window opens.

10 Type the database's service name in the Service Name box, and click **Next**.

Normally, this is the database's global database name. The Select Protocols window opens.

11 Accept the default (TCP), and click **Next**. The TCP/IP Protocol window opens.

12 Type the host name for the computer on which the database is located in the Host name box, accept the default TCP/IP port number (1521), and click **Next**. The Test window opens.

13 Select **Yes, perform a test**, and click **Next**. The Connecting window will notify you if the test was successful.

14 If the test is successful, click **Next** in the Connecting window. The Net Service Name window opens.

15 Accept the default net service name *or* change the name, and then click **Next**. The Another Net Service Name window opens.

16 Click **No**, and click **Next**. The Configuration Done window opens.

17 Click **Next**. The Done window opens.

18 Click **Finish**. The End of Installation window opens.

19 Click **Exit**.

20 Continue to Task 2 if you need to upgrade your Oracle database to 9.2.0.5. Otherwise continue to Task 3.

Task 2:   Upgrade to Oracle 9.2.0.5 by applying the 9.2.0.5 patch set to your Oracle database.

1   Go to Oracle's website (**www.oracle.com**), click the **MetaLink** icon, and log on.

> ▶   You need to have a current product support contract to access this website.

2   Download the Oracle 9.2.0.5 patch set.

> ⚠   Before you install the patch set, be sure to read the README.html file included in the zip file containing the patch set.

3   Install the Oracle 9.2.0.5 patch set

> ▶   Be sure to install all pieces of the patch set, starting with the Oracle Universal Installer (OUI) shipped with the patch set in **ORACLE_HOME**.

4   *HP-UX only*: During the patch set install, you are prompted to run root.sh. Before doing so, you must edit the root.sh script. Change the following lines:

```
CHMODF="/bin/chmod -f"
CHMODRF="/bin/chmod -fR"
```

to

```
CHMODF="/bin/chmod "
CHMODRF="/bin/chmod -R"
```

Task 3:   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.

Task 4:   Edit the tnsnames.ora file on the system where Oracle client is installed.

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

- *Windows*

  oracle_install_dir\network\admin

- *UNIX*

  oracle_install_dir/network/admin

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

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)
    )
  )
```

4 Save the tnsnames.ora file.

Task 5: Create the dsi_dpipe user and tablespaces on the system where the Oracle database is installed.

1 Create the dsi_dpipe user and grant it specific privileges.

2 Create specific tablespaces as the dsi_dpipe user.

Follow the procedure in Creating Tablespaces on page 84.

Task 6:   Install OVPI on the system where Oracle Client is installed.

See Chapter 5, 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 (Figure 3 on page 132). 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.

Installing OVPI on Sybase

This chapter describes how to install HP OpenView Performance Insight (OVPI) on supported operating systems in a standalone configuration on a Sybase database.

A *standalone* system is one where all of the OVPI components are installed on a single system. If you would like to install OVPI in a distributed configuration, see Chapter 6, Installing OVPI in a Distributed Configuration. To install OVPI on an Oracle database, see Chapter 5, Installing OVPI on Oracle.

Before you install OVPI, be sure that you have met the following requirements:

- Read the *Performance Insight Release Notes*. This document provides an overview of the changes made to OVPI for the version 5.1 release.

- Your system must meet the prerequisites in Chapter 2, Preparing for Installation. For all Windows and UNIX systems, see System Requirements on page 27. In addition, see UNIX-Specific Requirements on page 38 for UNIX systems.

- You have installed the database according to the information provided in Chapter 3, Installing a Database.

Installing OVPI – Standalone

This section describes the information that you need to supply when you use the installation wizard, and how to install OVPI on both Windows and UNIX systems.

Preparing for Component Installation

Most of the information that you need to supply when you use the installation wizard will have default values; however, HP recommends that you have this information available prior to installation in the event that you want to change a default value.

Table 1 lists each of the OVPI components, the installation wizard window that asks for information about the component, the parameters requested in each window, and the default values for the parameters.

Table 1   Installation Wizard Configuration Parameters

Component	Wizard Window	Default Values for the Parameters
All components	Destination Folder	**Destination Directory**: `C:\OVPI` (Windows) or `/usr/ovpi` (UNIX)
OVPI database schema	Sybase Reference Using Sybase Administrator User	**Sybase Server Name**: *<LOCAL_HOST>*[a] (Windows) *or* *<LOCALHOST>*_SYBASE (UNIX) **Sybase Host Name**: System on which Sybase is installed **Sybase Port**: 5000 (Windows) *or* 2052 (UNIX) **Sybase Directory**: `C:\Sybase` (Windows) *or* `/usr/Sybase` (UNIX)

Table 1   Installation Wizard Configuration Parameters (cont'd)

Component	Wizard Window	Default Values for the Parameters
OVPI database schema	Sybase User and Device Creation	**Database Devices**: *Sybase_directory*\dbfiles (Windows) ***or*** *Sybase_directory*/dbfiles (UNIX) **Database Size**: 800 MB **Transaction Log**: *Sybase_directory*\dbfiles (Windows) ***or*** *Sybase_directory*/dbfiles (UNIX) **Percent of Database**: 50% **Temporary Space**: *Sybase_directory*\dbfiles (Windows) ***or*** *Sybase_directory*/dbfiles (UNIX) **Percent of Database**: 50%
Performance Manager	Performance Manager Settings	**Poller/Collection Cache Directory**: *OVPI_directory*\collect (Windows) ***or*** *OVPI_directory*/collect (UNIX)
Web Access Server	Web Access Server Settings	**OVPI Administrator Username**: trendadm **HTTP Port**: 80

a.   In this instance, *LOCAL_HOST* (Windows) or *LOCALHOST* (UNIX) is the name of the Sybase host.

Installing OVPI

▶ With the exception of starting the installation wizard, the **Advanced** button on the Sybase User and Device Creation window (raw devices), and the Operating System User for Performance Manager window, the steps for installing OVPI as a standalone system are identical for both Windows and UNIX systems. To minimize duplication, this section provides separate instructions for starting the installation wizard on Windows and UNIX; however, it provides only one procedure for the OVPI installation.

Task 1:   Make sure that the database is installed and running.

If you have *not* installed the database, see Chapter 3, Installing a Database.

Task 2:   Start the setup program.

Run the OVPI setup program. See Starting the Setup Program on page 59.

Task 3: Select the OVPI installation option.

Select **OVPI 5.1.0** from the Install section of the Setup window.

Task 4: Read the Welcome window.

Figure 1 shows the Welcome window.

Figure 1   Welcome Window

Click **Next** to continue the installation.

Task 5:   Accept or reject the license agreement.

Figure 2 shows the License Agreement window.

Figure 2   License Agreement Window

Do *one* of the following:

- To reject the license agreement and discontinue installation, click **Cancel**.

  A confirmation window appears.

  — If you click **Yes**, the installation process ends.

  — If you click **No**, the License Agreement window appears again. You can then click the **I accept the terms in the license agreement** option to proceed with installation.

- To accept the license agreement and continue installing OVPI, click the **I accept the terms in the license agreement** option, and then click **Next**.

Task 6:   Select the OVPI components you want to install.

Figure 3 shows the Component Selection window.

Figure 3   Component Selection Window

1   Make sure that all components are checked; all components are required for a standalone installation.

For a description of each component, see OVPI Components on page 12.

2   Click **Next** to continue the installation.

Task 7:   Specify an installation directory for the OVPI software.

Figure 4 shows the Destination Folder window.

Figure 4   Destination Folder Window

An installation directory can be any one of the following: NFS mounted directory, UNIX soft link, UNIX hard link, or a Windows mapped drive.

⚠ The path to the destination folder cannot contain any blank spaces.

Do *one* of the following:

- Click **Next** to accept the default destination folder and to continue the installation.

- Type a different destination folder from the default, and click **Next** to continue the installation.

Depending on the installation directory you specified, the following will occur:

- If the installation directory does not already exist, the setup program creates it.

- If the installation directory already exists and contains data, a message will display to warn you that the directory is not empty.

- If you specify an installation directory that is located on a file system that the setup program cannot access, a message will display to warn you. You cannot continue the installation until you supply a valid directory.

Task 8: **Select the database settings in which the OVPI database schema will be installed.**

Figure 5 shows the Database Selection window.

Figure 5   Database Selection Window

1   Select **Create new database on Sybase**.

This option requires that no dpipe_db database or dsi_dpipe user exist in order for the installation to complete successfully.

2   Click **Next**.

Task 9:   Locate and connect to the database.

Figure 6 shows the Sybase Reference Using Sybase Administrator User
window.

Figure 6   Sybase Reference Using Sybase Administrator User

The Sybase Reference Using Sybase Administrator User window contains the
following values:

• Sybase Server Name (DSQUERY). This is the name of the Sybase SQL
  Server where the client applications will look for information by default.
  (Note that this name is case sensitive.) You can find the name of this
  server in the Sybase interfaces file; this file is located on the system where
  the Sybase SQL Server is installed. For more information about the
  Sybase interfaces file, see Appendix B.

• Sybase Host Name. This is the name of the system on which Sybase is
  installed.

- Sybase TCP/IP Port Number. The TCP/IP port number that Sybase uses to communicate with clients and servers on other systems. In addition to <DSQUERY>, there are several other Sybase SQL Servers that will be assigned port numbers during the installation. These servers are as follows:

Sybase Server	Windows	UNIX
<DSQUERY>_BS	5001	2053
<DSQUERY>_MS	5002	2054
<DSQUERY>_HS	5003	2055
<DSQUERY>_XP	5004	2056

  You must manually start each of these servers in order for them to work.

- Sybase Administrator (SA) Password. If you changed the Sybase Administrator password during the Sybase installation from a NULL value to an actual password, type that password in the Sybase Administrator (SA) Password box.

  If you did *not* change the Sybase Administrator during the Sybase installation, you can leave this box blank.

- Sybase Directory. The directory into which you installed Sybase. Click **Browse** to select a different directory. After you select a directory, click **Open** to return to the Sybase SA Reference window.

Do *one* of the following:

- Click **Next** to accept the default values for Sybase environment configuration.

- Type the necessary values, and click **Next**.

Task 10: Create the OVPI user account and devices.

Figure 7 shows the Sybase User and Device Creation window.

Figure 7   Sybase User and Device Creation Window

The installation wizard creates the device files for the OVPI database using Sybase Adaptive Server. Files are created within Sybase for the following: OVPI database, transaction log, and temporary space. The OVPI database uses the device files to store its data. (If raw devices are used, no device files are created.)

By default, the installation wizard creates the device files in the Sybase installation directory in a subfolder called dbfiles. You can change the name of this folder at this point in the installation to be something different; however, the name cannot contain any spaces.

➤   All Sybase devices are created using the vstart=512 option. This lets you use labeled file systems with OVPI. For example, if the size of your database is 800 MB, only 799 MB of it will be available; one megabyte is allocated for the label.

The Sybase User and Device Creation window contains the following options:

- Database Devices and Database Size (MB). Specifies the file location of the database device and its size.

- Transaction Log and Percent of Database. Specifies the file location of the transaction log and the amount of space allocated to it in the database.

- Temporary Space and Percent of Database. Specifies the file location of the temporary space and the amount of space allocated to it in the database.

- OVPI Database User (dsi_dpipe) Password and Confirm Password. Creates a password for the dsi_dpipe account.

Do the following:

1   Accept the default values for the OVPI database configuration, or modify a value; click **Browse** to specify a different location.

> HP recommends that the temporary space (dpipe_temp) and the transaction log (dpipe_log) be approximately 50% the size of the database device (dpipe_db). For example, if the database (dpipe_db) is 800 MB, then the temporary space (dpipe_temp) and temporary log (dpipe_log) should be 400 MB each.

2   In the OVPI Database User (dsi_dpipe) Password box, create a password for this account, and then retype the password in the Confirm Password box.

Create the dsi_dpipe password adhering to the following rules:

- The password must have a minimum length of six characters and cannot exceed 30 characters in length.

- The password must start with an alphabetic character.

- Valid characters are all alphanumeric characters, the underscore (_), and the pound (#).

> The password is case sensitive.

3 If needed, click **Advanced** to display the Advanced OVPI Configuration dialog box. This dialog box lets you do the following:

- Add files to or remove them from the OVPI database devices (dpipe_db, dpipe_temp, and dpipe_log); on UNIX systems only, you can use raw partitions for these devices (Database, Transaction Log, and Temporary Space tabs); S0 and Veritas raw partitions are supported. See Modifying the Sybase Database Devices on page 107 for details.

- Modify the Sybase configuration parameters (Parameters tab). See Changing Sybase Configuration Parameters on page 109 for details.

4 Click **Next** to continue the installation.

Modifying the Sybase Database Devices

To modify the OVPI database devices:

a Select the tab associated with the device (Database, Transaction Log, or Temporary Space) you want to modify. Figure 8 shows the Database tab in the Advanced OVPI Configuration dialog box.
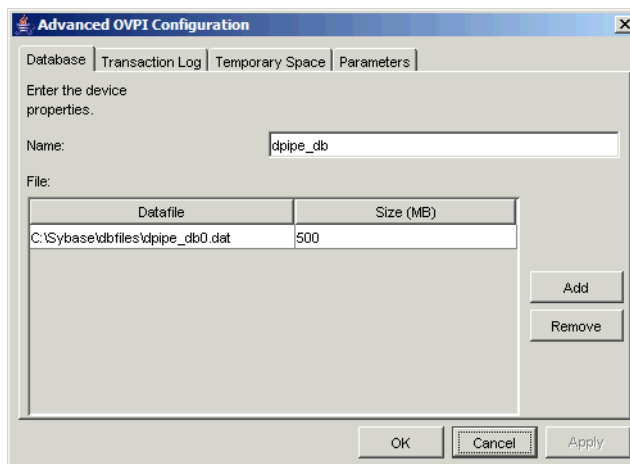
Figure 8 Database Tab

b To add a file to a database device, do one of the following:

— *Windows*:

   Click **Add**.

— *UNIX*:

Click **Add**, and then click the Datafile arrow, and select a file from the list.

A precalculated size for the device appears next to the device's name in the Size (MB) column. If you are using raw partitions, it is recommended that you do not change this value.

c *File-system database files only*: To edit the file, double-click the file, path, or size cell.

d To remove a file:

— Click on the file, and press the TAB key.

— Press the up or down arrow key to enable selection, and then use the up or down arrow key to select the file you want to remove.

— Click **Remove**..

▶ You must create at least one file for each device.

e *UNIX only*: To use a raw partition for a database device, do the following:

— Select the tab associated with the device that you want to use a raw partition.

— Select the **Use raw partitions for this database** check box.

The installation application will find disk partitions that are not mounted, used, swapped or listed in the /etc/vfstab file. This will prevent any file systems that may have been unmounted, but are still available as file systems if the administrator were to mount them, from being used by the installation wizard.

f Click **Apply** when you have finished making all of your changes.

g Click **OK** to return to the Sybase User and Device Creation window, and then click **Next** to continue the installation.

When you return to the Sybase User and Device Creation window, you may notice the following conditions:

• *UNIX only*: If you chose a raw partition for a particular database device, the database device will appear dimmed on the window.

• If you added a file to or removed a file from one of the devices, the percentages and database size listed on the window will be recalculated.
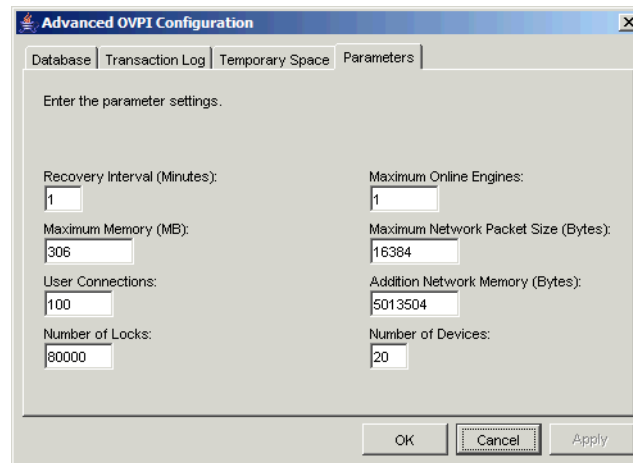
- If a database device has several files that are located in different directories, the fields for the database device will appear dimmed on the window.

Changing Sybase Configuration Parameters

⚠ HP recommends that only a Sybase database administrator change the values for these parameters.

To change your Sybase configuration parameters:

a Select the Parameters tab in the Advanced OVPI Configuration dialog box, shown in Figure 9.

Figure 9   Parameters Tab

The Parameters tab contains the following options:

— Recovery Interval (Minutes). Sets the maximum number of minutes that the SQL Server should use to recover each database in case of system failure.

— Maximum Memory (MB). Sets the size of memory that the SQL Server allocates from the operating system.

— User Connections. Sets the maximum number of user connections that can be connected to a SQL Server at the same time. The global variable @@max_connections stores the maximum values for your system. It varies according to operating system.

— Number of Locks. Sets the number of available locks.

— Maximum Online Engines. Controls the number of engines in a symmetric multiprocessor environment.

If your system uses a single CPU, the recommended value is 1. If you increase the value, there is a possibility that Sybase will slow down due to internal contention. However, if your system uses multiple CPU's, the value may be increased in order to take advantage of the multiple CPU architecture.

— Maximum Network Packet Size (Bytes). Sets the maximum network packet size that a client program can request.

— Additional Network Memory (Bytes). Allocates additional memory for clients that request packet sizes larger than the default packet size for the server.

— Number of Devices. Limits the number of database devices that the SQL Server can use.

b Click **Apply** when you have finished making all of your changes.

c Click **OK** to return to the Sybase User and Device Creation window, and then click **Next** to continue the installation.

Task 11: Install Performance Manager.

Figure 10 shows the Performance Manager Settings window.

Figure 10 Performance Manager Settings Window

► For collections to work properly, the disk partition on which the Poller Collection/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.

Do the following:

1 If needed, click **Advanced** to open the Advanced OVPI Configuration dialog box, which lets you specify the directory in which the log files will reside. Figure 11 shows the Log Settings tab in the Advanced OVPI Configuration dialog box.
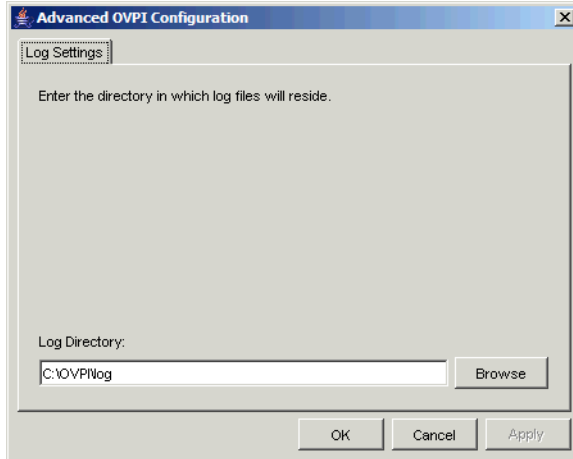
Figure 11 Log Settings Tab

To specify a directory for log files:

a In the Log Directory box, do one of the following:

— Type the directory path in which the log files will reside.

— Click **Browse** to locate the desired directory.

— Accept the default path; the default creates a log folder under the directory into which you installed OVPI.

The installation will create a log directory under the directory in which you installed OVPI. Certain log files will be maintained there regardless of the directory you specify in the Log Directory box.

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

2   Do *one* of the following:

  — Click **Next** to accept the default location for the Cache Folder and to
     continue the installation.

  — Type a fully-qualified path to the location, and click **Next** to continue
     the installation.

  — Click **Browse** to navigate to a location for the Cache Folder, and then
     click **Next** to continue the installation.

3   Do one of the following depending on your operating system:

  — Windows: Go to Task 13 on page 116.

  — UNIX: Proceed with Task 12.

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

On UNIX systems, the Performance Manager component requires an
operating system account and group named trendadm.

▶   The purpose of this account is to preserve the environment in which OVPI
will run. This account is used to log on to the operating system and should not
be confused with the trendadm account you will create in Task 13 on page 116,
which is used to log on to the Web Access Server application.

The Operating System User for Performance Manager window will open and
will prompt you for different information depending on whether or not this
account exists.

• If the operating system account and group do not exist, see Creating the
  Operating System Account on page 114.

• If the operating system account and group do exist, see Modifying the
  Existing Operating System Account on page 115.

Creating the Operating System Account

Figure 12 shows the Operating System User for Performance Manager window.

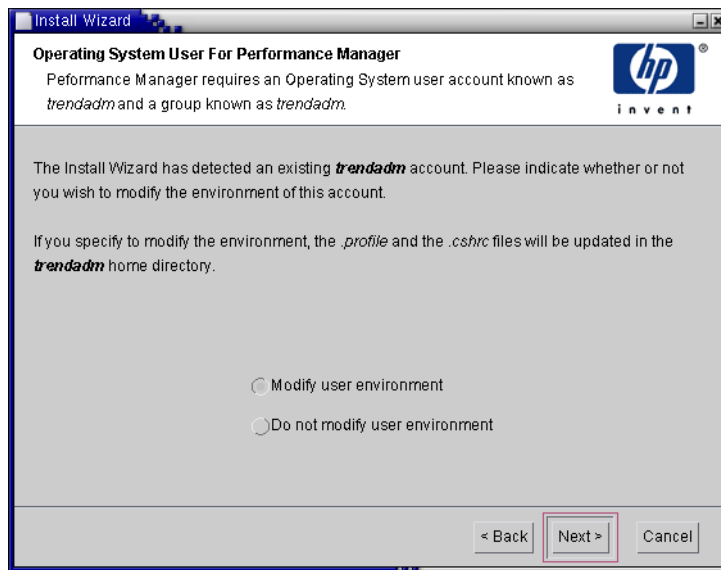**Figure 12 Operating System User for Performance Manager Window**

1 Create a password for the `trendadm` account in the Password box, and then retype the password in the Confirm Password box.

   By default, the password must have a minimum length of one character, has no limit on its maximum length, and may contain any character; however, it is recommended that you adhere to your company's policy for password creation.

2 Click **Next**.

3 Go to Task 13 on page 116.

Modifying the Existing Operating System Account

Figure 13 shows the Operating System User for Performance Manager window.

Figure 13 Operating System User for Performance Manager Window

1   Click one of the following:

— **Modify user environment**. This option 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 option will not update the account's .profile or .cshrc with the OVPI environment variables. If you select this option, you will have to manually add the OVPI environment variables later.

2   Click **Next**.

Task 13: Specify the port for the Web Access Server.

Figure 14 shows the Web Access Server Settings window.
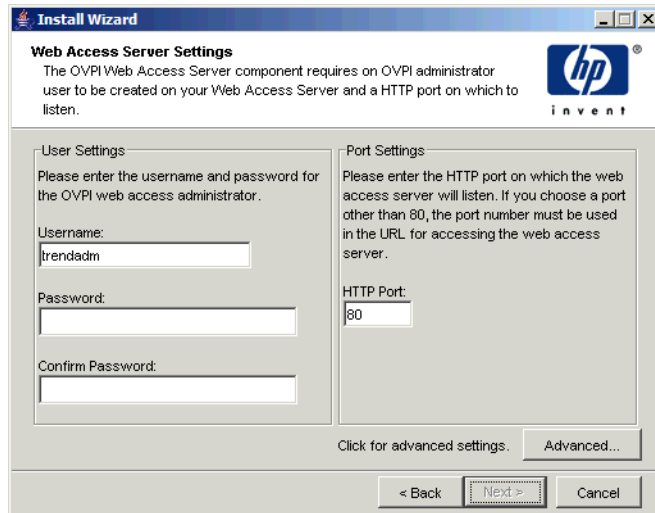
Figure 14 Web Access Server Settings Window

1   In the Username box, type the username for the OVPI Web Access Server
    administrator. The username is trendadm by default.

> ▶   This account is used to log on to the Web Access Server application.
>   Do not confuse this account with the trendadm account discussed in
>   Task 12 on page 113 (UNIX installations only), which is used to
>   preserve the environment in which OVPI will run. The account for
>   the Web Access Server is given the default name of trendadm;
>   however, you can change the name of this account now.

2 Create a password for the OVPI Web Access Server administrator account by typing a password in the Password box.

> ➤ The installation wizard places no restrictions on the minimum and maximum length or on the characters that can be used in the username and password; however, the installation wizard does require that you supply a username and a password. It is recommended that you adhere to your company's policy for username and password creation.

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

3 Type the password you created in Step 2 in the Confirm Password box.

4 Type the port for the Web Access Server in the HTTP Port box if you do not want to use the default, which is 80. Any open port can be used.

5 If needed, click **Advanced** to open the Advanced OVPI Configuration dialog box, which lets you do the following:

- Change the location of the reports directories (Directories tab). The reports directory is where all deployed reports will be stored. See Changing the Reports Directories on page 118 for details.

- Create and remove user accounts (OVPI User tab). A user account lets you log on to OVPI's client applications (Report Viewer, Report Builder, Web Access Server, and Management Console). See Creating and Modifying User Accounts on page 118 for details.

- Enable Secure Sockets Layer (SSL) communication between the Web Access Server and a supported Web browser (SSL Setup tab). See Enabling Secure Sockets Layer (SSL) Communications on page 120 for details.

6 Click **Next** to continue with the installation.

Changing the Reports Directories

To change the location of the users and reports directories:

a Select the Directories tab in the Advanced OVPI Configuration dialog box, shown in Figure 15.
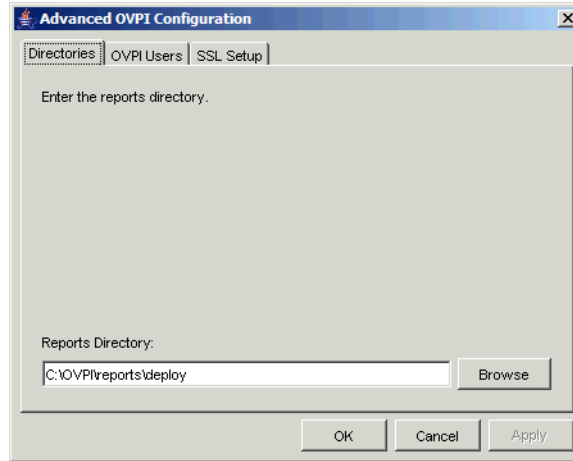
Figure 15 Directories Tab

b To change the reports directory, do *one* of the following:

— Enter a new directory location in the Reports Directory box.

— To search for a directory, click **Browse**. Locate the directory, and then click **Open**.

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

d Click **OK** when you want to return to the Web Access Server Settings window, and then click **Next** to continue with the installation.

Creating and Modifying User Accounts

Use the OVPI User tab to create user accounts. These accounts are used to log on to the following OVPI client applications: Management Console, Report Builder, Report Viewer, and Web Access Server.

You can create regular user accounts or administrator accounts. Users with non-administrator accounts can access the OVPI client applications. Users with administrator accounts can access the administration features (Administration link) of the Web Access Server. Refer to the *Performance Insight Administration Guide* for details.

To create and modify accounts:

a Select the OVPI User tab in the Advanced OVPI Configuration dialog box, shown in Figure 16

Figure 16 OVPI User Tab

    b To add a user account, do the following:

— Click **Add User**. A default user appears with a default value of new-user for user name and password, and a role of user.

— Double-click the new-user cell under the User Name column, delete the default value, and then enter the user name you want to use.

— Double-click the new-user cell under the Password column, delete the default value, and then enter the password you want to use.

— Click the user cell under the Role column, and then select a role (**user** or **admin**) from the list.

— Click **Apply** when you have finished making all of your changes.

c   To remove a user account:

— Select the user name. The entire row is selected including the user name, password, and role.

— Click **Delete User**.

— Click **Apply** when you have finished making all of your changes.

d   Click **OK** to return to the Web Access Server Settings window, and then click **Next** to continue with the installation.

You can create, modify, or delete user accounts after you install OVPI using the Web Access Server. Refer to the *Performance Insight Administration Guide* for details.

Enabling Secure Sockets Layer (SSL) Communications

Using SSL, you can 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, this self-signed certificate 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:

a   Select the SSL Setup tab in the Advanced OVPI Configuration dialog
box, shown in Figure 17.

Figure 17 SSL Setup Tab

b   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.

c   Do *one* of the following:

— Leave the value in the SSL Port box as is; the default is 443.

— Modify the value in the SSL Port box.

d   In the Keystore Password box, enter 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 is information used by the person who checks by the certificate to ensure that the certificate is valid.

e   Type your two-letter country code in the Country box (for example, "US").

f   The following information is optional:

    — Organization. Type the name of your organization (for example, "ABC Systems, Inc.")

    — Org. Unit. Type the name of your department or division (for example, "Northeast Sales").

    — City. Type the name of your city or locality (for example, "Los Angeles").

    — State. Type the name of your state or province (for example, "California").

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

h   Click **OK** to return to the Web Access Server Settings window, and then click **Next** to continue with the installation.

Task 14: Review the installation information and install.

Figure 18 shows the Selection Summary window.
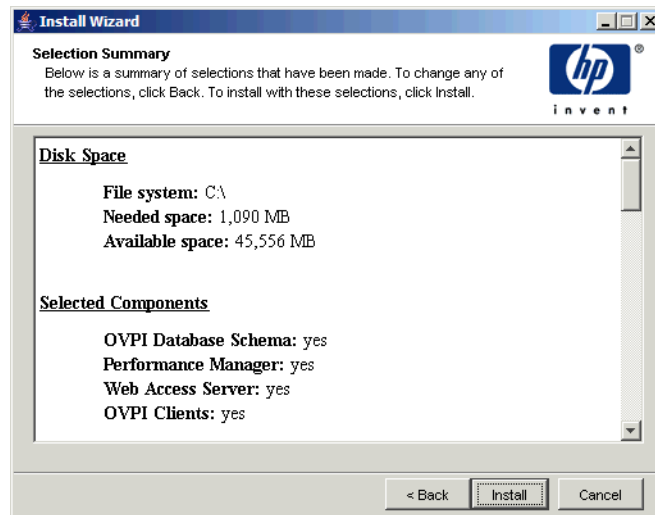
Figure 18 Selection Summary Window

1   Review the Selection Summary window.

2   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 Selection Summary window.

3   Click **Install** to continue the installation.

Task 15: Close the Setup program.

Figure 19 shows the Installation Progress window, which shows the installation status.
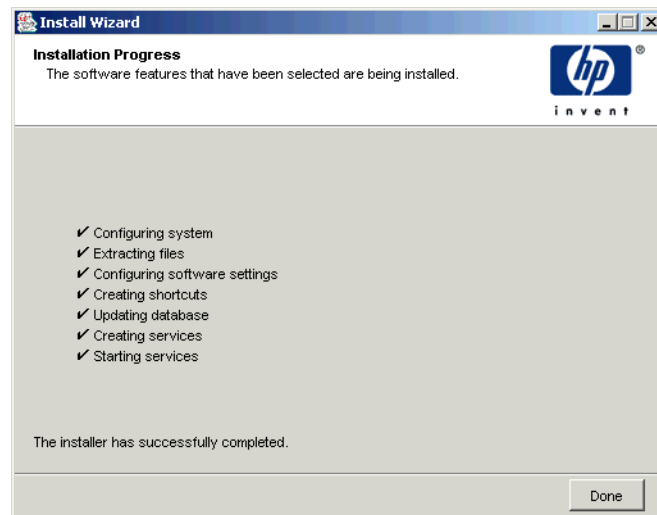
Figure 19 Installation Progress Window

Do *one* of the following:

•   If the OVPI installation was successful, click **Done**.

> If you installed OVPI on a UNIX system, the installation is complete.

•   If the OVPI installation was unsuccessful, click the **Details** button at the bottom of the Installation Progress window for additional information, and then contact Support.

Task 16: Windows systems only: Reboot the system.

You must reboot your Windows system before you can use OVPI.

Applying Service Packs

You should apply any Service Packs for the release. To locate any Service Packs for this release, go to the following Web site:

http://support.openview.hp.com/cpe/ovpi/patch_ovpi.jsp

Post-Installation Configuration Tasks

Refer to the *Performance Insight Administration Guide* for information about how to configure OVPI after you have installed it and for administrative tasks that you will need to perform.

5

Installing OVPI on Oracle

This chapter describes how to install HP OpenView Performance Insight (OVPI) on supported operating systems in a standalone configuration on an Oracle database.

A *standalone* system is one where all of the OVPI components are installed on a single system. (If you would like to install OVPI in a distributed configuration, see Chapter 6, Installing OVPI in a Distributed Configuration.) To install OVPI on a Sybase database, see Chapter 4, Installing OVPI on Sybase.

Before you install OVPI, be sure that you have met the following requirements:

- Read the *Performance Insight Release Notes*. This document provides an overview of the changes made to OVPI for the version 5.1 release.

- Your system must meet the prerequisites in Chapter 2, Preparing for Installation. For all Windows and UNIX systems, see System Requirements on page 27. In addition, see UNIX-Specific Requirements on page 38 for UNIX systems.

- You have installed the database according to the information provided in Chapter 3, Installing a Database.

Installing OVPI – Standalone

This section describes the information that you need to supply when you use the installation wizard, and how to install OVPI on both Windows and UNIX systems.

Preparing for Component Installation

Most of the information that you need to supply when you use the installation wizard will have default values; however, HP recommends that you have this information available prior to installation in the event that you want to change a default value.

Table 1 lists each of the OVPI components, the installation wizard window that asks for information about the component, the parameters requested in each window, and the default values for the parameters.

Table 1   Installation Wizard Configuration Parameters

Component	Wizard Window	Default Values for the Parameters
All components	Destination Folder	**Destination Directory**: `C:\OVPI` (Windows) or `/usr/ovpi` (UNIX)
OVPI Database Schema	Oracle Reference Using Database Administrator User	**Oracle TCP/IP port**: 1521 **Oracle home directory**: $ORACLE_HOME
OVPI Database Schema	Oracle User and Tablespace Creation[a]	**Database size**: 1024 MB **Database files directory**: $ORACLE_HOME/dbs
Performance Manager	Performance Manager Settings	**Poller/Collection Cache Directory**: *OVPI_directory*`\collect` (Windows) *or* *OVPI_directory*`/collect` (UNIX)
Web Access Server	Web Access Server Settings	**OVPI Administrator Username**: `trendadm` **HTTP Port**: 80

a. This window will only open if you select the **Create new tablespaces on Oracle** option in the Database Selection window (Figure 5 on page 134).

Installing OVPI

▶ With the exception of starting the installation wizard and the Operating System User for Performance Manager window, the steps for installing OVPI as a standalone system are identical for both Windows and UNIX systems. To minimize duplication, this section provides separate instructions for starting the installation wizard on Windows and UNIX; however, it provides only one procedure for the OVPI installation.

Task 1: Make sure that the database is installed and running.

If you have *not* installed the database, see Chapter 3, Installing a Database.

▶ If you want to use an existing 9.2.0.5 Oracle database and install OVPI so that it will access the database remotely, see Using an Existing Remote Oracle Database on page 89 for configuration and installation information.

Task 2: Make sure that the instance for the Oracle listener program created for OVPI is running.

Task 3: Start the setup program.

Run the OVPI setup program. See Starting the Setup Program on page 59.

Task 4: Select the OVPI installation option.

Select **OVPI 5.1.0** from the Install section of the Setup window.

Task 5: **Read the Welcome window.**

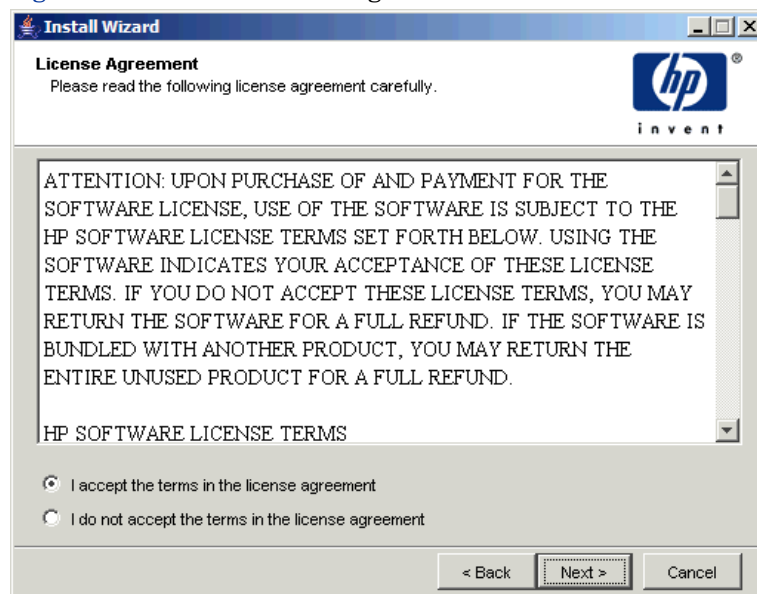Figure 1 shows the Welcome window.

Figure 1   Welcome Window

Click **Next** to continue the installation.

Task 6: Accept or reject the license agreement.

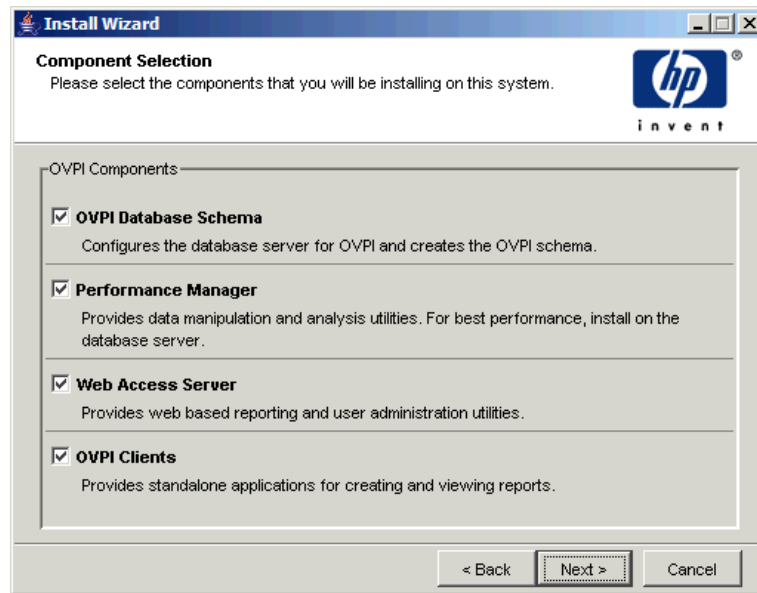Figure 2 shows the License Agreement window.

Figure 2   License Agreement Window

Do *one* of the following:

- To reject the license agreement and discontinue installation, click **Cancel**.

    A confirmation window appears.

    — If you click **Yes**, the installation process ends.

    — If you click **No**, the License Agreement window appears again. You can then click the **I accept the terms in the license agreement** option to proceed with installation.

- To accept the license agreement and continue installing OVPI, click the **I accept the terms in the license agreement** option, and then click **Next**.

Task 7:   Select the OVPI components you want to install.

Figure 3 shows the Component Selection window.

Figure 3   Component Selection Window

1   Make sure that all components are checked; all components are required
    for a standalone installation.

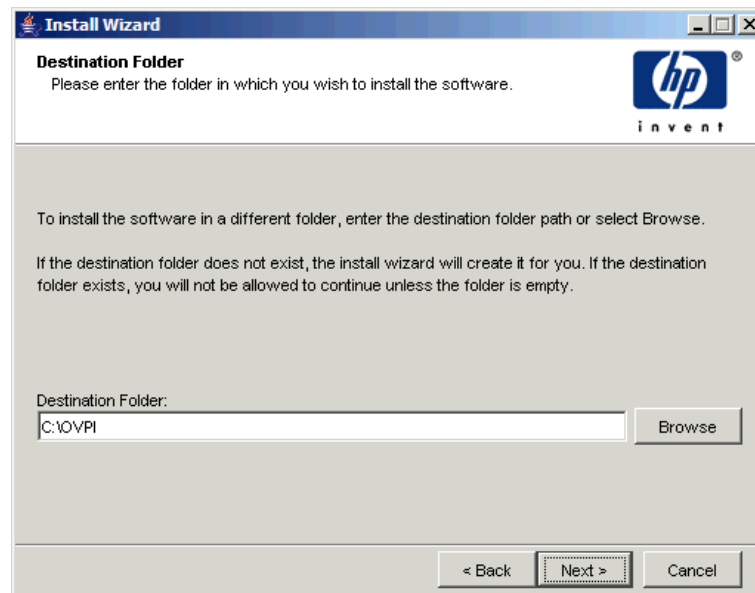   For a description of each component, see OVPI Components on page 12.

2   Click **Next** to continue the installation.

▶   If you are running the OVPI installation wizard on a 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.

Task 8:   Specify an installation directory for the OVPI software.

Figure 4 shows the Destination Folder window.

Figure 4   Destination Folder Window

An installation directory can be any one of the following: NFS mounted directory, UNIX soft link, UNIX hard link, or a Windows mapped drive.

⚠ The path to the destination folder cannot contain any blank spaces.

Do *one* of the following:

- Click **Next** to accept the default destination folder and to continue the installation.

- Type a different destination folder from the default, and click **Next** to continue the installation.
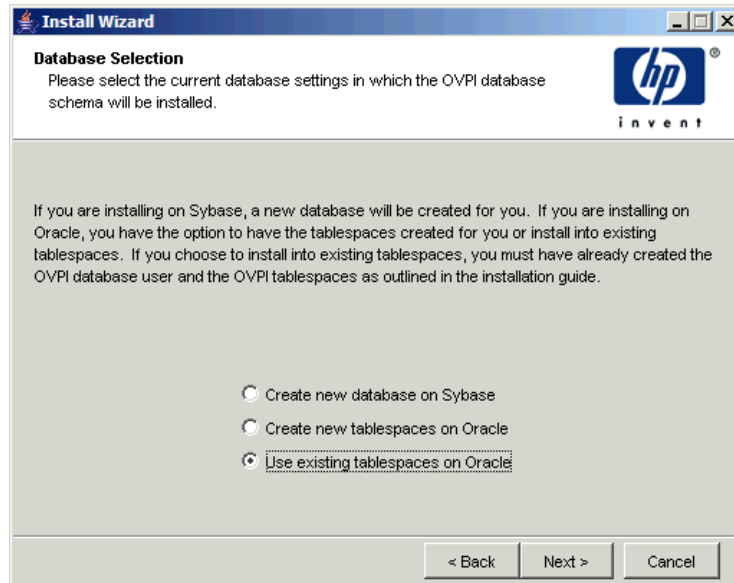
Depending on the installation directory you specified, the following will occur:

- If the installation directory does not already exist, the setup program creates it.

- If the installation directory already exists and contains data, a message will display to warn you that the directory is not empty.

- If you specify an installation directory that is located on a file system that the setup program cannot access, a message will display to warn you. You cannot continue the installation until you supply a valid directory.

Task 9: **Select the database settings in which the OVPI database schema will be installed.**

Figure 5 shows the Database Selection window.

Figure 5   Database Selection Window

Use the following guidelines when deciding which option to select:

- Choose **Create new tablespaces on Oracle** if you are unsure of which option to choose.

- Choose **Use existing tablespaces on Oracle** if either of the following conditions 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 dsi_dpipe user and tablespaces as described in Tablespace Sizing Guidelines on page 87.

1 Select one of the following options:

- **Create new tablespaces on Oracle**.

    To use this option, the dsi_dpipe user must ***not*** exist 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**.

    Before you continue with the installation, you ***must*** do the following:

    — Create the OVPI database user account (dsi_dpipe).

    — As the dsi_dpipe user, create the tablespaces referred to above.

   — Adjust the recommended Oracle parameters. For details, see Creating Tablespaces on page 84.

2 Click **Next**.

Do one of the following depending on which tablespace option you chose:

- **Create new tablespaces on Oracle** option. Go to Task 10.

- **Use existing tablespaces on Oracle** option. Go to Task 12 on page 141.

Task 10: Locate and connect to the database.

The Oracle Reference Using Database Administrator User window opens.
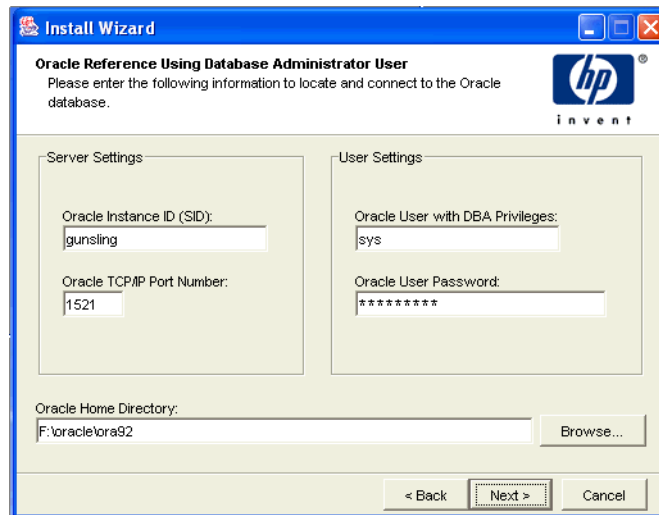
Figure 6   Oracle Reference Using Database Administrator User Window

1   In the Oracle Instance ID (SID) box, type the Oracle Instance ID.

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

2   In the Oracle TCP/IP Port Number box, type the TCP/IP port for Oracle. The default is 1521.

3   In the Oracle User with DBA Privileges box, enter **sys**.

4   In the Oracle User Password box, type the password for the **sys** account.

5   In the Oracle Home Directory box, type the directory into which you installed Oracle. If the installation program can determine the location of the Oracle Home directory, then it is provided as the default.

6   Click **Next**.

Task 11: Create the Oracle user account and the new tablespaces.

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

Figure 7 shows the Oracle User and Tablespace Creation window.

Figure 7   Oracle User and Tablespace Creation Window

⚠ Before you change the values for the Total Size and Data File Folder options, decide whether you want to modify the data files for database segments by clicking the **Advanced** button. See Step 4 on page 138 for details. Do **not** change the values for the Total Size (Step 1) and Database Folder (Step 2) options after you modify the database segments using the Advanced Configuration dialog box. Once you set the values for these options, you cannot reset them. Thus, they will 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.

1   In the Total Size box, type the size of the database. The default is 1024 MB; the minimum size that the database can be is 500 MB.

    The tablespaces will be created with the space appropriately distributed.

2   In the Data File (.dbf) Folder box, type the directory in which the database files (.dbf) are created.

3   In the OVPI Database User (dsi_dpipe) Password box, create a password for the `dsi_dpipe` account, and then retype the password in the Confirm Password box.

Create the dsi_dpipe password adhering to the following rules:

- The password must have a minimum length of one character and cannot exceed 30 characters in length.

- The password must start with an alphabetic character.

- Valid characters are all alphanumeric characters and the underscore (_).

> The password is not case sensitive.

4   If needed, click **Advanced** to display the Advanced OVPI Configuration dialog box. This dialog box lets you do the following:

- Add, modify, or remove the data files that comprise the tablespaces.

  The tablespaces are as follows: default, property and property index, upload and upload index, rate and rate index, summary and summary index, and database overflow. See Modifying the Default Tablespaces for details.

- Change specific Oracle configuration parameters. See Changing Specific Oracle Configuration Parameters on page 140 for details.

Modifying the Default Tablespaces

⚠ Once you modify the database segments using the Advanced OVPI Configuration dialog box, do **not** change the values for the Total Size (Step 1 on page 137) and Data File Folder (Step 2 on page 138) options in the Oracle User and Tablespace Creation window. If you change the values for these options, you can not 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 Tablespace Sizing Guidelines on page 87.

To modify the tablespaces:

a   Click **Advanced** in the Oracle User and Tablespace Creation window to open the Advanced OVPI Configuration dialog box.

b   Select the tab associated with the tablespace you want to change. Figure 8 shows the Property tab in the Advanced OVPI Configuration dialog box.
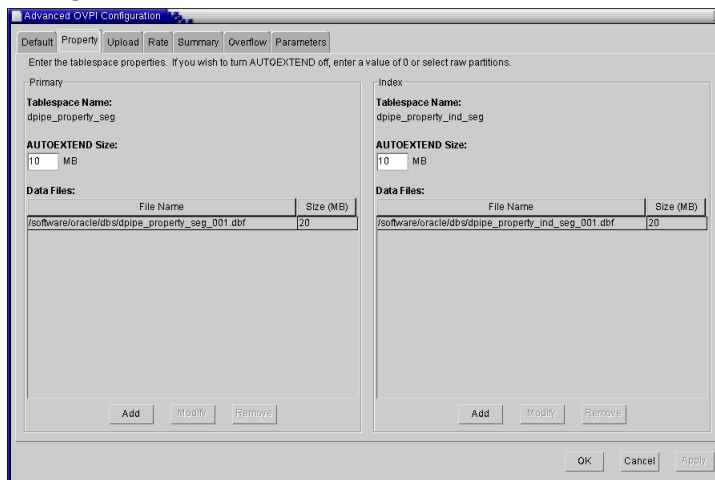
Figure 8   Property Tab

c   In the AUTOEXTEND Size box, type the size of the extent.

▶   If you specify 0 for the extent size, Oracle's autoextending feature is disabled.

d   To add a data file, click **Add**. In the DataFile Information dialog box, type the following: the name of the data file in the DataFile name box and the size of the data file in the Size box. Click **OK**.

e   To modify a data file, select the data file, and click **Modify**. In the DataFile Information dialog box, do the following: change the data file's name, size, or both, and click **OK**.

f To remove a data file, select the data file, and click **Remove**.

▶ You must create at least one data file for each tablespace.

g When you have finished making all of your changes, click **OK** to close the Advanced OVPI Configuration dialog box and return to the Oracle User and Tablespace Creation window.

Changing Specific Oracle Configuration Parameters

See Table 1 on page 86 for the values that HP recommends for these parameters.

To change your Oracle configuration parameters:

a Click **Advanced** in the Oracle User and Tablespace Creation window to open the Advanced OVPI Configuration dialog box.

b Select the Parameters tab. The Parameters tab contains the following:

— SGA_MAX_SIZE. This parameter determines 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). This parameter lets you specify the target aggregate PGA memory available to all server processes associated with the instance. The default is 200M.

— DB_FILE_MULTIBLOCK_READ_COUNT. This parameter lets you minimize I/O during table scans by specifying the maximum number of blocks that should be read in one I/O operation when a sequential scan occurs.

— WORKAREA_SIZE_POLICY. This parameter lets you specify the policy for sizing work areas and controls the mode in which working areas are tuned. The default is AUTO. It is *not* recommended that you use MANUAL for the value.

— DB_CACHE_SIZE. This parameter specifies 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. This parameter lets you specify the size of the cache for 32K buffers.

— PARALLEL_AUTOMATIC_TUNING. Lets you specify whether or not Oracle will determine the default values for the parameters that control parallel execution.

c   Click **Apply** to make your changes take effect. Click **OK** to return to the Oracle User and Tablespace Creation window.

5   Click **Next** in the Oracle User and Tablespace Creation window to continue with the installation.

6   Go to Task 13 on page 142.

Task 12: Locate and connect to the database.

Figure 9 shows the Oracle Reference Using OVPI Database User window.

Figure 9   Oracle Reference Using OVPI Database User Window

1   In the Oracle Instance ID (SID) box, type the Oracle Instance ID.

A default is provided only if the Oracle environment variable ORACLE_SID is set; verify that the SID shown is correct since you may have more than one database instance running.
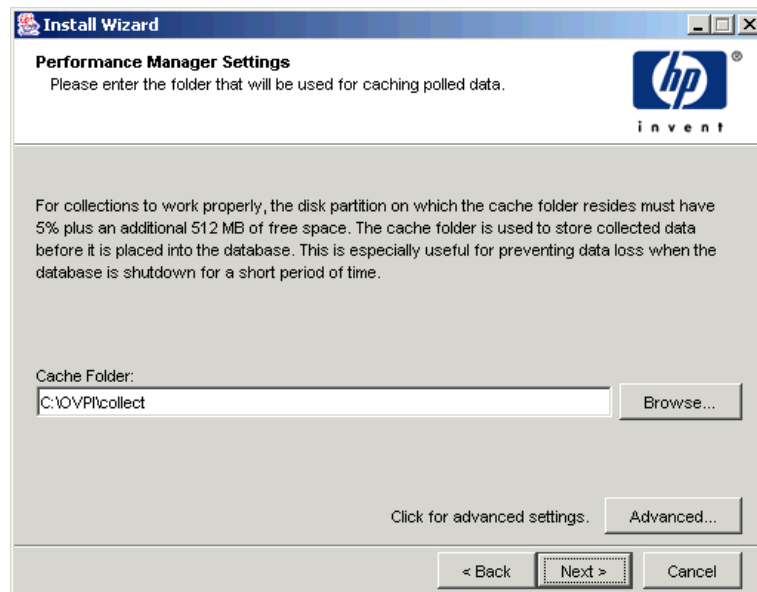
2 In the Oracle Hostname box, type the hostname of the system on which Oracle is installed.

By default, this box contains the name of the local host. If your Oracle database is installed on a remote system, you will need to change this value.

3 In the Oracle TCP/IP Port Number box, type the TCP/IP port for Oracle.

4 In the Password box, type the password for the dsi_dpipe account.

5 In the Oracle Home Directory box, type the directory into which you installed Oracle.If the installation program can determine the location of the Oracle Home directory, then it is provided as the default.

6 Click **Next**.

7 The Oracle Parameter Verification box asks you to confirm that you have modified parameters to support OVPI. Click **Yes** to continue.

Task 13: Install Performance Manager.

Figure 10 shows the Performance Manager Settings window.

Figure 10 Performance Manager Settings Window

> ➤ For collections to work properly, the disk partition on which the Poller Collection/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.

Do the following:

1 If needed, click **Advanced** to open the Advanced OVPI Configuration dialog box, which lets you specify the directory in which the log files will reside. Figure 11 on page 112 shows the Log Settings tab in the Advanced OVPI Configuration dialog box.

To specify a directory for log files:

   a In the Log Directory box, do one of the following:

      — Type the directory path in which the log files will reside.

      — Click **Browse** to locate the desired directory.

      — Accept the default path; the default creates a log folder under the directory into which you installed OVPI.

   > ➤ The installation will create a log directory under the directory in which you installed OVPI. Certain log files will be maintained there regardless of the directory you specify in the Log Directory box.

   b Click **OK** to apply any changes you made and return to the Performance Manager Settings window.

2 Do one of the following:

   — Click **Next** to accept the default location for the Cache Folder and to continue the installation.

   — Type a fully-qualified path for the location, and click **Next** to continue the installation.

— Click **Browse** to navigate to a location for the Cache Folder, and then click **Next** to continue the installation

3   Do one of the following depending on your operating system:

— Windows: Go to Task 15 on page 147.

— UNIX: Proceed with Task 14.

Task 14: UNIX systems only: Create or modify the operating system account.

On UNIX systems, the Performance Manager component requires an operating system account and group named trendadm.

▶   The purpose of this account is to preserve the environment in which OVPI will run. This account is used to log on to the operating system and should not be confused with the trendadm account you will create in Task 15 on page 147, which is used to log on to the Web Access Server application.

Depending on whether or not this account exists, different windows will open during this point in the installation:

•   If the operating system account and group do not exist, the Create OS user window opens. See Creating the Operating System Account on page 145.

•   If the operating system account and group do exist, the Existing OS User window opens. See Modifying the Existing Operating System Account on page 146.

Creating the Operating System Account

Figure 11 shows the Operating System User for Performance Manager window.
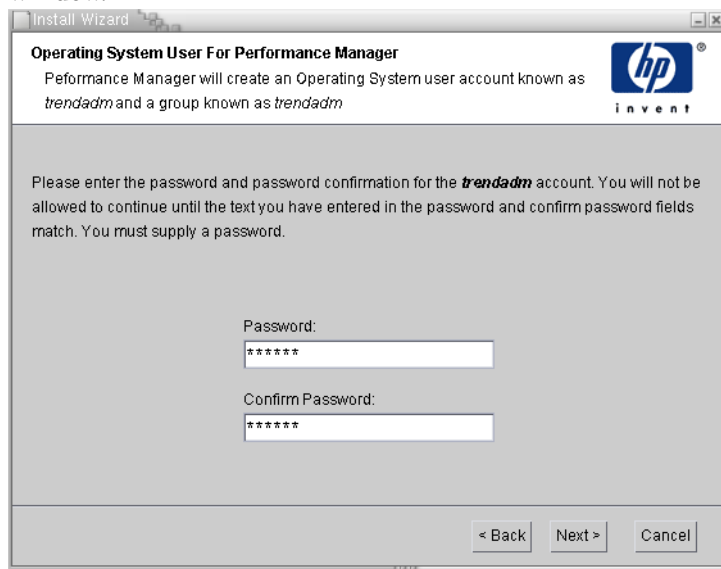
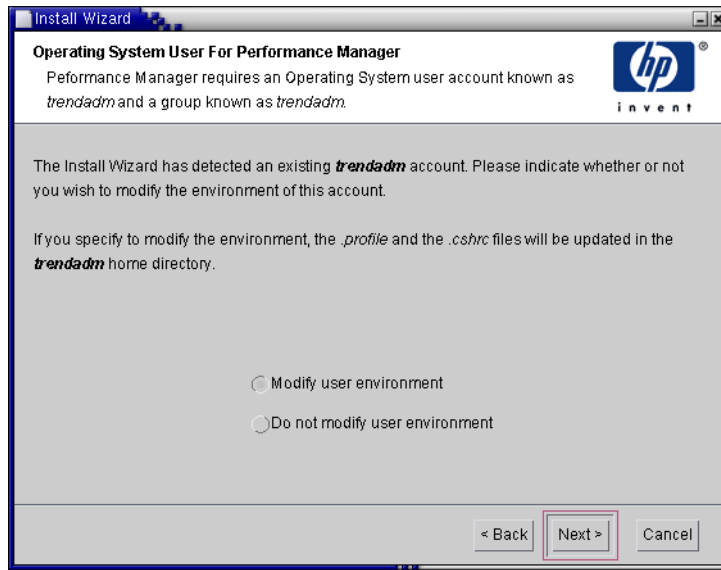**Figure 11 Operating System User for Performance Manager Window**

1 Create a password for the `trendadm` account in the Password box, and then retype the password in the Confirm Password box.

By default, the password must have a minimum length of one character, has no limit on its maximum length, and may contain any character; however, it is recommended that you adhere to your company's policy for password creation.

2 Click **Next**.

3 Go to Task 15 on page 147.

Modifying the Existing Operating System Account

Figure 12 shows the Operating System User for Performance Manager window.

Figure 12 Operating System User for Performance Manager Window

1   Click one of the following:

   — **Modify user environment**. This option 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 option will not update the
       account's .profile or .cshrc with the OVPI environment variables.
       If you select this option, you will have to manually add the OVPI
       environment variables later.

2   Click **Next**.

Task 15: Specify the port for the Web Access Server.

Figure 13 shows the Web Access Server Settings window.
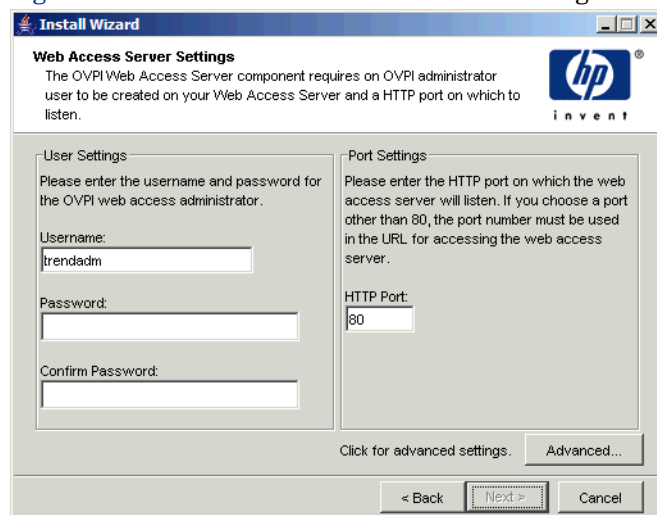
Figure 13 Web Access Server Settings Window

1   In the Username box, type the username for the OVPI Web Access Server administrator. The username is trendadm by default.

> ▶ This account is used to log on to the Web Access Server application. Do not confuse this account with the trendadm account discussed in Task 14 on page 144 (UNIX installations only), which is used to preserve the environment in which OVPI will run. The account for the Web Access Server is given the default name of trendadm; however, you can change the name of this account now.

2   Create a password for the OVPI Web Access Server administrator account by typing a password in the Password box.

> ▶ The installation wizard places no restrictions on the minimum and maximum length or on the characters that can be used in the username and password; however, the installation wizard does require that you supply a username and a password. It is recommended that you adhere to your company's policy for username and password creation.

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

3 Type the password you created in Step 2 in the Confirm Password box.

4 Type the port for the Web Access Server in the HTTP Port box if you do not want to use the default, which is 80. Any open port can be used.

5 If needed, click **Advanced** to open the Advanced Configuration dialog box, which lets you do the following:

- Change the location of the reports directories (Directories tab). The reports directory is where all deployed reports will be stored. See Changing the Reports Directories for details.

- Create and remove user accounts (OVPI User tab). A user account lets you log on to OVPI's client applications (Report Viewer, Report Builder, Web Access Server, and Management Console). See Creating and Modifying User Accounts on page 149 for details.

- Enable Secure Sockets Layer (SSL) communication between the Web Access Server and a supported Web browser (SSL Setup tab). See Enabling Secure Sockets Layer (SSL) Communications on page 150 for details.

6 Click **Next** to continue with the installation.

Changing the Reports Directories

To change the location of the users and reports directories:

a Select the Directories tab in the Advanced OVPI Configuration dialog box, shown in Figure 15 on page 118.

b To change the reports directory, do *one* of the following:

— Enter a new directory location in the Reports Directory box.

— To search for a directory, click **Browse**. Locate the directory, and then click **Open**.

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

d Click **OK** when you want to return to the Web Access Server Settings window, and then click **Next** to continue with the installation.

Creating and Modifying User Accounts

Use the OVPI User tab to create user accounts. These accounts are used to log on to the following OVPI client applications: Management Console, Report Builder, Report Viewer, and Web Access Server.

You can create regular user accounts or administrator accounts. Users with non-administrator accounts can access the OVPI client applications. Users with administrator accounts can access the administration features (Administration link) of the Web Access Server. Refer to the *Performance Insight Administration Guide* for details.

To create and modify accounts:

a   Select the OVPI User tab in the Advanced OVPI Configuration dialog box, shown in Figure 16 on page 119.

b   To add a user account, do the following:

— Click **Add User**. A default user appears with a default value of new-user for user name and password, and a role of user.

— Double-click the new-user cell under the User Name column, delete the default value, and then enter the user name you want to use.

— Double-click the new-user cell under the Password column, delete the default value, and then enter the password you want to use.

— Click the user cell under the Role column, and then select a role (**user** or **admin**) from the list.

— Click **Apply** when you have finished making all of your changes.

c   To remove a user account:

— Select the user name. The entire row is selected including the user name, password, and role.

— Click **Delete User**.

— Click **Apply** when you have finished making all of your changes.

d   Click **OK** to return to the Web Access Server Settings window, and then click **Next** to continue with the installation.

You can create, modify, or delete user accounts after you install OVPI using the Web Access Server. Refer to the *Performance Insight Administration Guide* for details.

Enabling Secure Sockets Layer (SSL) Communications

Using SSL, you can 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, this self-signed certificate 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:

a Select the SSL Setup tab in the Advanced Configuration dialog box, shown in .

b 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.

c Do *one* of the following:

— Leave the value in the SSL Port box as is; the default is 443.

— Modify the value in the SSL Port box.

d In the Keystore Password box, enter 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 is information used by the person
who checks by the certificate to ensure that the certificate is valid.

e Type your two-letter country code in the Country box (for example,
"US").

f The following information is optional:

— Organization. Type the name of your organization (for example,
"ABC Systems, Inc.")

— Org. Unit. Type the name of your department or division (for
example, "Northeast Sales").

— City. Type the name of your city or locality (for example, "Los
Angeles").

— State. Type the name of your state or province (for example,
"California").

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

h Click **OK** to return to the Web Access Server Settings window, and
then click **Next** to continue with the installation.

Task 16: Review the installation information and install.

Figure 14 shows the Selection Summary window.
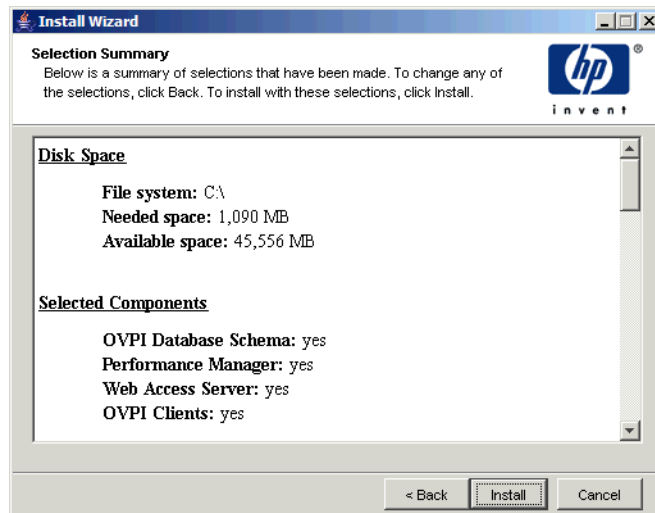
**Figure 14 Selection Summary Window**

1   Review the Selection Summary window.

2   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 Selection Summary window.

3   Click **Install** to continue the installation.

Task 17: Close the Setup program.

Figure 15 shows the Installation Progress window, which shows the installation status.
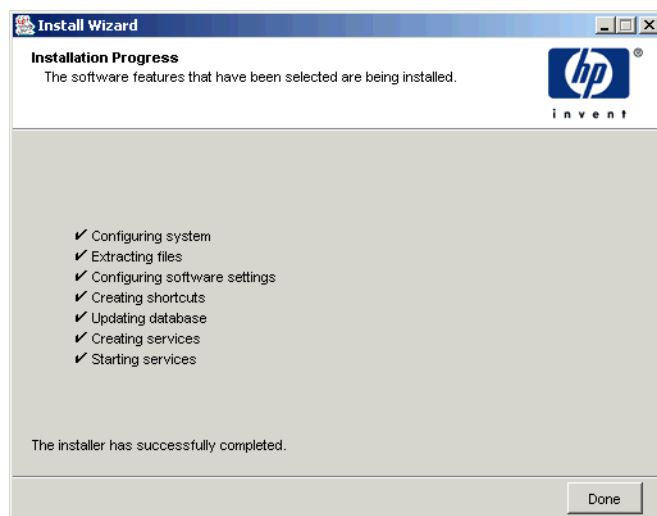
Figure 15 Installation Progress Window

Do *one* of the following:

•   If the OVPI installation was successful, click **Done**.

▶   If you installed OVPI on a UNIX system, the installation is complete.

•   If the OVPI installation was unsuccessful, click the **Details** button at the bottom of the Installation Progress window for additional information, and then contact Support.

Task 18: Windows systems only: Reboot the system.

You must reboot your Windows system before you can use OVPI.

Applying Service Packs

You should apply any Service Packs for the release. To locate any Service Packs for this release, go to the following Web site:

http://support.openview.hp.com/cpe/ovpi/patch_ovpi.jsp

Post-Installation Configuration Tasks

Refer to the *Performance Insight Administration Guide* for information about how to configure OVPI after you have installed it and for administrative tasks that you will need to perform.

6

Installing OVPI in a Distributed Configuration

This chapter describes how to install HP OpenView Performance Insight (OVPI) in a distributed configuration.

Installation Prerequisites

Before you install OVPI in a distributed configuration, do the following:

- Read the *Performance Insight Release Notes*. This document provides an overview of the changes made to OVPI for the version 5.1 release.

- Read OVPI System Roles and Tasks on page 16 to understand the role your system will play in the overall architecture. System roles dictate which OVPI components you must install for the system to be capable of fulfilling its role.

- Read Reasons for Using a Distributed Configuration on page 20.

- Your systems must meet the prerequisites in Chapter 2, Preparing for Installation. For all Windows and UNIX systems, see System Requirements on page 27. In addition, see UNIX-Specific Requirements on page 38 for UNIX systems.

- Adhere to the following requirements:

  — Install the database schema component *first*, making sure that you install it on the same system that is running your database server (Sybase or Oracle).

 — Install OVPI's Database Schema and the Performance Manager components on the ***same*** system.

  During the installation, you select these components from the Component Selection window. See Figure 3 on page 100.

  — The remote poller and satellite servers can be installed on different platforms; however, as the default database character sets may differ between operating systems, be sure that all database instances and clients utilize a common character set.

Installing OVPI

Since there are numerous ways to install OVPI in a distributed configuration, it is not possible to document all of those configurations; however, this chapter does provide the following:

- An example scenario of how to install OVPI in a typical distributed configuration

- Instructions about how to individually install each component

- Separate instructions for installing the Database and Performance Manager components on Sybase and on Oracle

  ▶ If you have an existing Oracle database and plan to keep it on a system separate from the OVPI installation, see Using an Existing Remote Oracle Database on page 89.

This section describes how to install OVPI in the distributed configuration shown below.
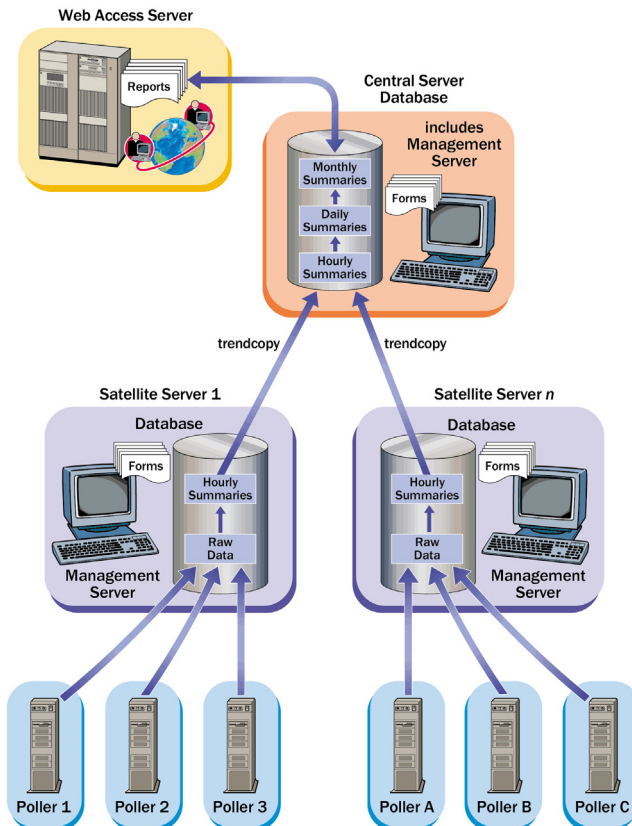
Figure 1   Common Distributed Architecture for SNMP Polling Systems

Example: Installing OVPI in a Distributed Configuration

The following example shows you how to install OVPI in the distributed configuration shown in Figure 1 on Windows systems using Sybase.

Task 1:   **Ensure that Sybase is installed and running.**

Ensure that Sybase is installed and running. Refer to the *Performance Insight Release Notes* for details.

Task 2:   **Install the Database Schema and Performance Manager components on the Central Server.**

To install these components, see Installing the Database Schema and Performance Manager Components on Sybase on page 161.

Task 3:   **Install the Web Access Server.**

To install the Web Access Server, see Installing the Web Access Server on page 187.

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

Task 4:   **Install one or more report packs on the Central Server; accept the default for deploying reports. Do not install datapipes on the Central Server unless the Central Server is polling.**

Shared packages, report packs, and datapipes are packaged together on the RNS distribution CD. As explained in the Release Notes created for each release of RNS, inserting the CD launches a package extraction program that extracts compressed files from the CD and copies the results to the Packages directory on your system. As soon as package extraction finishes, Performance Insight starts and the Package Manager install wizard Welcome window opens.

Install packages by following the on-screen instructions. For details about dependencies, special procedures to follow when installing upgrade packages, and special procedures to follow when configuring a package to function in a distributed environment, see the user guide for the package. The user guide is located in the **docs** direction under OVPI on your system. You can also download user guides from the following web site:

http://www.hp.com/managementsoftware

Select **Support** and click on **Product Manuals** to open the Product Manuals search page. The user guides for shared packages, report packs, and datapipes are listed under Reporting and Networking Solutions.

Task 5: Deploy reports to each Web Access Server.

If your configuration has more than one Web Access Server, use the **deploytool** command to deploy all reports from your Central Server to each Web Access Server. Refer to the *Performance Insight Reference Guide* for information about the **deploytool** command.

Alternatively, you can use the Deployment wizard, which lets you deploy selected reports one at a time. Refer to the *Performance Insight Guide to Building and Viewing Reports* for more information about the Deployment wizard.

Task 6: Install the Database Schema and Performance Manager on each Satellite Server.

To install these components, see Installing the Database Schema and Performance Manager Components on Sybase on page 161.

▶ It is also possible to have a distributed installation without Satellite Servers; this installation would only have a Central Server and Remote Pollers.

Task 7: Discover the network on the Satellite Servers.

Discover your network by using one of the following methods:

- Let OVPI discover your nodes by using the SNMP Discovery wizard. For details, refer to the *Performance Insight Administration Guide*.

- Import your nodes by using the node_manager command. For details, refer to the *Performance Insight Reference Guide*.

▶ You only need to discover the nodes that you plan to poll.

Task 8: Install report packs and datapipes on each satellite server. If you require local reporting, deploy reports during installation.

Start Package Manager and follow the on-screen instructions. The user guide for the package indicates which packages to install and the sequence to follow. If a satellite server is not polling, disable polling by editing the trendtimer.sched file. For details about polling, refer to the *Performance Insight Administration Guide*.

Task 9: Install Remote Pollers (optional).

For details, see Installing the Remote Poller Component on page 198.

If you have more than one Remote Poller, repeat the installation procedure on each Remote Poller system.

Task 10: Run type discovery at each Satellite Server.

If you did not perform a type discovery when you installed the report packs (see Task 8), run type discovery at each satellite server. For details about type discovery, refer to the *Performance Insight Administration Guide*.

Task 11: Configure report packs for operation in a distributed environment.

Specific instructions vary from report pack to report pack. Typically, this is what you will do:

• Using the Add Database Wizard, set up connections between the central server and satellite server databases.

• Configure trendcopy pull commands.

• At each satellite server, shut-off summarizations above the hourly level.

For specific instructions, refer to the user guide for the report pack.

Task 12: Configure polling policies for Remote Pollers (optional).

This task is applicable only if you are using remote pollers. For details, see the *Performance Insight Administration Guide* or "Configuring for Multiple Pollers" in the *Interface Discovery Datapipe User Guide*.

Installing OVPI Components Individually

You can select the components that are required for your particular system and the installation wizard will guide you through the installation, prompting you for all the configuration parameters needed for the installation; however, the following sections describe how to individually install most of the components.

▶ When you perform a distributed installation, you *must* install the Database Schema and Performance Manager components on the same system.

Installing the Database Schema and Performance Manager Components on Sybase

This section describes the preparation and installation steps necessary for the OVPI database component and Performance Manager on Sybase.

Preparing for the Installation

To avoid delays in the installation process, ensure that you have the following information available:

- Directory into which you want to install OVPI

- Sybase Administrator password

- Sybase TCP/IP port number

- Directory into which you installed Sybase

- To create the OVPI devices, you will need the following information:

  — The location of the database device file and its size

  — The location of the transaction log file and the space it will occupy in database

  — The location of the temporary space file and the space it will occupy in the database

- Poller/Collection Cache Directory

- UNIX systems only: Create or modify the operating system account (trendadm).

- Management Server HTTP port number

- Web Access Server host name and its HTTP port number

Installing the Components

Complete the following tasks to install the Database Schema and Performance Manager components:

Task 1:   Ensure that the database is installed and running.

See Chapter 3, Installing a Database for details.

Task 2:   Start the setup program.

See .

After you start the setup program, the Setup window opens (see).

Task 3:   Select the OVPI installation option.

Select **OVPI 5.1.0** from the Setup window.

Task 4:   Read the Welcome window.

The Welcome window opens. See .

Click **Next** to continue the installation.

Task 5:   Accept or reject the license agreement.

The License Agreement window opens. See .

Do *one* of the following:

- To reject the license agreement and discontinue installation, click **Cancel**.

  A confirmation window appears.

  — If you click **Yes**, the installation process ends.

  — If you click **No**, the License Agreement window appears again. You can then click the **I accept the terms in the license agreement** option to proceed with installation.

- To accept the license agreement and continue installing OVPI, click the **I accept the terms in the license agreement** option, and then click **Next**.

Task 6:   Select the OVPI components you want to install.

The Component Selection window opens. See .

1   Click the **OVPI Database Schema** check box, the **Performance Manager** check box, and click to clear all other check boxes.

   For a description of the components, see .

2   Click **Next**.

Task 7:   Specify an installation directory for OVPI software.

The Destination Folder window opens. See .

An installation directory can be any one of the following: NFS mounted directory, UNIX soft link, UNIX hard link, or a Windows mapped drive.

⚠️ The path to the destination folder cannot contain any blank spaces.

Do *one* of the following:

• Click **Next** to accept the default destination folder and to continue the installation.

• Type a different destination folder from the default, and click **Next** to continue the installation.

Depending on the installation directory you specified, the following will occur:

• If the installation directory does not already exist, the setup program creates it.

• If the installation directory already exists and contains data, a message will display to warn you that the directory is not empty.

• If you specify an installation directory that is located on a file system that the setup program cannot access, a message will display to warn you. You cannot continue the installation until you supply a valid directory.

Task 8: Select the database where the OVPI database schema will be installed.

The Database Selection window opens. See Figure 5 on page 102.

1 Select **Create new database on Sybase**.

This option requires that no dpipe_db database or dsi_dpipe user exist in order for the installation to complete successfully.

2 Click **Next**.

Task 9: Locate and connect to the database.

The Sybase Reference Using Sybase Administrator User window opens. See Figure 6 on page 103. It contains the following values:

• Sybase Server Name (DSQUERY). This is the name of the Sybase SQL Server where the client applications will look for information by default. (Note that this name is case sensitive.) You can find the name of this server in the Sybase interfaces file; this file is located on the system where the Sybase SQL Server is installed. For more information about the Sybase interfaces file, see Appendix B.

- Sybase Host Name. This is the name of the system on which Sybase is installed.

- Sybase TCP/IP Port Number. The TCP/IP port number that Sybase uses to communicate with clients and servers on other systems. In addition to <DSQUERY>, there are several other Sybase SQL Servers that will be assigned port numbers during the installation. These servers are as follows:

Sybase Server	Windows	UNIX
<DSQUERY>_BS	5001	2053
<DSQUERY>_MS	5002	2054
<DSQUERY>_HS	5003	2055
<DSQUERY>_XP	5004	2056

You must manually start each of these servers in order for them to work.

- Sybase Administrator (SA) Password. If you changed the Sybase Administrator password during the Sybase installation from a NULL value to an actual password, type that password in the Sybase Administrator (SA) Password box.

  If you did *not* change the Sybase Administrator during the Sybase installation, you can leave this box blank.

- Sybase Directory. The directory into which you installed Sybase. Click **Browse** to select a different directory. After you select a directory, click **Open** to return to the Sybase Reference Using Sybase Administrator User window.

Do *one* of the following:

- Click **Next** to accept the default values for Sybase environment configuration.

- Type the necessary values, and click **Next**.

Task 10: Create the OVPI user account and devices.

The Sybase User and Device Creation window opens. See Figure 7 on page 105.

The installation wizard creates the device files for the OVPI database using Sybase Adaptive Server. Files are created within Sybase for the following: OVPI database, transaction log, and temporary space. The OVPI database uses the device files to store its data. (If raw devices are used, no device files are created.)

By default, the installation wizard creates the device files in the Sybase installation directory in a subfolder called dbfiles. You can change the name of this folder at this point in the installation to be something different; however, the name cannot contain any spaces.

▶ All Sybase devices are created using the vstart=512 option. This lets you use labeled file systems with OVPI. For example, if the size of your database is 800 MB, only 799 MB of it will be available; one megabyte is allocated for the label.

The Sybase User and Device Creation window contains the following options:

• Database Devices and Database Size (MB). Specifies the file location of the database device and its size.

• Transaction Log and Percent of Database. Specifies the file location of the transaction log and the amount of space allocated to it in the database.

• Temporary Space and Percent of Database. Specifies the file location of the temporary space and the amount of space allocated to it in the database.

• OVPI Database User (dsi_dpipe) Password and Confirm Password. Creates a password for the dsi_dpipe account.

Do the following:

1 Accept the default values for the OVPI database configuration, or modify a value; click **Browse** to specify a different location.

   ▶ HP recommends that the temporary space (dpipe_temp) and the transaction log (dpipe_log) be approximately 50% the size of the database device (dpipe_db). For example, if the database (dpipe_db) is 800 MB, then the temporary space (dpipe_temp) and temporary log (dpipe_log) should be 400 MB each.

2 In the OVPI Database User (dsi_dpipe) Password box, create a password for this account, and then retype the password in the Confirm Password box.

   Create the dsi_dpipe password adhering to the following rules:

- The password must have a minimum length of six characters and cannot exceed 30 characters in length.

- The password must start with an alphabetic character.

- Valid characters are all alphanumeric characters, the underscore (_), and the pound (#).

   ▶ The password is case sensitive.

3 If needed, click **Advanced** to display the Advanced OVPI Configuration dialog box (see Figure 8 on page 107). This dialog box lets you do the following:

- Add files to or remove them from the OVPI database devices (dpipe_db, dpipe_temp, and dpipe_log); on UNIX systems only, you can use raw partitions for these devices (Database, Transaction Log, and Temporary Space tabs); S0 and Veritas raw partitions are supported. See Modifying the Sybase Database Devices on page 166 for details.

- Modify the Sybase configuration parameters (Parameters tab). See Changing Sybase Configuration Parameters on page 168 for details.

4 Click **Next** to continue the installation.

Modifying the Sybase Database Devices

To modify the OVPI database devices:

a Select the tab associated with the device (Database, Transaction Log, or Temporary Space) you want to modify. Figure 8 on page 107 shows the Database tab in the Advanced OVPI Configuration dialog box.

b To add a file to a database device, do one of the following:

— *Windows*:

   Click **Add**.

— *UNIX*:

   Click **Add**, and then click the Datafile arrow, and select a file from the list.

   A precalculated size for the device appears next to the device's name in the Size (MB) column. If you are using raw partitions, it is recommended that you do not change this value.

c *File-system database files only*: To edit the file, double-click the file, path, or size cell.

d To remove a file:

— Click on the file, and press the TAB key.

— Press the up or down arrow key to enable selection, and then use the up or down arrow key to select the file you want to remove.

— Click **Remove**.

> You must create at least one file for each device.

e *UNIX only*: To use a raw partition for a database device, do the following:

— Select the tab associated with the device that you want to use a raw partition.

— Select the **Use raw partitions for this database** check box.

The installation application will find disk partitions that are not mounted, used, swapped or listed in the /etc/vfstab file. This will prevent any file systems that may have been unmounted, but are still available as file systems if the administrator were to mount them, from being used by the installation wizard.

f Click **Apply** when you have finished making all of your changes.

g Click **OK** to return to the Sybase User and Device Creation window, and then click **Next** to continue the installation.

When you return to the Sybase User and Device Creation window, you may notice the following conditions:

- *UNIX only*: If you chose a raw partition for a particular database device, the database device will appear dimmed on the window.

- If you added a file to or removed a file from one of the devices, the percentages and database size listed on the window will be recalculated.

- If a database device has several files that are located in different directories, the fields for the database device will appear dimmed on the window.

Changing Sybase Configuration Parameters

⚠️ HP recommends that only a Sybase database administrator change the values for these parameters.

To change your Sybase configuration parameters:

a Select the Parameters tab in the Advanced OVPI Configuration dialog box, shown in Figure 9 on page 109.

The Parameters tab contains the following options:

— Recovery Interval (Minutes). Sets the maximum number of minutes that the SQL Server should use to recover each database in case of system failure.

— Maximum Memory (MB). Sets the size of memory that the SQL Server allocates from the operating system.

— User Connections. Sets the maximum number of user connections that can be connected to a SQL Server at the same time. The global variable @@max_connections stores the maximum values for your system. It varies according to operating system.

— Number of Locks. Sets the number of available locks.

— Maximum Online Engines. Controls the number of engines in a symmetric multiprocessor environment.

If your system uses a single CPU, the recommended value is 1. If you increase the value, there is a possibility that Sybase will slow down due to internal contention. However, if your system uses multiple CPUs, the value may be increased in order to take advantage of the multiple CPU architecture.

— Maximum Network Packet Size (Bytes). Sets the maximum network packet size that a client program can request.

— Additional Network Memory (Bytes). Allocates additional memory for clients that request packet sizes larger than the default packet size for the server.

— Number of Devices. Limits the number of database devices that the SQL Server can use.

b Click **Apply** when you have finished making all of your changes.

c Click **OK** to return to the Sybase User and Device Creation window, and then click **Next** to continue the installation.

Task 11: Install Performance Manager.

Figure 10 on page 111 shows the Performance Manager Settings window.

▶ For collections to work properly, the disk partition on which the Poller Collection/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.

Do the following:

1 If needed, click **Advanced** to open the Advanced OVPI Configuration dialog box, which lets you specify the directory in which the log files will reside. Figure 11 on page 112 shows the Log Settings tab in the Advanced OVPI Configuration dialog box.

   To specify a directory for log files:

   a In the Log Directory box, do one of the following:

   — Type the directory path in which the log files will reside.

   — Click **Browse** to locate the desired directory.

   — Accept the default path; the default creates a log folder under the directory into which you installed OVPI.

   ▶ The installation will create a log directory under the directory in which you installed OVPI. Certain log files will be maintained there regardless of the directory you specify in the Log Directory box.

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

2 Do *one* of the following:

   — Click **Next** to accept the default location for the Cache Folder and to continue the installation.

   — Type a fully-qualified path to the location, and click **Next** to continue the installation.

   — Click **Browse** to navigate to a location for the Cache Folder, and then click **Next** to continue the installation.

3 Do one of the following depending on your operating system:

   — Windows: Go to Task 13 on page 171.

   — UNIX: Proceed with Task 12.

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

On UNIX systems, the Performance Manager component requires an operating system account and group named `trendadm`.

▶ The purpose of this account is to preserve the environment in which OVPI will run. This account is used to log on to the operating system and should not be confused with the `trendadm` account you will create in Task 8 on page 189, which is used to log on to the Web Access Server application.

The Operating System User for Performance Manager window will open and will prompt you for different information depending on whether or not this account exists.

- If the operating system account and group do not exist, see Creating the Operating System Account on page 170.

- If the operating system account and group do exist, see Modify the Existing Operating System Account. on page 170.

Creating the Operating System Account

Figure 12 on page 114 shows the Operating System User for Performance Manager window.

1 Create a password for the `trendadm` account in the Password box, and then retype the password in the Confirm Password box.

By default, the password must have a minimum length of one character, has no limit on its maximum length, and may contain any character; however, it is recommended that you adhere to your company's policy for password creation.

2 Click **Next**.

3 Go to Task 13 on page 171.

Modify the Existing Operating System Account.

Figure 13 on page 115 shows the Operating System User for Performance Manager window.

1 Click one of the following:

— **Modify user environment**. This option 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 option will not update the
account's .profile or .cshrc with the OVPI environment variables.
If you select this option, you will have to manually add the OVPI
environment variables later.

2   Click **Next**.

Task 13: Specify the port for the Management Server.

Figure 2 shows the Management Server window.
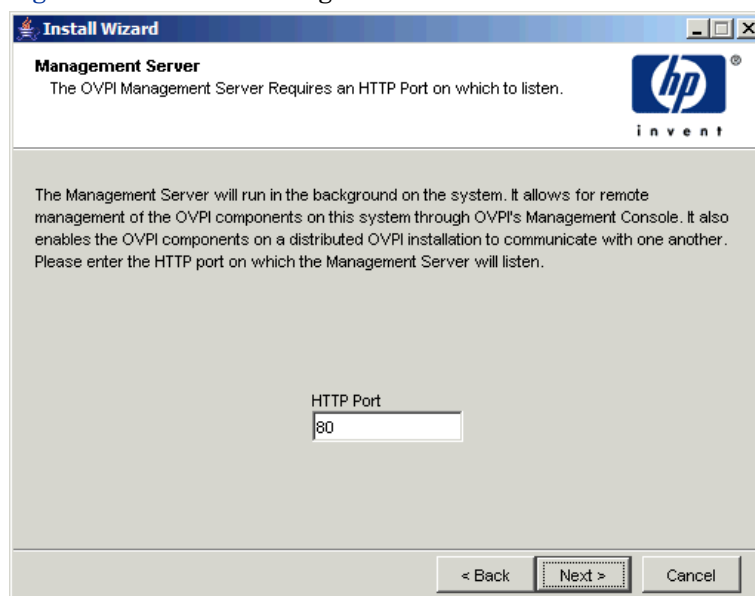
Figure 2   Management Server Window

This window creates the Management Server, which runs in the background
on the system. The Management Server lets you manage the OVPI
components on this system using OVPI's Management Console application.
(Refer to the *Performance Insight Administration Guide* for more information
about the Management Console.) Additionally, it lets the components in an
OVPI distributed installation communicate with each other.

The Management Server is a service that is started automatically by the OVPI setup program; this service appears as follows on the supported operating systems:

- Windows: OVPI HTTP Server

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

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

Do the following:

1 Type the HTTP Port on which the Management Server will listen.

2 Click **Next**.

The Remote Web Access Server Settings window opens.

Task 14: Specify information about the Web Access Server.

▶ If you have not installed the Web Access Server yet, enter the information
where it will be installed.

Figure 3 shows the Remote Web Access Server Settings window.
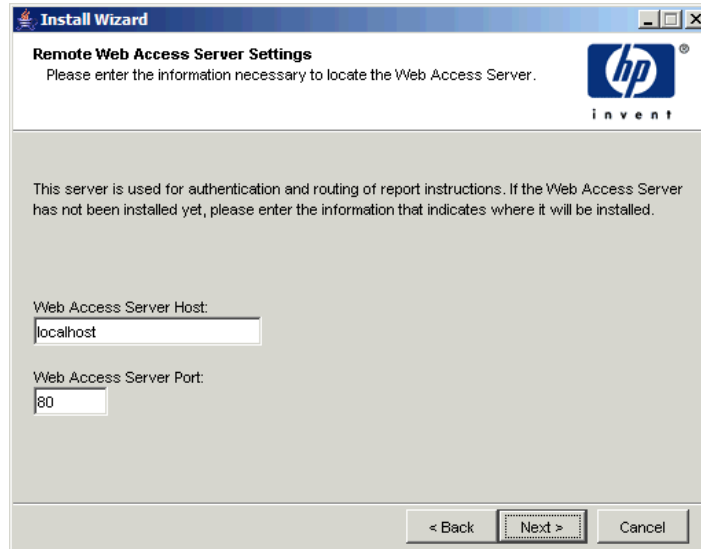
Figure 3   Web Access Server Reference Window

1   Enter the name of the Web Access Server in the Web Access Server Host
box.

2   Enter the port number for the Web Access Server in the Web Access
Server Port box.

3   Click **Next** to continue.

Task 15: Review the installation information and install.

1   Review the Selection Summary window (see Figure 18 on page 123).

2   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.

3   Click **Install** to continue the installation.

The Installation Progress window opens, showing the installation status. See Figure 19 on page 124.

Task 16: Close the Setup program.

Do *one* of the following:

- If the OVPI installation was successful, click **Done**.

   ➤ If you installed OVPI on a UNIX system, the installation is complete.

- If the OVPI installation was unsuccessful, click the **Details** button at the bottom of the Installation Progress window for additional information, and then contact Support.

Task 17: Windows systems only: Reboot the system.

You must reboot your Windows system before you can use OVPI.

Installing the Database Schema and Performance Manager Components on Oracle

This section describes the preparation and installation steps necessary for the OVPI database component and Performance Manager on Oracle.

➤ When you perform a distributed installation, you *must* install the Database Schema and Performance Manager components on the same system.

Preparing for the Installation

To avoid delays in the installation process, ensure that you have the following information available:

- Directory into which you will install OVPI
- Oracle Instance ID (SID)
- Password for the OVPI database (dsi_dpipe) account
- Oracle TCP/IP port number
- Directory into which you installed Oracle
- If you are using existing tablespaces, you will also be asked for the following:

— The size of the database

— The directory in which the data files are stored

For more information about tablespaces and tablespace sizing guidelines, see Installing Oracle 9.2.0.5 on page 80.

- Poller/Collection Cache Directory

- UNIX systems only: Create or modify the operating system account (trendadm).

- Web Access Server host name

- Web Access Server HTTP port number

- Management Server HTTP port number

Installing the Components

Complete the following tasks to install the Database Schema and Performance Manager components:

Task 1:   Ensure that the database is installed and running.

See Chapter 3, Installing a Database for details.

▶   If you want to use an existing 9.2.0.5 Oracle database and install OVPI so that it will access the database remotely, see Using an Existing Remote Oracle Database on page 89 for configuration and installation information.

Task 2:   Make sure that the instance for the Oracle listener program created for OVPI is running.

Task 3:   Start the setup program.

See Starting the Setup Program on page 59.

After you start the setup program, the Setup window opens (see page 61).

Task 4:   Select the OVPI installation option.

Select **OVPI 5.1.0** from the Install section of the Setup window.

Task 5:   Read the Welcome window.

The Welcome window opens. See Figure 1 on page 130.

Click **Next** to continue the installation.

Task 6:   Accept or reject the license agreement.

The License Agreement window opens. See Figure 2 on page 131.

Do *one* of the following:

- To reject the license agreement and discontinue installation, click **Cancel**.

  A confirmation window appears.

  — If you click **Yes**, the installation process ends.

  — If you click **No**, the License Agreement window appears again. You can then click the **I accept the terms in the license agreement** option to proceed with installation.

- To accept the license agreement and continue installing OVPI, click the **I accept the terms in the license agreement** option, and then click **Next**.

Task 7:   Select the OVPI components you want to install.

The Component Selection window opens. See Figure 3 on page 132.

1   Click the **OVPI Database Schema** check box, the **Performance Manager** check box, and click to clear all other check boxes.

    For a description of the components, see OVPI Components on page 12.

2   Click **Next**.

Task 8:   Specify an installation directory for the OVPI software.

The Destination Folder window opens. See Figure 4 on page 133.

An installation directory can be any one of the following: NFS mounted directory, UNIX soft link, UNIX hard link, or a Windows mapped drive.

⚠   The path to the destination folder cannot contain any blank spaces.

Do *one* of the following:

- Click **Next** to accept the default destination folder and to continue the installation.

- Type a different destination folder from the default, and click **Next** to continue the installation.

Depending on the installation directory you specified, the following will occur:

- If the installation directory does not already exist, the setup program creates it.

- If the installation directory already exists and contains data, a message will display to warn you that the directory is not empty.

- If you specify an installation directory that is located on a file system that the setup program cannot access, a message will display to warn you. You cannot continue the installation until you supply a valid directory.

Task 9: Select the database settings in which the OVPI database schema will be installed.

The Database Selection window opens. See Figure 5 on page 134.

Use the following guidelines when deciding which option to select:

- Choose **Create new tablespaces on Oracle** if you are unsure of which option to choose.

- Choose **Use existing tablespaces on Oracle** if either of the following conditions 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 dsi_dpipe user and tablespaces as described in Tablespace Sizing Guidelines on page 87.

1 Select one of the following options:

  - **Create new tablespaces on Oracle**.

    To use this option, the dsi_dpipe user must ***not*** exist 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**.

   Before you continue with the installation, you ***must*** do the following:

   > — Create the OVPI database user account (dsi_dpipe).
   >
   > — As the dsi_dpipe user, create the tablespaces referred to above.
   >
   > — Adjust the recommended Oracle parameters. For details, see Table 1 on page 86.

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

2 Click **Next**.

Do one of the following depending on which tablespace option you chose:

> — **Create new tablespaces on Oracle** option. Go to Task 10.
>
> — **Use existing tablespaces on Oracle** option. Go to Task 12 on page 182.

Task 10: Locate and connect to the database.

Figure 6 on page 136 shows the Oracle Reference Using Database Administrator User window.

1 In the Oracle Instance ID (SID) box, type the Oracle Instance ID.

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

2 In the Oracle TCP/IP Port Number box, type the TCP/IP port for Oracle. The default is 1521.

3 In the Oracle User with DBA Privileges box, enter **sys**.

4 In the Oracle User Password box, type the password for the **sys** account.

5 In the Oracle Home Directory box, type the directory into which you installed Oracle. If the installation program can determine the location of the Oracle Home directory, then it is provided as the default.

6 Click **Next**.

Task 11: Create the Oracle user account and the new tablespaces.

shows the Oracle User and Tablespace Creation window.

⚠ 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. Thus, monitor the system to make sure that the physical filesystem does not exceed 100%.

1   In the Total Size box, type the size of the database. The default is 1024 MB; the minimum size that the database can be is 500 MB.

   The tablespaces will be created with the space appropriately distributed.

2   In the Data File (.dbf) Folder box, type the directory in which the database files (.dbf) are created.

⚠ Before you change the values for the Total Size and Data File Folder options, decide whether you want to modify the data files for database segments by clicking the **Advanced** button. See for details. Do **not** change the values for the Total Size () and Data File Folder () options after you modify the database segments using the Advanced Configuration dialog box. Once you set the values for these options, you cannot reset them. Thus, they will 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.

3   In the OVPI Database User (dsi_dpipe) Password box, create a password for the dsi_dpipe account, and then retype the password in the Confirm Password box.

   Create the dsi_dpipe password adhering to the following rules:

   •   The password must have a minimum length of one character and cannot exceed 30 characters in length.

   •   The password must start with an alphabetic character.

   •   Valid characters are all alphanumeric characters and the underscore (_).

   ➤   The password is not case sensitive.

4   If needed, click **Advanced** to display the Advanced OVPI Configuration dialog box. This dialog box lets you do the following:

- Add, modify, or remove the data files that comprise the tablespaces.

  The tablespaces are as follows: default, property and property index, upload and upload index, rate and rate index, summary and summary index, and database overflow. See Modifying the Default Tablespaces for details.

- Change specific Oracle configuration parameters. See Changing Specific Oracle Configuration Parameters on page 181 for details.

Modifying the Default Tablespaces

⚠ Once you modify the database segments using the Advanced OVPI Configuration dialog box, do **not** change the values for the Total Size (Step 1 on page 179) and Data File Folder (Step 2 on page 179) options in the Oracle User and Tablespace Creation window. If you change the values for these options, you can not 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 Tablespace Sizing Guidelines on page 87.

To modify the tablespaces:

a Click **Advanced** in the Oracle User and Tablespace Creation window to open the Advanced OVPI Configuration dialog box.

b Select the tab associated with the tablespace you want to change. Figure 8 on page 139 shows the Property tab in the Advanced OVPI Configuration dialog box.

c In the AUTOEXTEND Size box, type the size of the extent.

➤ If you specify 0 for the extent size, Oracle's autoextending feature is disabled.

d To add a data file, click **Add**. In the DataFile Information dialog box, type the following: the name of the data file in the DataFile name box and the size of the data file in the Size box. Click **OK**.

e To modify a data file, select the data file, and click **Modify**. In the DataFile Information dialog box, do the following: change the data file's name, size, or both, and click **OK**.

f   To remove a data file, select the data file, and click **Remove**.

➤   You must create at least one data file for each tablespace.

g   When you have finished making all of your changes, click **OK** to close the Advanced OVPI Configuration dialog box and return to the Oracle User and Tablespace Creation window.

Changing Specific Oracle Configuration Parameters

See for the values that HP recommends for these parameters.

To change your Oracle configuration parameters:

a   Click **Advanced** in the Oracle User and Tablespace Creation window to open the Advanced OVPI Configuration dialog box.

b   Select the Parameters tab. The Parameters tab contains the following:

— SGA_MAX_SIZE. This parameter determines 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). This parameter lets you specify the target aggregate PGA memory available to all server processes associated with the instance. The default is 200M.

— DB_FILE_MULTIBLOCK_READ_COUNT. This parameter lets you minimize I/O during table scans by specifying the maximum number of blocks that should be read in one I/O operation when a sequential scan occurs.

— WORKAREA_SIZE_POLICY. This parameter lets you specify the policy for sizing work areas and controls the mode in which working areas are tuned. The default is AUTO. It is *not* recommended that you use MANUAL for the value.

— DB_CACHE_SIZE. This parameter specifies 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. This parameter lets you specify the size of the cache for 32K buffers.

> — PARALLEL_AUTOMATIC_TUNING. Lets you specify whether or
> not Oracle will determine the default values for the parameters
> that control parallel execution.
>
> **c** Click **Apply** to make your changes take effect. Click **OK** to return to the
> Oracle User and Tablespace Creation window.

5 Click **Next** in the Oracle User and Tablespace Creation window to continue
with the installation.

6 Go to Task 13 on page 183.

Task 12: Locate and connect to the database.

Figure 4 shows the Oracle Reference Using OVPI Database User window.
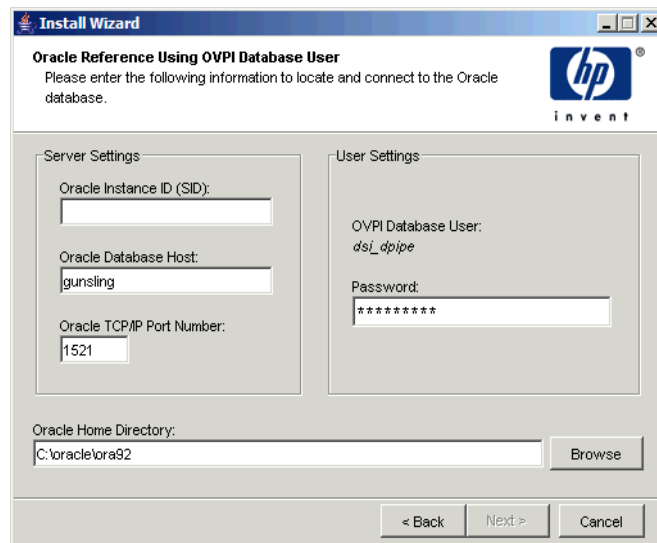
Figure 4   Oracle Reference Using OVPI Database User Window

1 In the Oracle Instance ID (SID) box, type the Oracle Instance ID.

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

2 In the Oracle Database Host box, type the hostname of the system on
which Oracle is installed.

3 In the Oracle TCP/IP Port Number box, type the TCP/IP port for Oracle.

4   In the Password box, type the password for the dsi_dpipe account.

5   In the Oracle Home Directory box, type the directory into which you installed Oracle. If the installation program can determine the location of the Oracle Home directory, then it is provided as the default.

6   Click **Next**.

7   The Oracle Parameter Verification box asks you to confirm that you have modified parameters to support OVPI. Click **Yes** to continue.

Task 13: Install Performance Manager.

Figure 10 on page 142 shows the Performance Manager Settings window.

▶   For collections to work properly, the disk partition on which the Poller Collection/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.

Do the following:

1   If needed, click **Advanced** to open the Advanced OVPI Configuration dialog box, which lets you specify the directory in which the log files will reside. Figure 11 on page 112 shows the Log Settings tab in the Advanced OVPI Configuration dialog box.

To specify a directory for log files:

a   In the Log Directory box, do one of the following:

— Type the directory path in which the log files will reside.

— Click **Browse** to locate the desired directory.

— Accept the default path; the default creates a log folder under the directory into which you installed OVPI.

▶   The installation will create a log directory under the directory in which you installed OVPI. Certain log files will be maintained there regardless of the directory you specify in the Log Directory box.

b   Click **OK** to apply any changes you made and return to the Performance Manager Settings window.

2   Do one of the following:

— Click **Next** to accept the default location for the Cache Folder and to continue the installation.

— Type a fully-qualified path for the location, and click **Next** to continue the installation.

— Click **Browse** to navigate to a location for the Cache Folder, and then click **Next** to continue the installation.

3　Do one of the following depending on your operating system:

— Windows: Go to Task 15 on page 185.

— UNIX: Proceed with Task 14.

Task 14: UNIX systems only: Create or modify the operating system account.

On UNIX systems, the Performance Manager component requires an operating system account and group named trendadm.

▶ The purpose of this account is to preserve the environment in which OVPI will run. This account is used to log on to the operating system and should not be confused with the trendadm account you will create in Task 8 on page 189, which is used to log on to the Web Access Server application.

Depending on whether or not this account exists, different windows will open during this point in the installation:

• If the operating system account and group do not exist, the Create OS user window opens. See Creating the Operating System Account on page 184.

• If the operating system account and group do exist, the Existing OS User window opens. See Modifying the Existing Operating System Account on page 185.

Creating the Operating System Account

Figure 11 on page 145 shows the Operating System User for Performance Manager window.

1　Create a password for the trendadm account in the Password box, and then retype the password in the Confirm Password box.

By default, the password must have a minimum length of one character, has no limit on its maximum length, and may contain any character; however, it is recommended that you adhere to your company's policy for password creation.

2　Click **Next**.

3   Go to .

Modifying the Existing Operating System Account

shows the Operating System User for Performance Manager window.

1   Click one of the following:

   — **Modify user environment**. This option 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 option will not update the account's .profile or .cshrc with the OVPI environment variables. If you select this option, you will have to manually add the OVPI environment variables later.

2   Click **Next**.

Task 15:   Specify information about the Management Server.

shows the Management Server window.

1   Type the port on which the Management Server will listen in the HTTP Port box.

2   Click **Next**.

This window creates the Management Server, which runs in the background on the system. It lets you manage the OVPI components on this system using OVPI's Management Console application. (Refer to the *Performance Insight Administration Guide* for more information about the Management Console.) Additionally, it lets the components in an OVPI distributed installation communicate with each other.

The Management Server is a service that is started automatically by the OVPI setup program; this service appears as follows on the supported operating systems:

• Windows: OVPI HTTP Server

• Solaris: /etc/init.d/ovpi_httpd and /etc/rc3.d/S99ovpi_httpd startupscripts

• HP-UX: /sbin/init.d/ovpi_httpd and /sbin/rc3.d/ S99ovpi_httpd startup scripts

Task 16: Specify information about the Web Access Server.

▶   If you have not installed the Web Access Server yet, enter the information where it will be installed.

Figure 3 on page 173 shows the Remote Web Access Server Settings window.

1   Enter the name of the Web Access Server in the Web Access Server Host box.

2   Enter the port number for the Web Access Server in the Web Access Server Port box.

3   Click **Next** to continue.

Task 17: Review the installation information and install.

1   Review the Selection Summary window (see Figure 14 on page 152).

2   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.

3   Click **Install** to continue the installation.

The Installation Progress window opens, showing the installation status. See Figure 19 on page 124.

Task 18: Close the Setup program.

Do *one* of the following:

• If the OVPI installation was successful, click **Done**.

▶   If you installed OVPI on a UNIX system, the installation is complete.

• If the OVPI installation was unsuccessful, click the **Details** button at the bottom of the Installation Progress window for additional information, and then contact Support.

Task 19: Windows systems only: Reboot the system.

You must reboot your Windows system before you can use OVPI.

Installing the Web Access Server

This section describes the preparation and installation steps necessary for the Web Access Server component.

Preparing for the Installation

To avoid delays in the installation process, have the following information available:

- Directory into which you will install OVPI

- The username and password for the Web Access Server administrator account that you will need to create

- Web Access Server HTTP port

- Database host and port

Installing the Component

Complete the following tasks to install the Web Access Server component.

Task 1:   It is recommended that the database is installed and running before you install this component.

When this component is installed, it asks for the database host and port number in order to download database information from the database system. If you have not installed the database, the installation will let you continue; however, you will then have to use the Management Console to configure your database system after you install this component.

See Chapter 3, Installing a Database for details.

Task 2:   Start the setup program.

See Starting the Setup Program on page 59.

After you start the setup program, the Setup window opens (see page 61).

Task 3:   Select the OVPI installation option.

Select **OVPI 5.1.0** from the Install section of the window. The Welcome window opens. See Figure 1 on page 98.

Task 4:   Read the Welcome window.

Click **Next**.

Task 5:   Accept or reject the license agreement.

The License Agreement window opens. See Figure 2 on page 99.

Do *one* of the following:

- To reject the license agreement and discontinue installation, click **Cancel**.

  A confirmation window appears.

  — If you click **Yes**, the installation process ends.

  — If you click **No**, the License Agreement window appears again. You can then click the **I accept the terms in the license agreement** option to proceed with installation.

- To accept the license agreement and continue installing OVPI, click the **I accept the terms in the license agreement** option, and then click **Next**.

Task 6:   Select the OVPI component you want to install.

The Component Selection window opens. See Figure 3 on page 100.

1   Click the **Web Access Server** check box, and click to clear all other check boxes.

   For a description of the component, see OVPI Components on page 12.

2   Click **Next**.

Task 7:   Specify an installation directory for the OVPI software.

> If you have already installed another OVPI component on this system, the Destination Folder window will not open. In this case, go to Task 8 on page 189.

An installation directory can be any one of the following: NFS mounted directory, UNIX soft link, UNIX hard link, or a Windows mapped drive.

⚠   The path to the destination folder cannot contain any blank spaces.

Do *one* of the following:

- Click **Next** to accept the default destination folder and to continue the installation.

- Type a different destination folder from the default, and click **Next** to continue the installation.

Depending on the installation directory you specified, the following will occur:

- If the installation directory does not already exist, the setup program creates it.

- If the installation directory already exists and contains data, a message will display to warn you that the directory is not empty.

- If you specify an installation directory that is located on a file system that the setup program cannot access, a message will display to warn you. You cannot continue the installation until you supply a valid directory.

Task 8:   Specify the port for the Web Access Server.

Figure 14 on page 116 shows the Web Access Server Settings window.

1   In the Username box, type the username for the OVPI Web Access Server administrator. The username is trendadm by default.

> ➤ This account is used to log on to the Web Access Server application. Do not confuse this account with the trendadm account discussed in Task 12 on page 170 (UNIX installations only), which is used to preserve the environment in which OVPI will run. The account for the Web Access Server is given the default name of trendadm; however, you can change the name of this account now.

2   Create a password for the OVPI Web Access Server administrator account by typing a password in the Password box.

> ➤ The installation wizard places no restrictions on the minimum and maximum length or on the characters that can be used in the username and password; however, the installation wizard does require that you supply a username and a password. It is recommended that you adhere to your company's policy for username and password creation.

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

3   Type the password you created in Step 2 in the Confirm Password box.

4 Type the port for the Web Access Server in the HTTP Port box if you do not want to use the default, which is 80. Any open port can be used.

5 If needed, click **Advanced** to open the Advanced OVPI Configuration dialog box, which lets you do the following:

- Change the location of the reports directory (Directories tab). The reports directory is where all deployed reports will be stored. See Changing the Reports Directory on page 190 for details.

- Create and remove user accounts (OVPI User tab). A user account lets you log on to OVPI's client applications (Report Viewer, Report Builder, Web Access Server, and Management Console). See Creating and Modifying User Accounts on page 190 for details.

- Enable Secure Sockets Layer (SSL) communication between the Web Access Server and a supported Web browser (SSL Setup tab). See Enabling Secure Sockets Layer (SSL) Communications on page 191 for details.

6 Click **Next** to continue with the installation.

Changing the Reports Directory

Use the Directories tab to change the location of the reports directory. To change the location:

a Select the Directories tab in the Advanced OVPI Configuration dialog box, shown in Figure 15 on page 118.

b To change the reports directory, do *one* of the following:

— Enter a new directory location in the Reports Directory box.

— To search for a directory, click **Browse**. Locate the directory, and then click **Open**.

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

d Click **OK** to return to the Web Access Server Settings window, and then click **Next** to continue with the installation.

Creating and Modifying User Accounts

Use the OVPI User tab to create user accounts. These accounts are used to log on to the following OVPI client applications: Management Console, Report Builder, Report Viewer, and Web Access Server.

You can create regular user accounts or administrator accounts. Users with non-administrator accounts can access the OVPI client applications. Users with administrator accounts can the administration features (Administration link) of the Web Access Server. Refer to the *Performance Insight Administration Guide* for details.

To create and modify accounts:

a Select the OVPI User tab in the Advanced OVPI Configuration dialog box, shown in .

b To add a user account, do the following:

— Click **Add User**. A default user appears with a default value of new-user for user name and password, and a role of user.

— Double-click the new-user cell under the User Name column, delete the default value, and then enter the user name you want to use.

— Double-click the new-user cell under the Password column, delete the default value, and then enter the password you want to use.

— Click the user cell under the Role column, and then select a role (**user** or **admin**) from the list.

— Click **Apply** when you have finished making all of your changes.

c To remove a user account:

— Select the user name. The entire row is selected including the user name, password, and role.

— Click **Delete User**.

— Click **Apply** when you have finished making all of your changes.

d Click **OK** to return to the Web Access Server Settings window, and then click **Next** to continue with the installation.

You can create, modify, or delete user accounts after you install OVPI using the Web Access Server. Refer to the *Performance Insight Administration Guide* for details.

Enabling Secure Sockets Layer (SSL) Communications

Using SSL, you can 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, this self-signed certificate 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:

a   Select the SSL Setup tab in the Advanced Configuration dialog box, shown in Figure 17 on page 121.

b   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.

c   Do *one* of the following:

— Leave the value in the SSL Port box as is; the default is 443.

— Modify the value in the SSL Port box.

d   In the Keystore Password box, enter 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 is information used by the person who checks by the certificate to ensure that the certificate is valid.

e   Type your two-letter country code in the Country box (for example, "US").

f   The following information is optional:

— Organization. Type the name of your organization (for example, "ABC Systems, Inc.")

— Org. Unit. Type the name of your department or division (for example, "Northeast Sales").

— City. Type the name of your city or locality (for example, "Los Angeles").

— State. Type the name of your state or province (for example, "California").

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

h Click **OK** to return to the Web Access Server Settings window, and then click **Next** to continue the installation.

Task 9: Supply information about the database.

Figure 5 shows the Remote Database Settings window.

Figure 5   Remote Database Settings Window

1 Enter the name of the database host in the Remote Database Host box.

2 Enter the port number for the database host in the Remote Management Server Port box.

3 Click **Next**.

▶ If the system fails to connect to the database to obtain database information, a warning message displays.

The database (Sybase or Oracle) and the OVPI database must be running before you continue with the installation. If you are using Oracle, the Oracle Listener program must be running also.

Click **Cancel** to retype the database information, or click **OK** to continue the installation. If you continue with the installation, you will need to use the Management Console after the installation to set up the database connection.

Task 10: Review the installation information and install.

1 Review the Selection Summary window (see Figure 18 on page 123).

2 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 Selection Summary window.

3 Click **Install** to continue the installation.

The Progress window opens, showing the installation status. See Figure 19 on page 124.

Task 11: Close the Setup program.

Do *one* of the following:

• If the OVPI installation was successful, click **Done**.

▶ If you installed OVPI on a UNIX system, the installation is complete.

• If the OVPI installation was unsuccessful, click the **Details** button at the bottom of the Installation Progress window for additional information, and then contact Support.

Task 12: Windows systems only: Reboot the system.

You must reboot your Windows system before you can use OVPI.

► If the system on which you installed the Web Access Server experiences hardware failure, reinstall the Web Access Server on a new system, and then 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.

Installing the Clients Component

This section describes the preparation and installation steps necessary for the Clients component. The clients provide the interface to OVPI. You can install a client on any networked system. For more information about the OVPI clients, see OVPI Clients on page 14.

► For Management Console to have full functionality, Performance Manager must be installed. In a client-only installation, you cannot use the Management Console applications normally available from the Tools menu following a complete OVPI installation: Database Tuner, MIB Browser, SNMP Discovery, Type Discovery, and Package Manager. Additionally, you will not be able to register a new data table, property table, or automatically add a collection to the database.

Preparing for the Installation

To avoid delays in the installation process, have the following information available:

- Directory into which you will install OVPI

- The username and password for the Web Access Server administrator account that you will need to create

- Port number on which the Web Access Server will reside

When you install the clients, several applications will install. For a list of these applications, see OVPI Clients on page 14.

Installing the Component

Complete the following tasks to install the OVPI Clients components.

Task 1:   Start the setup program.

See Starting the Setup Program on page 59.

After you start the setup program, the Setup window opens (see page 61).

Task 2:   Select the OVPI installation option.

Select **OVPI 5.1.0**. from the Install section of the Setup window. The Welcome window opens. See Figure 1 on page 98.

Task 3:   Read the Welcome window.

Click **Next** to continue the installation. The License Agreement window opens. See Figure 2 on page 99.

Task 4:   Accept or reject the license agreement.

Do *one* of the following:

• To reject the license agreement and discontinue installation, click **Cancel**.

A confirmation window appears.

— If you click **Yes**, the installation process ends.

— If you click **No**, the License Agreement window appears again. You can then click the **I accept the terms in the license agreement** option to proceed with installation.

• To accept the license agreement and continue installing OVPI, click the **I accept the terms in the license agreement** option, and then click **Next**.

The Component Selection window opens. See Figure 3 on page 100.

Task 5:   Select the OVPI component you want to install.

1   Click the **OVPI Clients** check box, and click to clear all other check boxes.

For a description of the component, see OVPI Components on page 12.

2   Click **Next**.

The Destination Folder window opens. See Figure 4 on page 101.

Task 6: Specify an installation directory for the OVPI software.

> ▶ If you have already installed another OVPI component on this
> system, the Destination Folder window will not open. In this case,
> go to Task 7.

An installation directory can be any one of the following: NFS mounted
directory, UNIX soft link, UNIX hard link, or a Windows mapped drive.

⚠️ The path to the destination folder cannot contain any blank spaces.

Do *one* of the following:

• Click **Next** to accept the default destination folder and to continue the
  installation.

• Type a different destination folder from the default, and click **Next** to
  continue the installation.

Depending on the installation directory you specified, the following will occur:

• If the installation directory does not already exist, the setup program
  creates it.

• If the installation directory already exists and contains data, a message
  will display to warn you that the directory is not empty.

• If you specify an installation directory that is located on a file system that
  the setup program cannot access, a message will display to warn you. You
  cannot continue the installation until you supply a valid directory.

The Remote Web Access Server Settings window opens.

Task 7: Specify the information needed to access the Web Access Server.

Figure 3 on page 173 shows the Remote Web Access Server Settings window.

Do the following:

1 Enter the name of the Web Access Server in the Web Access Server Host
   box.

2 Enter the port number for the Web Access Server in the Web Access
   Server Port box.

3 Click **Next**.

Task 8: Review the installation information and install.

1   Review the Selection Summary window (see Figure 18 on page 123).

2   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 Selection Summary window.

3   Click **Install** to continue the installation.

The Installation Progress window opens, showing the installation status. See Figure 19 on page 124.

Task 9: Close the Setup program.

Do *one* of the following:

•   If the OVPI installation was successful, click **Done**.

> ► If you installed OVPI on a UNIX system, the installation is complete.

•   If the OVPI installation was unsuccessful, click the **Details** button at the bottom of the Installation Progress window for additional information, and then contact Support.

Task 10: Windows systems only: Reboot the system.

You must reboot your Windows system before you can use OVPI.

Installing the Remote Poller Component

This section describes the preparation and installation steps necessary for the Remote Poller component.

Remote Poller is a database client, command-line executable. During installation, Remote Poller will install all of its polling binaries onto any system other than the one currently maintaining the OVPI database.

► If you have already installed the Performance Manager, you do not need to install the Remote Poller. Remote Poller is a subset of the Performance Manager.

Preparing for the Installation

To avoid delays in the installation process, have the following information available:

- Directory into which you will install the Remote Poller
- Database host
- Database host number
- Poller Collection/Cache directory
- UNIX systems only: Select a password for the operating system account (`trendadm`) if the account does not exist.

Installing the Component

Complete the following tasks to install the Remote Poller component.

Task 1: Ensure that the database is installed and running.

See Chapter 3, Installing a Database for details.

Task 2: Start the setup program.

See Starting the Setup Program on page 59.

After you start the setup program, the Setup window opens (see page 61).

Task 3: Select the OVPI installation option.

Select **Remote Poller** from the Install section of the Setup window.

Task 4: Read the Welcome window.

The Welcome window opens. See Figure 1 on page 98.

Click **Next** to continue the installation.

Task 5: Accept or reject the license agreement.

The License Agreement window opens. See Figure 2 on page 99.

Do *one* of the following:

- To reject the license agreement and discontinue installation, click **Cancel**.

  A confirmation window appears.

— If you click **Yes**, the installation process ends.

— If you click **No**, the License Agreement window appears again. You can then click the **I accept the terms in the license agreement** option to proceed with installation.

• To accept the license agreement and continue installing OVPI, click the **I accept the terms in the license agreement** option, and then click **Next**.

Task 6: **Specify an installation directory for the OVPI software.**

Figure 4 on page 101 shows the Destination Folder window.

> ▶ If you have already installed another OVPI component on this system, the Destination Folder window will not open. In this case, go to Task 7.

An installation directory can be any one of the following: NFS mounted directory, UNIX soft link, UNIX hard link, or a Windows mapped drive.

⚠ The path to the destination folder cannot contain any blank spaces.

Do *one* of the following:

• Click **Next** to accept the default destination folder and to continue the installation.

• Type a different destination folder from the default, and click **Next** to continue the installation.

Depending on the installation directory you specified, the following will occur:

• If the installation directory does not already exist, the setup program creates it.

• If the installation directory already exists and contains data, a message will display to warn you that the directory is not empty.

• If you specify an installation directory that is located on a file system that the setup program cannot access, a message will display to warn you. You cannot continue the installation until you supply a valid directory.

The Remote Database Settings window opens.

Task 7:   Supply information about the database.

Figure 5 on page 193 shows the Remote Database Settings window.

1 Enter the name of the database host in the Remote Database Host box.

2 Enter the port number for the database host in the Remote Management Server Port box.

3 Click **Next**.

► If the system fails to connect to the database to obtain database information, a warning message displays. It is recommended that the database (Sybase or Oracle) and the OVPI database be running before you continue with the installation. Click **Cancel** to retype the database information, or click **OK** to continue the installation. If you continue with the installation, you will need to use the Management Console after the installation to set up the database connection; refer the *Performance Insight Administration Guide* for details.

The Performance Manager Settings window opens.

Task 8:   Configure polling collections.

Figure 10 on page 111 shows the Performance Manager Settings window.

1 Do *one* of the following:

— Click **Next** to accept the default location for the Cache Folder and to continue the installation process.

— Click **Browse** to select a different location for the Cache Folder, and then click **Next** to continue the installation process.

► For collections to work properly, the disk partition on which the Poller Collection/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 dialog box, which lets you specify the directory in which the remote poller log files will reside.

To specify a directory for log files:

a Click **Advanced** on the Performance Manager Settings window. The Advanced Configuration dialog box opens.

    b   In the Log Directory box, type the directory path in which the log files will reside, or click **Browse** to locate the desired directory, or accept the default path.

> ➤ The installation will create a log directory under the directory in which you installed OVPI. Certain log files will be maintained there regardless of the directory you specify in the Log Directory box.

    c   Click **OK** to return to the Performance Manager Settings window.

    d   Click **Next**.

3   Do one of the following depending on your operating system:

    — UNIX: Go to Task 9.

    — Windows: Go to Task 10 on page 203.

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

On UNIX systems, the Performance Manager component requires an operating system account and group named `trendadm`.

> ➤ The purpose of this account is to preserve the environment in which OVPI will run. This account is used to log on to the operating system and should not be confused with the `trendadm` account you will create in Task 8 on page 189, which is used to log on to the Web Access Server application.

Depending on whether or not this account exists, different windows will open during this point in the installation:

- If the operating system account and group do not exist, the Create OS user window opens. See Creating the Operating System Account on page 202.

- If the operating system account and group do exist, the Existing OS User window opens. See Modifying the Existing Operating System Account on page 203.

Creating the Operating System Account

Figure 12 on page 114 shows the Operating System User for Performance Manager window.

1   Create a password for the `trendadm` account in the Password box, and then retype the password in the Confirm Password box.

By default, the password must have a minimum length of one character, has no limit on its maximum length, and may contain any character; however, it is recommended that you adhere to your company's policy for password creation.

2 Click **Next**.

3 Go to .

Modifying the Existing Operating System Account

shows the Operating System User for Performance Manager window.

1 Click one of the following:

— **Modify user environment**. This option 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 option will not update the account's `.profile` or `.cshrc` with the OVPI environment variables. If you select this option, you will have to manually add the OVPI environment variables later.

2 Click **Next**.

Task 10: Review the installation information and install.

1 Review the Selection Summary window, shown in Figure 6.
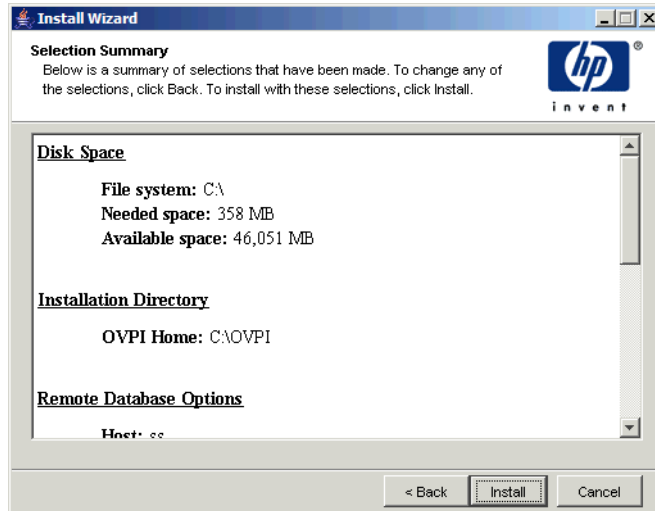
Figure 6   Selection Summary Window

2   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 Selection Summary window.

3   Click **Install** to continue the installation.

The Installation Progress window opens, showing the installation status. See Figure 19 on page 124.

Task 11: Close the Setup program.

Do *one* of the following:

•   If the OVPI installation was successful, click **Done**.

> If you installed OVPI on a UNIX system, the installation is complete.

•   If the OVPI installation was unsuccessful, click the **Details** button at the bottom of the Installation Progress window for additional information, and then contact Support.

Task 12: Windows systems only: Reboot the system.

You must reboot your Windows system before you can use OVPI.

▶ The Remote Poller will not begin to poll devices until you set up its polling policy. You must do this in the OVPI database where you installed Remote Poller. For more information about setting up a polling policy on a remote poller, refer Chapter 2 in the *Performance Insight Administration Guide* for details.

Editing the trendtimer.sched File for Multiple Pollers

If you have multiple pollers, it is recommended that you edit the `trendtimer.sched` file and add the -X option to all mw_collect commands; this prevents the pollers from running the raw to delta processing invoked by the **trendpm** command. If you do not do this, you could see performance issues.

You should edit the file for all of the pollers *except* one. For example, if you have a satellite system polling (that is, OVPI's Performance Manager component is installed on this system) with three remote pollers, edit the file for all of the pollers, leaving the satellite system's file as is. If the satellite system is not polling, then edit the file for two of the pollers leaving one as is.

To turn off raw to delta processing:

1   Edit the `trendtimer.sched` file.

2   Add the `-X` option to all of the `mw_collect` lines in the file.

For example, if the lines in your file read as follows:

5 - - {DPIPE_HOME}/bin/mw_collect -n -i 5 -K 1
10 - - {DPIPE_HOME}/bin/mw_collect -n -i 10 -K 1
15 - - {DPIPE_HOME}/bin/mw_collect -n -i 15 -K 1
20 - - {DPIPE_HOME}/bin/mw_collect -n -i 20 -K 1
60 - - {DPIPE_HOME}/bin/mw_collect -n -i 60 -K 1
24:00+1:00 - - {DPIPE_HOME}/bin/mw_collect -n -i 1440 -K 1

Edit the lines to look like the following:

5 - - {DPIPE_HOME}/bin/mw_collect -n -i 5 -K 1 -X
10 - - {DPIPE_HOME}/bin/mw_collect -n -i 10 -K 1 -X
15 - - {DPIPE_HOME}/bin/mw_collect -n -i 15 -K 1 -X

20 - - {DPIPE_HOME}/bin/mw_collect -n -i 20 -K 1 -X
60 - - {DPIPE_HOME}/bin/mw_collect -n -i 60 -K 1 -X
24:00+1:00 - - {DPIPE_HOME}/bin/mw_collect -n -i 1440 -K 1 -X

3 Save the file.

Applying Service Packs

You should apply any Service Packs for the release. To locate any Service Packs for this release, go to the following Web site:

http://support.openview.hp.com/cpe/ovpi/patch_ovpi.jsp

Post-Installation Configuration Tasks

Refer to the *Performance Insight Administration Guide* for information about how to configure OVPI after you have installed it and for administrative tasks that you will need to perform.

7

Uninstalling OVPI

This chapter contains instructions for uninstalling HP OpenView Performance Insight (OVPI) from Windows and UNIX systems.

When uninstalling OVPI, you must uninstall OVPI first, and then uninstall the database.

Instructions for uninstalling a Sybase database are also provided in this chapter. For information about uninstalling an Oracle database, see the Oracle documentation.

➤ With the exception of starting the uninstall wizard, the procedures for uninstalling OVPI are identical for both Windows and UNIX systems.

Starting the Uninstall Wizard

The Uninstall Wizard will remove files that were added to your system at the time of the OVPI installation (for example, OVPI components). It will not remove files that were generated or created by a user or an application (for example, log files and reports). The OVPI uninstallation procedure removes all OVPI components from the local system.

To uninstall OVPI on Windows and UNIX systems, do the following.

Task 1:   Start the Uninstall Wizard.

Do *one* of the following depending on your operating system:

- *Windows*:
  - Log on to the local system as a user with administrative privileges.
  - From the Windows Desktop, click **Start**, point to Programs, HP OpenView, Performance Insight, and then choose **Uninstall** from the menu.

- *UNIX*:
  - Log on to the local system as `root`.
  - Locate the `uninstall` program and start it by typing the following command:

    `%DPIPE_HOME/bin/uninstall`

    $DPIPE_HOME is the directory into which you installed OVPI.

The Welcome window opens.
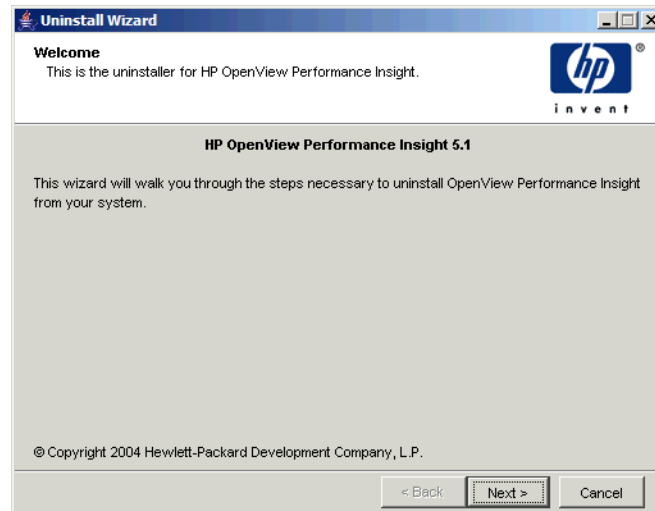
Task 2:   Read the Welcome window.

Click **Next** to continue the uninstall.

One of the following happens:

- If the database schema is installed on the system where you are uninstalling OVPI, go to Task 3.

- If the database schema is not installed on the system where you are uninstalling OVPI, go to Task 4.

Task 3:   Local Sybase database only: Supply the Sybase Administrator password.
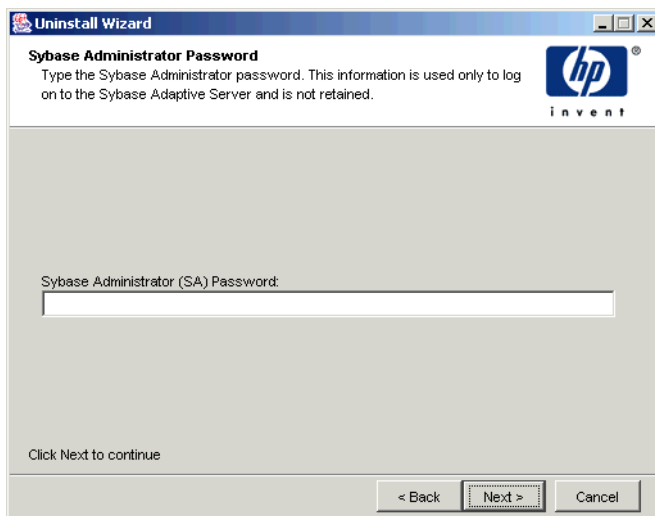
Do one of the following:

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

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

Task 4:   Review the information and uninstall.

The Selection Summary window opens.

1   Review the Selection Summary window.

2   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 Selection Summary window.

3   Click **Uninstall** to continue.

Task 5:   Close the Setup program.

The Uninstall Progress window opens, which shows the status of the uninstall.

Do *one* of the following:

- If the OVPI uninstall was successful, click **Done**.

- If the OVPI uninstall was unsuccessful, click the **Details** button at the bottom of the Uninstall Progress window for additional information, and then contact Support.

Task 6:   Windows systems only: reboot the system.

To complete the uninstall, you must reboot your Windows system.

Task 7:   Manually remove the directory in which OVPI was installed and the .ovpi directory.

The uninstall wizard will only remove the files installed by the installation wizard. For example, all reports you deployed for any report packs you have installed will not be removed; therefore, to prevent potential issues when you reinstall OVPI, it is recommended that you remove the following:

- The directory into which you installed OVPI

    ⚠ If you have reports or data in this directory that you want to save, move those files to another location before you remove the directory.

- The .ovpi directory, which stores a user's custom settings

    ▶ This directory will only be present if the user has run one of the following applications: Report Builder, Report Viewer, and Web Access Server.

The .ovpi directory is a hidden file; therefore, you will need to make it visible to your file system to remove it. On UNIX systems, this directory is located in the UNIX home directory. On Windows systems, you can find it in the following location:

`%SystemDrive%\Documents and Settings\`*username*

Users should remove their own .ovpi directory.

Deleting the OVPI and .ovpi Directories

To delete these directories on a UNIX system, do the following:

1 Open a new shell window on the system where the application is installed.

2 To delete the directory in which OVPI is installed, type the following command:

rm -rf *OVPI_directory*

For example, if you installed OVPI in the /data directory, you would type the following command:

rm -rf /data/ovpi

3 To delete the .ovpi directory, type the following command from your home directory:

rm -rf .ovpi

To delete these directories on a Windows system, do the following:

1 To delete the directory in which you installed OVPI, do either of the following:

- Windows Explorer. Locate the directory, right-click it, and select **Delete**.

- Command Prompt window. Type the following command:

  rmdir /S *OVPI_installation_directory*

2 To delete the .ovpi directory, do either of the following:

- Windows Explorer. Navigate to the following location:

  %SystemDrive%\Documents and Settings*username*

  Right-click the .ovpi directory, and select **Delete**.

- Command Prompt window. Type the following command:

  rmdir /S .ovpi

Uninstalling Sybase On Windows

To uninstall Sybase on a Windows system, you must:

- Stop Sybase.
- Run the Sybase uninstall program.
- Remove the Sybase directory.

Stopping Sybase

To stop Sybase on Windows:

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

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

3   Select Sybase SQLServer_*server*, where *server* is the name of your Sybase SQL Server.

4   Right-click the service name, and then select **Stop** from the shortcut menu.

5   Close the Services window.

Running the Sybase Uninstall Program

To remove Sybase from Windows:

1   Insert the OVPI CD in the CD-ROM drive.

2   From the top level folder on the CD, double-click setup.exe.

    The Setup window opens (see page 61).

3   Click **Sybase 11.9.2.5**.

    The Sybase Welcome window opens.

4 Click **Next** to continue the uninstall process.

The Select Installation Type window opens.

5 Click **Uninstall** to continue the uninstall process.

The Uninstall Sybase Products window opens.

6 Click **OK** to continue with the uninstall.

A warning message displays.

7 Click **OK** to continue with the uninstall.

A verification message displays asking if you want to delete the Sybase program group.

8 Click **OK** to continue with the uninstall.

If the uninstallation is successful, the following message displays:

9 Click **OK**.

The Select Installation Type window opens.

10 Click **Exit**.

11 Delete the Sybase directory.

Uninstalling Sybase on UNIX

To uninstall Sybase on UNIX, you must:

• Stop Sybase.

• Perform some required system tasks.

- Remove the Sybase directory.

▶ The commands shown in this section are case-sensitive. Be sure to type each one exactly as shown above.

Stopping Sybase

This section contains two procedures for stopping Sybase on UNIX. Use the first procedure if you *did not* set a Sybase administrator (SA) password when you installed Sybase. Use the second procedure if you *did* set an SA password during installation.

To stop Sybase if there is no SA password:

1   Log on as root.

2   Stop Sybase by entering one of the following:

— *Sun Solaris*:

/etc/init.d/Sybase stop

— *HP-UX*:

/sbin/init.d/Sybase stop

To stop Sybase if there is an SA password:

1   Log on as root.

2   Stop Sybase by entering the following command:

su – sybase $SYBASE/bin/isql -Usa P*sa_password* -S*server_name*

In this instance, *sa_password* is the Sybase administrator password and *server_name* is the name of the Sybase server.

3   At the ISQL prompt, type the following:

shutdown with wait

4   Press **Enter**, then type the following:

go

Performing Required System Tasks

➤ The following procedure assumes that you accepted the default settings when you installed Sybase. If you did not use the default values, you may need to examine the /etc/passwd file and /etc/group file to identify the actual Sybase user and group names.

Perform the required system tasks by doing the following:

1 Edit the /etc/services file and remove the following line:

SYBASEquery_*server*

In this instance, *server* is the name of your Sybase SQL Server.

2 Remove the Sybase user and group by entering:

— *Sun Solaris and HP-UX:*

groupdel sybase
userdel sybase

3 Remove the following files:

— *Sun Solaris*:

/etc/init.d/Sybase
/etc/rc3.d/S120Sybase
/etc/rc3.d/K120Sybase

— *HP-UX*:

/sbin/init.d/Sybase
/sbin/rc3.d/S120Sybase
/sbin/rc3.d/K120Sybase

Removing the Sybase Directory

To remove Sybase from UNIX:

1 Log on as root.

2 From the location where Sybase is installed, enter the following command:

rm -rf Sybase

8

Upgrading OVPI

This chapter contains information for upgrading:

- OVPI 4.6 or 5.0 to OVPI 5.1
- Report packs for use with OVPI
- A remote poller

It describes system software requirements; prerequisite tasks; step-by-step instructions for completing an upgrade; and post-upgrade tasks.

▶ Plan your upgrade well in advance so that you can find and fix any incompatible files before you upgrade. For OVPI 4.6 users, this means starting the upgrade so that the Pre-Upgrade Checker can flag problems that must be resolved, fixing the problems, and then restarting the upgrade. See Error Logging on page 225 for details.

System Requirements

This section describes the software requirements that your system must meet before you can upgrade to OVPI 5.1.

Supported OVPI Versions

To upgrade to OVPI release 5.1, you must have one of the following versions of OVPI installed, with or without Service Packs:

- OVPI release 4.6 GA
- OVPI release 5.0 GA

If you are running an older version of OVPI, you must upgrade to a supported version before upgrading to version 5.1. If you need assistance in upgrading from older versions, contact Support.

➤ Users of OVPI release 4.6 are encouraged to upgrade to OVPI 5.1 with Reporting and Neworking Solutions (RNS) 8.0. See Upgrading Report Packs and Datapipes on page 236 for more information.

Upgrade Media

You need the following media to upgrade:

- OVPI 5.1 installation CD-ROM
- RNS product distribution CD-ROM

Required Operating Systems

To upgrade to OVPI version 5.1, you must use one of the following operating systems:

- HP-UX 11.11
- Sun Solaris 8, 9
- MS Windows 2000 with Service Pack 4
- MS Windows 2003
- MS Windows XP (clients only)

If you are running another operating system, you must upgrade to a supported operating system before upgrading.

Required Java Patches for Your Operating System

OVPI 5.1 includes Java 1.4.2_02. Java will automatically load onto your system during the upgrade, replacing any previous Java versions that OVPI has installed.

▶ You must install the appropriate Java patches required for your operating system. See Required Patches for Running Java on page 30 for information about these patches.

Required Database Versions

• Sybase Adaptive Server 11.9.2.5 ESD 1.

OVPI 4.6 and 5.0 use Sybase 11.9.2.5. You do not need to perform any upgrade steps for Sybase.

• Oracle Enterprise Edition 9.2.0.5

OVPI 5.0 users who have Oracle 9.2.0.4 installed should upgrade to Oracle Enterprise Edition 9.2.0.5. The correct upgrade order is to upgrade OVPI to 5.1, then apply the Oracle patch to 9.2.0.5, and then start all OVPI services.

Component and Service Name Changes

The following OVPI 4.6 components have been renamed as follows:

• The Application Server is now called the Web Access Server.

• The Administration Server is now called the Management Server.

The TREND timer and Trend App Server services have been renamed as follows for each operating system:

• *Windows*

— TREND timer is now OVPI Timer.

— Trend App Server is now OVPI HTTP Server.

• *HP-UX*

— /sbin/init.d/TrendTimer is now /sbin/init.d/ovpi_timer

— /sbin/init.d/TrendAppServer is now /sbin/init.d/ovpi_httpd

- *Sun Solaris*

— /etc/init.d/TrendTimer is now /etc/init.d/ovpi_timer

— /etc/init.d/TrendAppServer is now /etc/init.d/ovpi_httpd

▶ If you use scripts, be sure to check for the service names and update them accordingly.

Prerequisite Tasks Checklist

Before you begin the upgrade, perform these prerequisite tasks:

1 Ensure that your system meets all requirements listed in System Requirements on page 217.

2 Read the *Performance Insight Release Notes*. This document provides an overview of changes made to OVPI for the version 5.1 release.

3 Verify that all users are logged off.

4 *On Windows systems only*, verify that all windows and third-party applications are closed.

5 *On UNIX systems only*, ensure that the DISPLAY environment variable is set. Ensure that you have read permissions on the directories where custom report packs or scripts are stored, and to the **$DPIPE_HOME** directory.

6 Verify that all remote OVPI processes that access your database are stopped. For example, if the Web Access Server is installed on the system you are upgrading, it should be shut down before you upgrade the database schema.

7 The upgrade process to OVPI 5.1 does not preserve customizations in your environment. While any custom reports that you have created should not be lost, any changes you have made to HP-supplied report packs will be lost. Make sure that you have the information you need to recreate and reapply your custom changes.

8   OVPI 4.6 users should plan the upgrade in advance, giving time to find and correct problems identified by the Pre-Upgrade Checker. You can perform the upgrade through the Pre-Upgrade Checker results, and then cancel the upgrade in order to fix any problems.

9   Back up your system by doing the following:

    a   Back up all OVPI files and the current version of OVPI.

    b   Back up your database.

⚠️   The upgrade procedure does not have any backout capability and it does not allow you to run the upgrade process again. If you encounter problems, you will have to restore your system from your backup files. Refer to the *Performance Insight Administration Guide* for details.

10 Verify that the OVPI Timer and OVPI HTTP Server processes are stopped and that all OVPI-related processes have completed before you run the upgrade wizard. See Stopping the OVPI Timer and OVPI HTTP Server on page 221.

11 Stop the OpenView Operations Agent, if running. See Stopping the OpenView Operations Agent on page 222.

12 Verify that your database is running. See Running the Database on page 223.

Stopping the OVPI Timer and OVPI HTTP Server

To stop the OVPI Timer and OVPI HTTP Server processes and verify that all OVPI-related processes have completed before you run the upgrade, do the following:

• Windows

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

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

• HP-UX

Type the following commands:

/sbin/init.d/ovpi_timer stop

/sbin/init.d/ovpi_httpd stop

- Solaris

  Type the following commands:

  /etc/init.d/ovpi_timer stop

  /etc/init.d/ovpi_httpd stop

Stopping the OpenView Operations Agent

If the OpenView Operations Agent is installed and running on your OVPI system, you must stop it before you upgrade.

If you do not stop the OVO Agent, the upgrade may fail while attempting to update shared files and leave the system in an unrecoverable state.

To stop the OpenView Operations Agent, do one of the following:

- *Windows*

  a From the **Control Panel** window, open the **Administrative Tools** window and then the **Services** window.

  b Right-click **HP ITO Agent**, and select Stop from the menu.

  c Right-click **HP ITO Agent**, and select Properties from the menu.

  d Select Disabled from the Startup type list.

  Leave this service disabled until the OVPI upgrade is complete. After the upgrade is complete, you can change the Startup Type to Automatic.

- *UNIX*

  Check the status of the OVO Agent, stop it, and check to verify that it is not running by typing the following on the command line:

  ```
  opcagt -status
  opcagt -stop
  opcagt -status
  ```

After the upgrade is complete, you can start the agent again.

Running the Database

Your database must be running before you begin the OVPI upgrade. This section describes how to determine whether your database is running and how to start the database if it is not running.

Verifying that the Database is Running (Windows)

To verify that your database is running on a Windows system:

1 From the **Control Panel** window, open the **Administrative Tools** window, and then the **Services** window.

2 Locate the Sybase or Oracle service.

   — The Sybase service will appear as follows, where *<server>* is the name of the Sybase server in use:

   Sybase SQLServer_<server>

   — The Oracle services will appear as follows, where *<db name>* is the name of the database in use:

   Oracle OraHome 92 TNSListener
   OracleService <db name>

3 If the service is not active, then the database is not running and you must use the Action menu to start it.

Verifying that the Database is Running (UNIX)

To verify that your database is running on a UNIX system, do the following:

• Sybase

Enter the following command at the command line, where *$DATABASE* is the directory into which you installed the database:

$DATABASE/install/showserver

For example, if you installed Sybase into `/usr/Sybase`, you would type:

`/usr/Sybase/install/showserver`

If no servers are listed, then the database is not running and you must start it.

• Oracle

Enter the following command at the command line:

`ps -aef | grep -i ora`

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.

To start the database on a UNIX system, log on to the system using the `root` account, and type one of the following commands depending on your operating system:

• Sybase

— Solaris

`/etc/init.d/Sybase start`

— HP-UX

`/sbin/init.d/Sybase start`

• Oracle

See the Oracle documentation for instructions about starting the database.

Component Upgrade Order

Your OVPI installation is either a standalone configuration or a distributed configuration. In a standalone configuration, all OVPI components are installed on one system. In a distributed configuration, the OVPI components are installed on physically separate systems and operate as a single, distributed system.

► For OVPI to work properly, you must upgrade *all* systems on which OVPI components are installed, and you must upgrade *all* components. For example, if you upgrade the system that is running the database, your client systems and the Web Access Server will not be able to connect to the database unless you upgrade them as well. OVPI 5.1 components cannot communicate with older versions of OVPI.

In a standalone configuration, you may upgrade components in any order. In a distributed configuration, you must upgrade the database schema first. Upgrade all the other components in any order unless your implementation contains remote pollers or distributed servers. If so, upgrade as follows:

- Remote Pollers

  If your implementation contains remote pollers that are configured to a certain server, upgrade the server first and then upgrade the remote pollers. To upgrade a remote poller, see Upgrading a Remote Poller on page 248.

- Distributed Servers

  If your implementation contains distributed servers (for example, satellite and central), upgrade the servers that run `trendcopy` before you upgrade the other database systems.

Error Logging

OVPI creates a log file during the upgrade; for OVPI 4.6 to 5.1 upgrades only, OVPI also creates a Pre-Upgrade Checker log file.

OVPI 4.6 users should plan the upgrade in advance, giving time to find and correct problems identified by the Pre-Upgrade Checker. You can perform the upgrade through the Pre-Upgrade Checker results, and then cancel the upgrade in order to fix any problems.

upgrade.log

During the upgrade, OVPI creates a log file called upgrade.log, which is located in **$TREND_log** (UNIX) or **%TREND_LOG%** (Windows). The file records all steps done during the upgrade.

formatted_output.log

If you are upgrading from OVPI 4.6 to OVPI 5.1, OVPI generates a Pre-Upgrade Checker log file called formatted_output.log, which is located in **$DPIPE_HOME/puc/log.**

formatted_output.log lists problems encountered during the OVPI 4.6 to 5.1 upgrade and provides information that may be useful in locating and resolving the problems.

To access the report, use the Pre-Upgrade Checker output viewer tool, viewReport.[bat|sh], available on the OVPI 5.1 installation CD, as follows:

- *Windows*

  cd Data
  .\puc\bin\viewReport.bat

- *UNIX*

  cd Data
  ./puc/bin/viewReport.sh

▶ You *must* run the command from the command prompt and directory specified, exactly as shown. (Windows users cannot use File Explorer.)

See Appendix C, Pre-Upgrade Checker Error Messages, for a list of the Pre-Upgrade Checker messages and their associated actions.

OVPI Upgrade Procedure

➤ This section documents an upgrade where all of the OVPI components have been installed on one system, a standalone configuration.

With the exception of starting the upgrade wizard, the procedures for upgrading OVPI are identical for Windows and UNIX systems. Thus, the following procedure notes the differences for starting the wizard on Windows and UNIX systems, but provides only one set of instructions for the upgrade.

For instructions about upgrading a remote poller, see Upgrading a Remote Poller on page 248.

To upgrade OVPI, perform the following tasks.

Task 1:   Log on.

1   Log on to the local system (for a distributed upgrade, start the upgrade on any system that contains components to be upgraded).

— *Windows*

Log on as a user with administrative privileges.

— *UNIX*

Log on as root.

2   Insert the OVPI installation CD in the CD-ROM drive. UNIX users must also mount the CD. See Table 10 on page 60 for instructions.

3   *Solaris system users only:* Do the following:

a   To display the cd_label, type the following command:

`ls -l /cdrom`

b   To change directory, type the following command, where *cd_label* identifies the CD name:

`cd /cdrom/cd_label`

Task 2:   Start the setup program.

1   To start the setup program:

— *Windows*

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*

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

`./setup`

The Setup window opens.
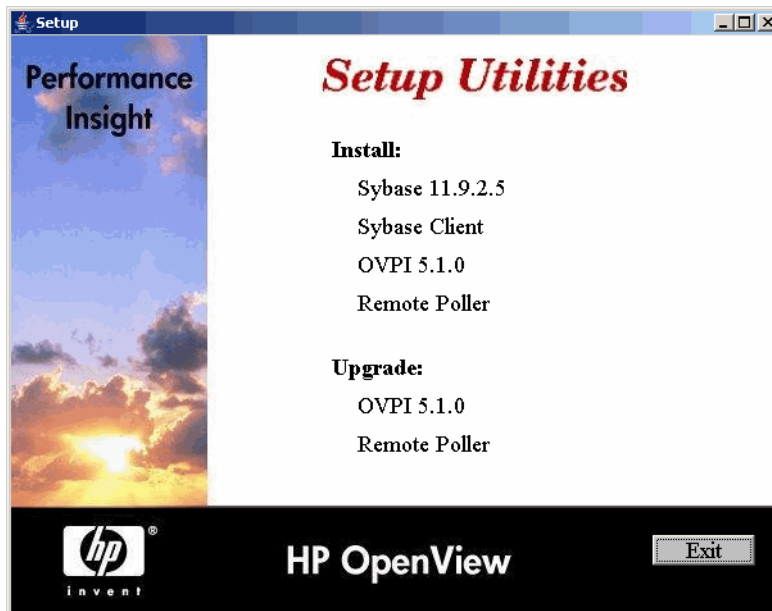
▶ *Windows only*: if the wizard windows display incorrectly, see Appendix A, Troubleshooting.

⚠ Make sure that you have the information you need to recreate and reapply custom changes to HP-supplied report packs. If you do not have this information, consider delaying the upgrade until the information you need is available.

2 Select **OVPI 5.1.0** from the Upgrade section of the Setup window.

> ➤ If OVPI 4.5 is currently installed on the system, the setup program displays a message informing you that you must upgrade to OVPI 4.6 *before* you can upgrade to 5.1.

The Welcome window opens.
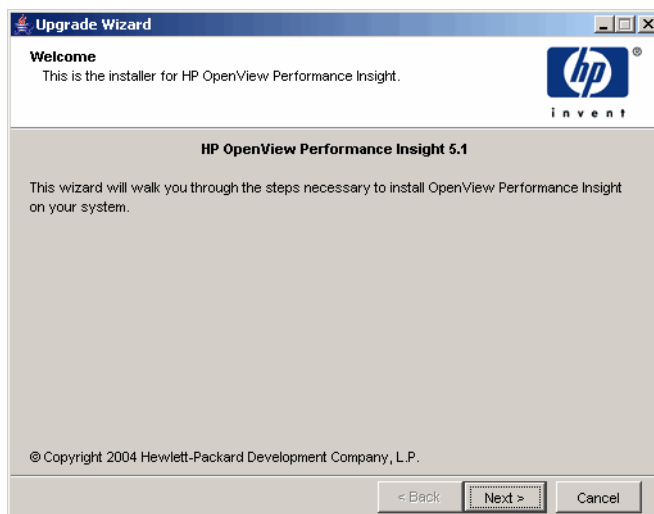
3 Click **Next** to continue the upgrade process.

The License Agreement window opens.
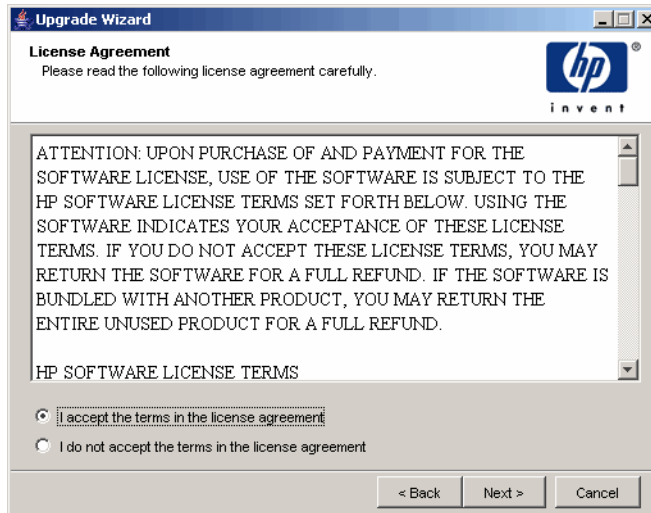
4 Do *one* of the following:

— To reject the license agreement and discontinue the upgrade, click **Cancel**.

A confirmation window appears.

– Click **Yes** to end the upgrade process.

– Click **No** to return to the License Agreement window. Click the **I accept the terms in the license agreement** option to proceed with the upgrade.

— To accept the license agreement and continue upgrading OVPI, click the **I accept the terms in the license agreement** option, and then click **Next**.

The OVPI Identifier window opens.
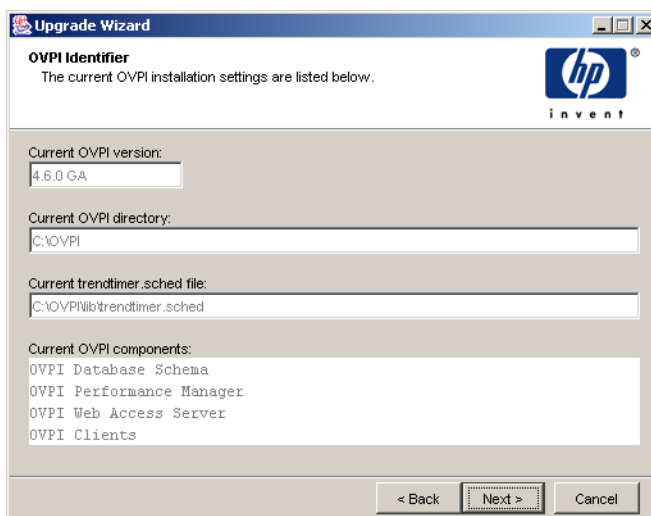
The upgrade wizard examines your system and determines the information for each option in the window.

— **Current OVPI version**. Displays the version of OVPI currently installed.

— **Current OVPI directory**. Displays the directory in which OVPI is installed.

— **Current trendtimer.sched file**. Displays the location of the `trendtimer.sched` file.

— **Current OVPI Components**. Displays the current OVPI components that are installed on the system.

5 Click **Next** to continue.

If you are upgrading from OVPI 5.0 to OVPI 5.1, go to Task 4.

If you are upgrading from OVPI 4.6 to OVPI 5.1, continue to Task 3.

Task 3:   Complete the OVPI Pre-Upgrade check (for OVPI 4.6 systems).

1   The OVPI Pre-Upgrade Checker (PUC) window opens. The Pre-Upgrade
     Checker checks the current OVPI 4.6 installation for known upgrade
     issues regarding installed report packs and datapipes. It generates a list
     of problems encountered, if any, and a report that can help you resolve
     problems.

     The PUC window gives you the opportunity to identify the locations of
     custom report packs to be checked.
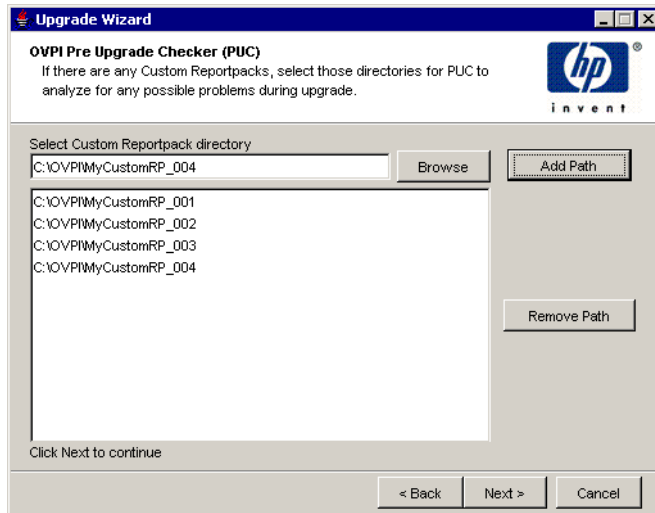
2   Click **Next** to continue. The Pre-Upgrade Checker runs and may require
     some time to complete before opening the Pre-Upgrade Checker Results
     window.

3 The OVPI Pre-Upgrade Checker Results window opens.
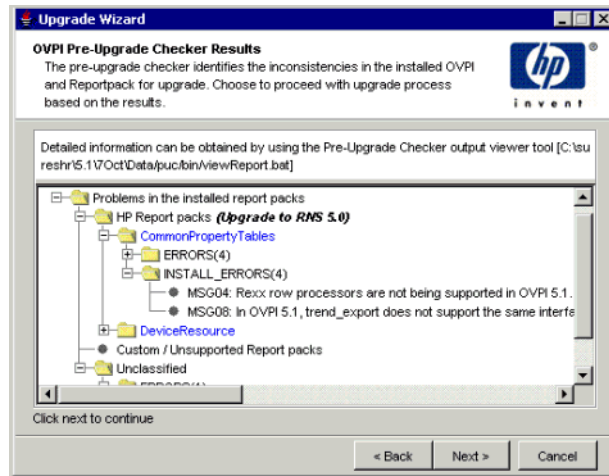
The OVPI Pre-Upgrade Checker Results window lists all problems encountered that must be resolved before continuing the upgrade.

To correct problems found with HP-supplied report packs, you need only upgrade to RNS 6.0 after upgrading to OVPI 5.1.

You can resolve a problem with a specific datapipe by uninstalling the existing datapipe and reinstalling the latest version of that datapipe after the upgrade to OVPI 5.1 is complete. See Upgrading Report Packs and Datapipes on page 236.

For problems with custom report packs, you must go through each one of the detected errors and resolve them; for some, actions are already available and are described in Appendix C, Pre-Upgrade Checker Error Messages. The upgrade will not preserve customizations you made to HP-supplied report packs, so you must have all information needed to recreate or reapply your customizations after the upgrade. An unclassified error is one that could not be attributed to a registered report pack.

4 Click **Next** to continue, or click `Cancel` to stop the upgrade so that you can resolve any errors involving custom report packs.

To view detailed information about reported problems, use the
Pre-Upgrade Checker output viewer tool (see Error Logging on page 225).

▶ Before you proceed with the upgrade to OVPI 5.1, make sure that
all errors are resolved. Failure to do so may impact the ability of the
OVPI software to function correctly.

Task 4:   Complete the upgrade.

1   One of the following will occur:

— The Sybase Administrator Password window opens if the database
schema is installed on the system you are upgrading. Go to Step 2.

— The Selection Summary window opens if the database schema is not
installed on the system you are upgrading. Go to Step to complete the
upgrade.

2   In the Sybase Administrator Password window, type the SA password and
click **Next**.

▶ If you have set the Sybase Administrator password, type the
password in the text box. If you have not set the Sybase
Administrator password, leave the text box blank.

3   The Selection Summary window opens.
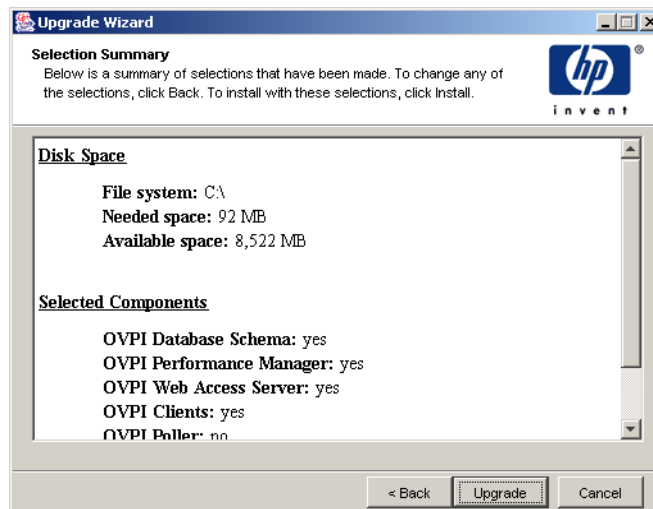
Review the summary of options on the Selection Summary window, and then click **Upgrade**.

The Progress window opens, displaying the status of the upgrade. When the upgrade completes, the Progress window displays a message that the upgrade was successful.
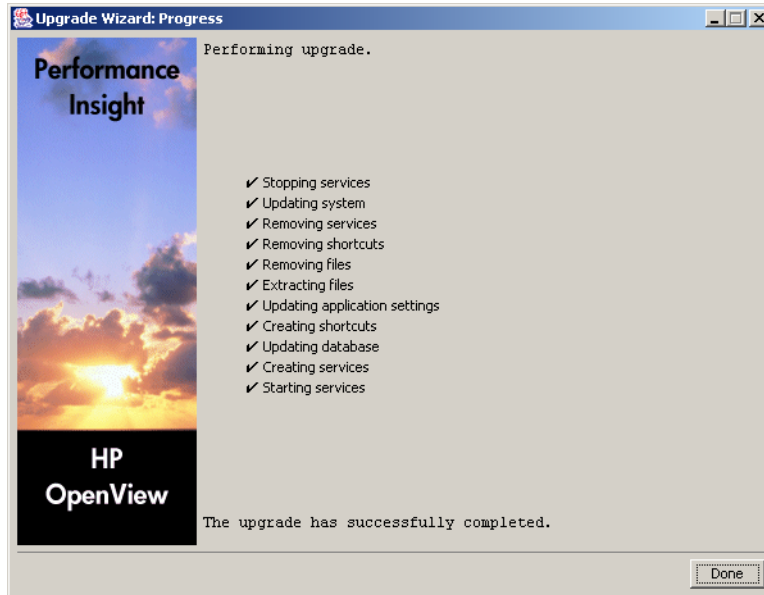
4   Do one of the following:

— If the upgrade was successful, click **Done**.

— If the OVPI upgrade was unsuccessful, click the Details button at the bottom of the Installation Progress window for additional information, and then contact Support. For information about how to contact support, see Support on page 3.

5   Finish the upgrade.

— *UNIX*

The installation is complete.

— *Windows*

Select **Reboot Now** to reboot your system, and then click **OK**. You *must* reboot your system before you can use your upgraded version of OVPI.

6   *Users of Oracle 9.2.0.4 only*: Apply the Oracle 9.2.0.5 patch set and then start all OVPI services. See Task 3 on page 81, ignoring the caution regarding OVPI and patch set installation order, which is for new OVPI installations only.

Upgrading Report Packs and Datapipes

This section covers the following topics:

- Basic information about upgrading
- OVPI and RNS compatibility issues
- Two packages with new names
- Sequence issues
- Steps for upgrading packages
- Tasks to perform after the upgrade is complete

Basic Information About Upgrading

Each release of RNS contains a combination of new packages, updates to existing packages, and packages that did not change from the previous release. If you are installing any package for the first time, installation is simple. You need to be aware that your new package may have prerequisites (also known as dependencies), but those prerequisites may already be installed; if those prerequisites are not already installed, Package Manager will install them for you, automatically.

If you are upgrading a report pack you already own, installation can be more complicated. This is because you may be required to upgrade a prerequisite package first, before you install the upgrade package for the report pack. In addition to being aware of prerequisite packages and upgrading the prerequisite packages first (before you upgrade the report pack), you may need to upgrade optional modules associated with the report pack (for example, a locations module). As explained in more detail in following sections, you must install upgrade packages for these modules after the report pack itself is upgraded.

OVPI and RNS Compatibility Issues

RNS releases are designed to operate with specific OVPI releases. Table 1 shows how RNS releases line up with OVPI releases.

Table 1   OVPI releases and RNS releases

This release of OVPI	Will run these releases of RNS
4.6	3.0; 4.0
5.0	5.0; 6.0; 7.0
5.1	6.0 or later

▶ Each release of RNS includes Release Notes that explain new features and bug fixes. If you want to know whether or not a package has changed, consult the RNS Release Notes.

If you have just upgraded from OPVI 5.0 to OVPI 5.1, you can:

- Continue using RNS 6.0
- Upgrade to RNS 7.0
- Upgrade to RNS 8.0

If you have just upgraded from OVPI 4.6 to OVPI 5.1, you can:

- Upgrade to RNS 6.0
- Upgrade to RNS 7.0
- Upgrade to RNS 8.0

RNS 8.0 streamlines the upgrade process. If you have access to RNS 8.0, upgrading will be easier and faster. If you must upgrade to RNS 7.0, Support is available should you encounter problems.

Two Packages with New Names

Two packages from RNS 4.0 changed names. The old names are:

- IRifentry_Datapipe
- ATMMIB2Interfaces Datapipe

The new names, appearing in RNS 5.0 and later, are:

- Interface_Reporting_ifEntry_Datapipe
- ATMifEntry_Datapipe

Sequence Issues

You may upgrade multiple packages in parallel. If you chose to upgrade multiple packages in parallel, we recommend that you follow this sequence:

- Upgrade shared packages
- Upgrade prerequisite report packs, such as Interface Reporting
- Upgrade all other report packs

Shared Packages

Some OVPI packages are shared by multiple report packs. Shared packages can be installed simultaneously, in parallel.

Table 2 provides a list of shared packages. It shows that shared packages do not have dependencies that must be upgraded first. This is either because the shared package has no prerequisite packages, or because there is no upgrade path.

Table 2   Upgrade Sequence of Shared Packages

Upgrading this shared Package?	Upgrade this package first:
Common Properties Tables	N/A (no dependency)
Thresholds Module	N/A (no dependency)
Interface Discovery Datapipe	N/A (no upgrade path)
NetFlow Preprocessor	N/A (no upgrade path)
Newbridge Preprocessor	N/A (no upgrade path)
Stratacom Preprocessor	N/A (no upgrade path)

▶ The Interface Discovery Datapipe supplies information about interfaces to multiple report packs. The Interface Discovery Datapipe is a prerequisite for the following datapipes:

- Interface Reporting ifEntry Datapipe

- ATM ifEntry Datapipe

- Frame Relay CPE Datapipe

If you are installing any of these datapipes for the first time, Package Manager will install the Interface Discovery Datapipe for you, automatically.

Report Packs

Table 3 provides a list of report packs and indicates which packages need to be upgraded first, before you upgrade the report pack. Because Common Property Tables is a mandatory package, upgrading Common Property Tables first is mandatory. The Thresholds Module is optional, so upgrading the Thresholds Module is only necessary when you are using the Thresholds Module.

When Interface Reporting is a prerequisite for the report pack you are upgrading, you must upgrade Interface Reporting first, before you install the upgrade package for your report pack.

Table 3   Upgrade Sequence of Report Packs

Upgrading this report pack?	Upgrade these packages first:
ATM [a]	Common Property Tables Thresholds Module Interface Reporting
Cisco IP Telephony Call Detail	Common Property Tables Thresholds Module
Cisco IP Telephony Statistics	Common Property Tables Thresholds Module
Cisco Ping	Common Property Tables Thresholds Module

Upgrading this report pack?	Upgrade these packages first:
Device Resources	Common Property Tables Thresholds Module
Executive Summaries	Common Property Tables Thresholds Module Interface Reporting Device Resources
Frame Relay	Common Property Tables Thresholds Module Interface Reporting
Interface Reporting	Common Property Tables Thresholds Module
IP Access Rate	Common Property Tables Thresholds Module Interface Reporting
IP QoS Statistics	Common Property Tables Thresholds Module Interface Reporting
MPLS VPN	Common Property Tables Thresholds Module
NetFlow Global	Common Property Tables Thresholds Module
NetFlow Interface	Common Property Tables Thresholds Module
NNM Event and Availability	Common Property Tables Thresholds Module
Internet Services (OVIS)	Common Property Tables Thresholds Module

Upgrading this report pack?	Upgrade these packages first:
RMON Ethernet Statistics	Common Property Tables Thresholds Module
RMON2 Traffic Profiling	Common Property Tables Thresholds Module
Service Assurance	Common Property Tables Thresholds Module
System Resources	Common Property Tables Thresholds Module

a.   Prior to running the ATM upgrade, the Upgrade ATM Checker should be installed. Review the output file, check_ATM_Property_consistency.out, located in the **DPIPE_HOME/tmp** directory, and fix any errors before upgrading the ATM Report Pack.

Steps for Upgrading Packages

Follow these steps to upgrade report packs:

- Stop OVPI Timer
- Save existing configuration data by exporting polling policies/groups
- Uninstall packages without upgrade paths
- Create a directory for new packages
- Install report packs
- Install new datapipes
- Perform post upgrade tasks

Stopping OVPI Timer

If you have not already done so, stop OVPI Timer and wait for processes to terminate by doing the following:

— *Windows*

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

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

c Right-click **OVPI Timer** and select Stop from the menu.

— *HP-UX*

Enter **/sbin/init.d/ovpi_timer stop**

— *Solaris*

Enter **/etc/init.d/ovpi_timer stop**

Saving Configuration Data

When you uninstall a datapipe and then reinstall the newer version of the same datapipe, you lose the polling policy you assigned to a remote poller. You will also lose any polling policy you cloned by giving a generic policy a different name and assigning it to multiple remote pollers. These losses occur because reinstalling the new datapipe reinstates a generic polling policy. To prevent your customizations from being lost, use **collection_manager** and **group_manager** commands to capture the configurations that are currently in effect.

▶ The output of the exports *should not* be used for import because of incompatibilities between datapipe versions. The exports will not reinstate the configurations correctly and could cause data corruption.

Refer to the *Performance Insight Reference Guide f*or more information about the **collection_manager** and **group_manager** commands.

Exporting Polling Policies

If your environment contains polling policy assignments to remote pollers, use the **collection_manager** command to export all polling policies to a file.

• *UNIX*

As the **trendadm** user, execute the following from the command line:

```
cd $DPIPE_HOME
./bin/collection_manager -export -file /tmp/
savePollingPolicy.lst
```

• *Windows*

As Administrator, launch a command window, navigate to the OVPI install directory, and execute the following from the command line:

```
bin\collection_manager -export -file
\temp\savePollingPolicy.lst
```

Exporting Polling Groups

If your environment contains custom or modified polling groups, use the **group_manager** command to export all groups to individual .xml files in a directory.

- *UNIX*

  As the **trendadm** user, execute the following from the command line:

  ```
  cd $DPIPE_HOME
  ./bin/group_manager -export_all -outfile /tmp/
  savePollingGroups
  ```

- *Windows*

  As Administrator, launch a command window, navigate to the OVPI install directory, and execute the following from the command line:

  ```
  bin\group_manager -export_all -outfile
  \temp\savePollingGroups
  ```

Deleting Custom Table Views

If you created custom views for data or property tables, your custom views may interfere with the report pack upgrade process, causing the process to fail. Whether or not your custom views interfere with the upgrade process depends on how you created them. If you created them using SQL, the upgrade will succeed but your custom views will not be available once the upgrade is complete. If you created them using Datapipe Manager, the upgrade is likely to fail. To prevent the upgrade from failing, be sure to delete your custom views prior to upgrading the report pack, and then recreate these views after the upgrade is complete.

To delete a custom data table view, enter the following command line, where *<custom view name>* is the name of the data table view:

```
datapipe_manager -p delete -T <custom view name>
```

Uninstalling Packages without Upgrade Paths

Before extracting packages from the RNS distribution CD, you can uninstall the following types of packages:

- Datapipes

- Preprocessors

- Threshold sub-packages

You will reinstall the newest versions of these packages later, following package extraction.

To uninstall existing versions of these packages, do the following:

1 Write down the name and version number of each package you want to uninstall.

2 Start Package Manager.

3 When the Package Location window opens, click **Uninstall**.

4 When the Report Deployment window opens, disable **Deploy Reports**.

5 When the Package Selection window opens, click each package you want to uninstall.

6 When the Selection Summary window opens, click **Uninstall**.

7 When Package Manager indicates that the uninstall is complete, click **Done**.

Creating a Packages Directory

To create a new directory for upgrade packages, do the following:

1 Rename the **DPIPE_HOME/packages** directory. This will save your current report packs and move the directory.

2 Create a new, empty, **DPIPE_HOME/packages** directory.

3 *UNIX users only*, do the following before you run Package Extractor:

    a Log on as root to the system where you will run Package Extractor.

    b Set the DISPLAY environment variable.

    For ksh and sh shells, type the following, where *hostname* is the name of the system where you will run Package Extractor:

```
DISPLAY=hostname:0; export DISPLAY
```

For the csh shell, type the following:

```
setenv DISPLAY hostname:0
```

Extracting Packages from the RNS CD

All upgrade packages reside on the RNS distribution CD, which also includes an install script, Package Extractor, which allows you to extract the packages to your packages directory.

To extract packages, do the following:

1   Insert the RNS distribution CD and run Package Extractor. From the CD-ROM directory, do one of the following:

    — UNIX

        Type the following command:

        ```
        ./setup
        ```

    — Windows

        Double-click the file setup.bat

2   A warning message asks if you want to continue. Type **y**.

    The Main Menu for Upgrading Report Packs opens.

3   Type **1** in the choice field, and press **Enter**.

    The installation script displays a percentage complete bar. When the copy to the Packages directory is complete, the installation script starts Package Manager. The Package Manager Welcome window opens.

Installing Report Packs

Before you extracted packages from the RNS distribution CD, you were able to uninstall packages that do not have upgrade paths. These packages included datapipes and threshold sub-packages, and you were able to uninstall all of them at once. Now that those packages have been uninstalled, you are ready to upgrade report packs. After each report pack is upgraded, you will be ready to re-install the latest version of each datapipe and the latest version of the threshold sub-package.

In some instances, upgrading a report pack is a simple, one-step process, while in other cases upgrading a report pack is more complicated than that. For example, if you are running version 2.0, and you want to upgrade to version 3.0, upgrading is a one-step process: Start Package Manager, select the Install option, then look for the single upgrade package that will move you from version 2.0 to version 3.0. Then, as soon as version 3.0 is installed, you can re-install new datapipes and the latest threshold sub-package.

However, if you are running version 1.0 and you want to upgrade to version 3.0, the upgrade can be a multi-step process. First, upgrade to version 2.0, then, once the installation of that upgrade package is complete, re-start Package Manager and look for the upgrade package that will move you from version 2.0 to version 3.0. Again, as soon as version 3.0 is installed, you can re-install new datapipes and the latest threshold sub-package.

Optional Modules

Some report packs include optional modules. An optional module will not be upgraded simply by upgrading the main package. Table 4 provides a list of report packs that have optional modules.

Table 4   Report Packs with Optional Modules

Report Pack	Module
Device Resources	DeviceResourceBackplane
Interface Reporting	Interface_Reporting_Device Interface_Reporting_Location Interface_Reporting_Protocol Interface_Reporting_Vlan
IP Telephony Call Detail	IPT_CallDetails_Location
IP Telephony Statistics	Gateway_Statistics_Location
Service Assurance	Service_Assurance_Location Service_Assurance_NRT
System Resources	SR_CPU SR_DISK

When you upgrade a report pack that has one or more optional modules, the upgrade is never a one-step process; this is because you cannot install the upgrade package for an optional module until the upgrade package for the main package is already installed.

Upgrading Report Packs with Optional Modules

If the report pack you are upgrading includes optional modules, and if Package Manager is showing an upgrade path for those modules, perform the upgrade as follows:

• Start Package Manager; install the upgrade package for the report pack.

• Click **Done** when the install is finished.

• Re-start Package Manager; install (at the same time) the upgrade package for each optional module.

• Click **Done** when the install is finished.

In some cases, upgrading an optional module can be a two-step process. If you are running version 1.0 of the module, and you intend to upgrade to version 3.0, you may need to multiple upgrade packages, first the 1.0 to 2.0 upgrade, then the 2.0 to 3.0 upgrade.

Package Manager shows version numbers in two places, in the *Version* column, and in the name of the upgrade package. In some instances the number that appears in the *Version* column may not match the version number that appears in the name of the package. If you notice this discrepancy, always rely on the version number that appears in the name of the upgrade package.

For details about Package Manager, refer to the *Performance Insight Administration Guide*. For details about installing any package, refer to the user guide for the package. You can download user guides for packages from the following web site:

http://www.hp.com/managementsoftware

Select **Support**, then click **Product Manuals** to open the Product Manuals search page. The user guides for report packs and shared packages are listed under "Reporting and Network Solutions."

Post-Upgrade Tasks

Perform the following tasks:

1   Reconfigure any polling policies and group definitions that you need to restore.

> ▶ Because of incompatibilities between the versions of the datapipes, the output of exports should not be used for import. Doing so will not reinstate the configurations correctly and could cause data corruption.

2   If you dropped custom data table views, recreate those views now.

3   If you are not going to install a Service Pack at this point, restart OVPI timer, the OVO Agent process, and any other processes that you stopped before you started the package upgrade process.

Upgrading a Remote Poller

A remote poller collects data from network nodes and stores the data in a relational database. A remote poller does not have its own database. It is controlled by an outside server and usually does not include the OVPI graphical user interface application. Performance data from non-standard or legacy equipment can be collected using a datapipe. For more information about datapipes, refer to the *Performance Insight Administration Guide*.

To upgrade a Remote Poller:

1   Log on to the local system.

— *Windows*:

Log on as a user with administrative privileges.

— *UNIX*:

Log on as root.

2   Insert the OVPI 5.1 installation CD in the CD-ROM drive. UNIX users must also mount the CD. Refer to the Table 10 on page 60 for instructions on how to accomplish this task.

3   *Solaris systems only* do the following:

a   To display the cd_label, type the following command:

`ls -l /cdrom`

b   To change directory, type the following command, where *cd_label*
identifies the CD name:

`cd /cdrom/cd_label`

> ▶   If the upgrade wizard starts automatically, select **Exit**; you must
> start the upgrade wizard manually.

4   Do *one* of the following to start the upgrade wizard:

— *Windows*:

From the Start menu, select **Run**, and then type the following in the
Open box of the Run dialog box, where *cdrom_drive* is the letter that
represents your CD-ROM drive:

*cdrom_drive***`:\setup -upgrade`**

— *UNIX*:

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

`./setup -upgrade`

The Setup window opens (see page 228).

5   Select **Remote Poller** from the Upgrade section of the window.

The Welcome window opens (see page 229). Click **Next** to continue the
upgrade process.

6   The License Agreement window opens (see page 230). Do *one* of the
following:

— To reject the license agreement and discontinue the upgrade, click
Cancel.

A confirmation window appears.

– Click **Yes** to end the upgrade process.

– Click **No** to return to the License Agreement window. Click the **I
accept the terms in the license agreement** option to proceed with the
upgrade.

— To accept the license agreement and continue upgrading OVPI, click the **I accept the terms in the license agreement** option, and then click **Next**.

7 The OVPI Identifier window opens (see page 231).

The upgrade wizard examines your system and determines the information for each option in the window:

— **Current OVPI version**. Displays the version of OVPI currently installed.

— **Current OVPI directory**. Displays the directory in which OVPI is installed.

— **Current trendtimer.sched file**. Displays the location of the `trendtimer.sched` file.

— **Current OVPI components**. Displays the current OVPI components that are installed on the system.

Click **Next** to continue.

8 The Remote Database Settings window opens (Figure 5 on page 193).

a Enter the name of the database host in the Database Host box.

b Enter the port number for the database host in the Database HTTP Administration Port box.

c Click **Next** to continue.

9 The Selection Summary window opens. Review the summary of options on this window, and then click **Upgrade**.

10 The Installation Progress window opens, displaying the upgrade status. Do one of the following:

• If the upgrade was successful, click **Done**.

• If the OVPI upgrade was unsuccessful, click the **Details** button at the bottom of the Installation Progress window for additional information, and then contact Support.

11 Finish the upgrade.

— *UNIX systems:* The installation is complete.

— *Windows systems*: Select **Reboot Now** to reboot your system and begin using your upgraded version of OVPI. Click **OK**.

You *must* reboot your system before you can use OVPI.

Applying the Latest OVPI Service Pack

It is highly recommended that you install the latest available Service Pack for OVPI version 5.1 on each system in your OVPI environment at this point. Service Packs are available at the following website:

http://support.openview.hp.com/cpe/ovpi/patch_ovpi.jsp

OVPI Post-Upgrade Tasks

Following an OVPI 4.6 to OVPI 5.1 upgrade, to avoid having the console.log file written to **$TREND_LOG/log** instead of **$TREND_LOG**, do the following:

- *Windows*

    a Search for the .**ovpi** directory for the admin user in the Documents and Settings directory.

    b Remove the **.ovpi** directory.

- *UNIX*

    a Exit from the Management Console if it is running.

    b As the trendadm user, remove the .**ovpi** directory from the trendadm home directory as follows:

    rm -rf .ovpi

You can safely remove the **$TREND_LOG/log** directory if one was created.

Refer to the *Performance Insight Administration Guide* for a list of other post-upgrade configuration tasks that you should perform.

Troubleshooting

This appendix describes the error messages and problems that you may encounter during the HP OpenView Performance Insight (OVPI) installation.

UNIX Issues

This section describes modifications you may have to make for specific vendor devices while installing Sybase or OVPI.

Building a Sybase Device on an EMC Disk

Before you build any Sybase device on an EMC disk, you must first disable asynchronous I/O in the database.

To disable asynchronous I/O:

1   Change the <SYBASE_SERVER>.cfg option:

    from

    "**allow sql server async i/o = DEFAULT**"

    to

"**allow sql server async i/o = 0**"

2   Stop and restart the Sybase Server.

3   When you are finished, replace the [SYBASE_SERVER].cfg option with its original setting, and stop and restart the Sybase Server.

Starting OVPI (Solaris)

The following warning message may display when OVPI starts on Solaris:

Illegal mnemonic - could not convert X KEYSYM to a keycode

This is a hardware key-mapping issue and does not affect OVPI. You can use the xmodmap program to view and modify the current key mappings if you want.

To view and modify the current key mappings:

1   At the command line, type the following:

su to root

2   Enter the following command:

xmodmap -e "keysym KP_Insert = Insert"

▶   You must perform this task whenever the system is restarted.

Windows Issues

This section describes issues you may encounter with OVPI in the Windows environment.

Fixing the Display of Installation Wizard Windows

If the installation or uninstall wizard windows display incorrectly during the installation, you will need to change the text size of the Windows font.

To change the text size of the Windows font:

1   On the Windows task bar, click the Start button, point to Settings, and then select **Control Panel**. The Control Panel window opens.

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

3   Select the Settings tab.

4   On the Settings tab, click **Advanced**.

5   On the General tab, select **Small Fonts** from the Font Size list.

Uninstalling OVPI Manually

If for some reason the OVPI uninstall fails on Windows, you must manually uninstall OVPI by using the following procedure.

To uninstall OVPI manually:

Task 1:   Stop all OVPI services.

Stop the following services:

- OVPI HTTP Server

- OVPI Timer

- *Sybase databases only*: Sybase SQLServer_*server*, where *server* is the name of your Sybase SQL Server.

Task 2:   Remove the OVPI HTTP Server.

To remove the OVPI HTTP server:

1   Open a command prompt window, and navigate to the *installation_directory*\jrun\bin directory, where *installation_directory* is the directory into which you installed OVPI.

2   Execute the following command:

   jrunsvc -remove "OVPI HTTP Server"

Task 3:   Remove the following registry entries:

1   Open HKEY_LOCAL_MACHINE ⇨ SOFTWARE, and then 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 service:

1   Open a command prompt window, and navigate to the *installation_directory*\bin directory, where *installation_directory* is the directory into which you installed OVPI.

2   Execute the following command to remove OVPI Timer:

`trendtimer -r`

Task 5:   Delete and edit certain environment variables.

1   On the Windows task bar, click the Start button, point to Settings, and then select **Control Panel**. The Control Panel window opens.

2   Double-click **System**. The System Properties dialog box opens.

3   Click the **Advanced** tab, and then click the **Environment Variables** button.

4   Delete the following variables:

— COLLECT_HOME

— DPIPE_HOME

— DPIPE_TMP

— TREND_LOG

5   Edit the PATH environment variable by removing anything that relates to OVPI; click **OK** when you are finished.

Task 6:   Restart your system.

Task 7:   Delete the OVPI directory.

Task 8:   *Sybase databases only*: Uninstall Sybase, delete the Sybase directory, and restart your system.

        1   Uninstall Sybase.

               ▶   If the Sybase SQL server is running, then stop it.

            Do the following:

            a   Start the OVPI setup program (see Starting the Setup Program on page 59).

            b   Select **Sybase 11.9.5.2** from the Setup window.

            c   Click **Uninstall** in Sybase's Select Installation Type window.

        2   Delete and edit certain environment variables by doing the following:

            a   From the Control Panel window, double-click **System**. The System Properties dialog box opens.

            b   Click the **Advanced** tab, and then click the **Environment Variables** button.

            c   Delete the following variables:

                — DSLISTEN

                — DSQUERY

            d   Edit the PATH environment variable by removing anything that relates to Sybase; click **Set** when you are finished.

        3   Delete the Sybase directory.

        4   Restart your system.

Task 9:   Remove the OVPI program folder.

        1   Right-click the **Start** button.

        2   Select **Open All Users** from the shortcut menu.

        3   Expand the Programs folder, and then expand the HP OpenView folder.

        4   Right-click **Performance Insight**, and select **Delete** from the shortcut menu.

B

The Sybase Interfaces File

▶ This appendix is supplied for reference purposes only. Any changes to the Sybase interfaces file should be made using the Management Console's System Management application. Refer to the *Performance Insight Administration Guide* for more information about using this application.

Sybase uses a file called an *interfaces file* to locate the SQL Servers on the network. This appendix describes how to create or modify this file using **dsedit**.

You can find the Sybase interfaces file in the following locations:

- **UNIX**

  The interfaces file is located in the Sybase home directory specified by your SYBASE environment variable; for example, `/usr/Sybase`. See Creating the Sybase Interfaces File on UNIX Systems on page 260 for details.

- **Windows**

  The interfaces file is located in `C:\Sybase\ini\sql.ini`, where `C:` is the location of the Sybase directory. See Creating the Sybase Interfaces File on Windows Systems on page 263 for details.

▶ Ensure that when you type the SQL Server name that it matches the entry in the Sybase interfaces file exactly.

Creating the Sybase Interfaces File on UNIX Systems

Use the dsedit utility to create the Sybase interfaces file for Sybase on UNIX systems.

To create the Sybase interfaces file:

1 Open a new shell window.

2 Type the following command:

$SYBASE/bin/dsedit

The dsedit - Select a Directory Service dialog box opens.
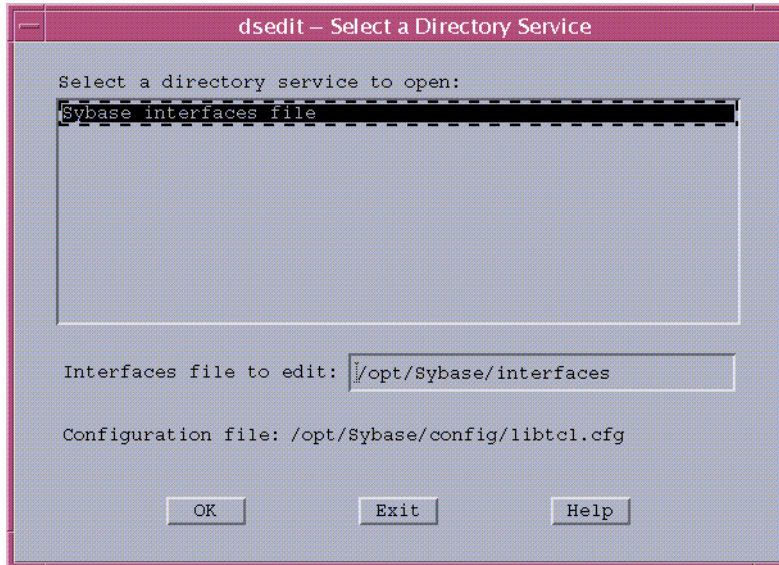
3 Select **Sybase interfaces file** in the Select a directory service to open box.

4 Verify the path and name of the interfaces file in the Interfaces file to edit box.

5 Click **OK**.

The dsedit - Directory Service Session dialog box opens.

```
+------------------------------------------------------+
| [-]        dsedit – Directory Service Session        |
+------------------------------------------------------+
|                                                      |
|   Session: bluestone:/opt/Sybase/interfaces          |
|                                                      |
|   Available servers:                                 |
|   +------------------+   +------------------------+   |
|   | BLUESTONE_SYBASE |   |  Add new server entry  |   |
|   | bluestone_back   |   +------------------------+   |
|   |                  |   |  Modify server entry   |   |
|   |                  |   +------------------------+   |
|   |                  |   |   Copy server entry    |   |
|   |                  |   +------------------------+   |
|   |                  |   |  Delete server entry   |   |
|   |                  |   +------------------------+   |
|   |                  |                                |
|   +------------------+                                |
|                                                      |
|      +---------------+         +-----------+          |
|      | Close session |         |   Help    |          |
|      +---------------+         +-----------+          |
+------------------------------------------------------+
```
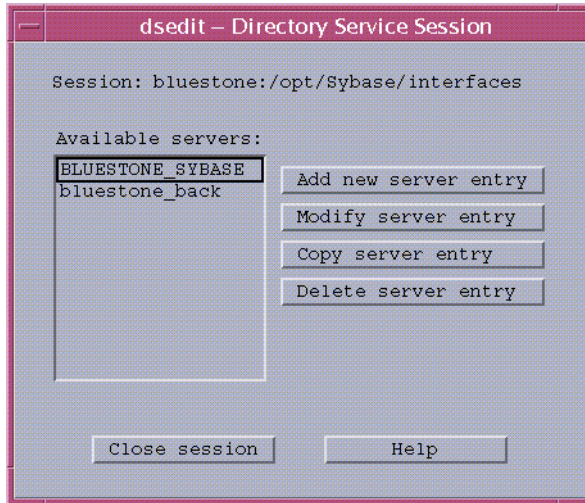
6   Select the Sybase server from the Available servers box.

7   Click **Add new server entry**.

The dsedit - Server Entry Editor dialog box opens.

```
+------------------------------------------------------------+
| [-]            dsedit – Server Entry Editor                 |
+------------------------------------------------------------+
|                                                            |
|   Session: bluestone:/opt/Sybase/interfaces                |
|                                                            |
|   Server name: | BANYAS_SYBASE                        |    |
|                                                            |
|   Security mechanisms: |                              |    |
|                                                            |
|   Available network transports:                            |
|   +------------------+  +-----------------------------+    |
|   |                  |  |  Add new network transport  |    |
|   |                  |  +-----------------------------+    |
|   |                  |  |  Modify network transport   |    |
|   |                  |  +-----------------------------+    |
|   |                  |  |  Move network transport up  |    |
|   |                  |  +-----------------------------+    |
|   |                  |  | Move network transport down |    |
|   |                  |  +-----------------------------+    |
|   |                  |  |  Delete network transport   |    |
|   |                  |  +-----------------------------+    |
|   +------------------+                                     |
|                                                            |
|   +--------+      +----------+      +----------+           |
|   |   OK   |      |  Cancel  |      |   Help   |           |
|   +--------+      +----------+      +----------+           |
+------------------------------------------------------------+
```
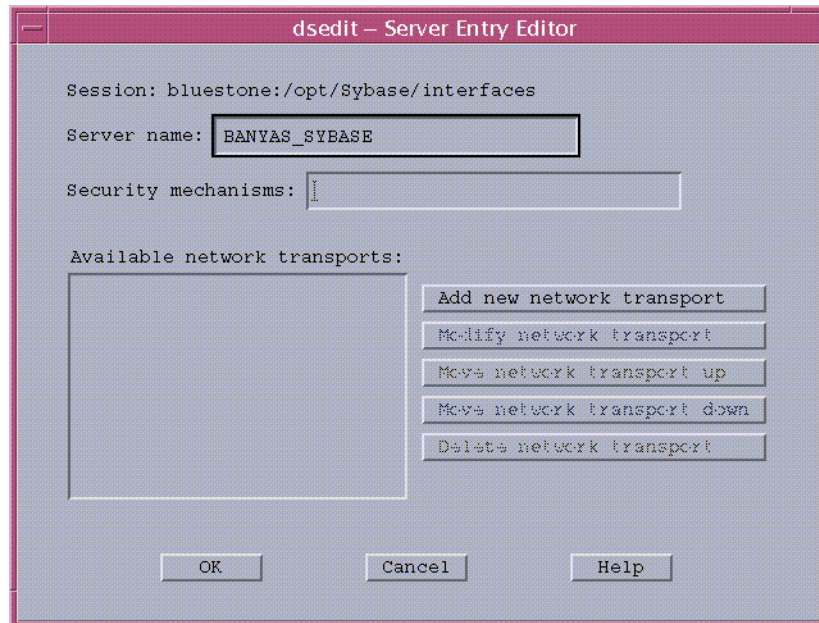
8   Type the name of the secondary Sybase server (***not*** the server's host name) in the Server name box (in this example, BANYAS_SYBASE.)

> ► The Sybase server name on a UNIX platform is typically *hostname*_SYBASE. The Sybase server name on a Windows platform is typically the same as the host name.

9   Click **Add new network transport**.

The dsedit - Network Transport Editor dialog box opens.
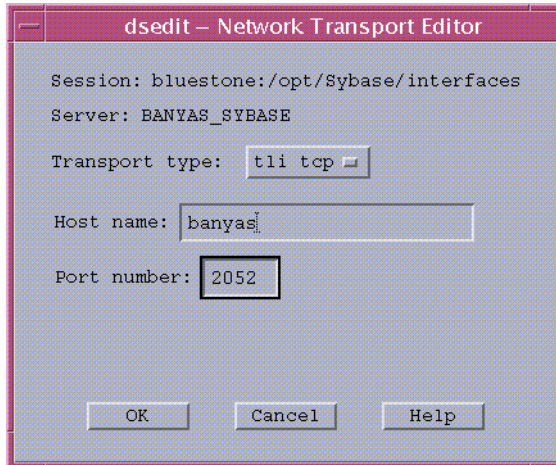
10 In the Transport type list, click **tli tcp**.

11 Enter the secondary server's host name in the Host name box.

12 Enter the port number that is configured for Sybase connections on the secondary server in the Port number box.

> ► The port number for OVPI servers installed on a UNIX system is typically 2052. The port number for OVPI servers installed on a Windows system is typically 5000.

13 Click **OK** to close the dsedit - Network Transport Editor dialog box.

14 Click **OK** to close the dsedit - Server Entry Editor dialog box.

15 Click **Close session** to close the dsedit - Directory Service Session dialog box.

16 Click **Exit** to close the dsedit - Select a Directory Service dialog box.

17 Click **Yes** to confirm that you want to exit from dsedit.

You can validate the result by viewing the `$SYBASE/interfaces` file.

Creating the Sybase Interfaces File on Windows Systems

Use the dsedit utility to install a secondary server interfaces file entry for Sybase on a Windows system.

To create the Sybase interfaces file:

1   Select **Start** ➪ **Programs** ➪ **Sybase** ➪ **Dsedit**.

The Dsedit window opens with the Select Directory Service dialog box.
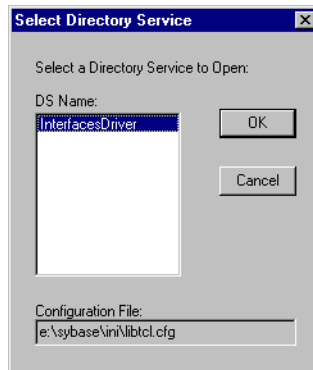
2   Select **InterfacesDriver** in the DS Name box.

3   Click **OK**.

The DSEDIT1 - InterfacesDriver window opens.
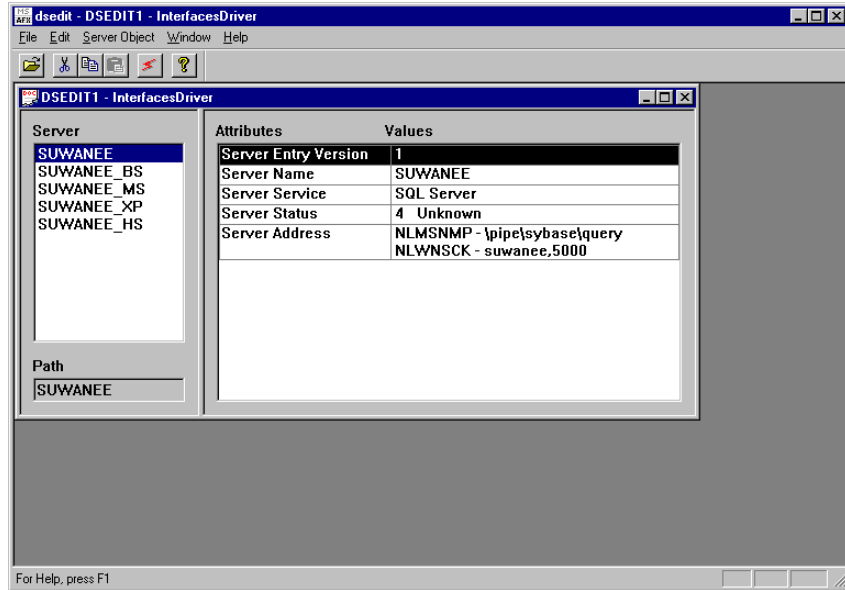
4   From the Server Object menu, choose **Add**.

The Input Server Name dialog box opens.
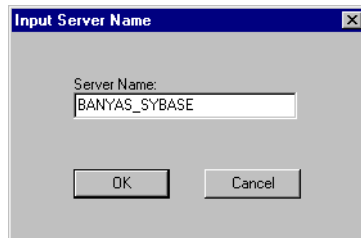
5   Enter the database server name in the Server Name box (in this example,
       BANYAS_SYBASE, which is on a UNIX platform).

> The Sybase server name on a UNIX platform is typically
> *servername*_SYBASE. The Sybase server name on a Windows
> platform is typically the same as the host name.

6   Click **OK**.

The DSEDIT1 - InterfacesDriver window reopens with the server name that you added highlighted.
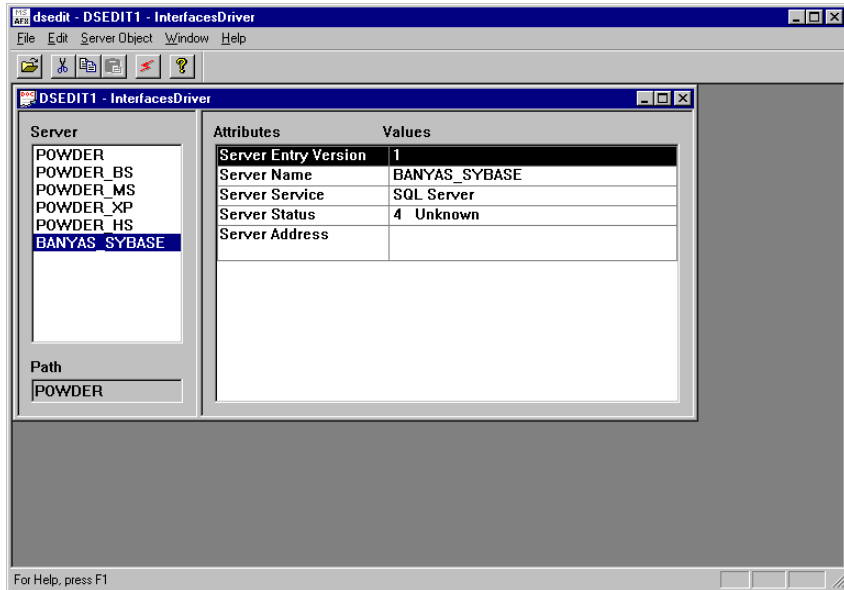
7   Double-click the **Server Address** attribute in the Attributes column.

The Network Address Attribute dialog box opens.
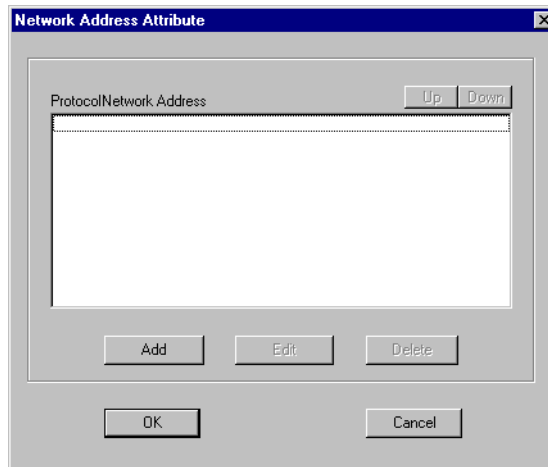
8   Click **Add**.

The Input Network Address For Protocol dialog box opens.
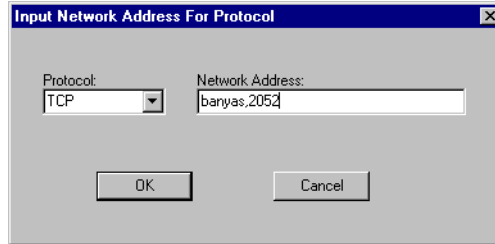
9 Do the following:

   a In the Protocol list, click **TCP**.

   b In the Network Address box, type the host name of the server (banyas, in this example), a comma, and the port number to which the server listens (2052, in this example).

   ▶ The port number for OVPI servers installed on a UNIX system is typically 2052. The port number for OVPI servers installed on a Windows system is typically 5000.

10 Click **OK**.

   The Network Address Attribute dialog box opens with your entry.
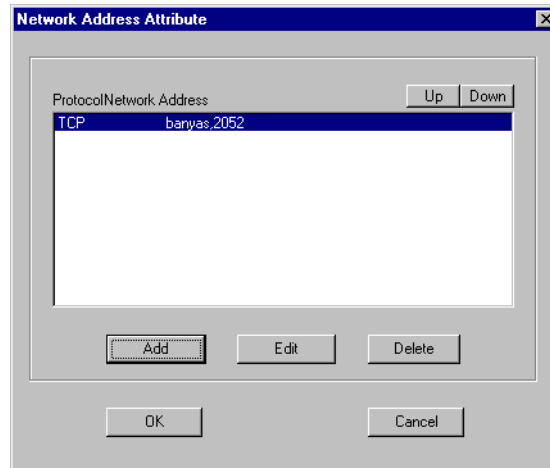
11 Click **OK**.

The DSEDIT1 - InterfacesDriver window opens with the information that you added highlighted.
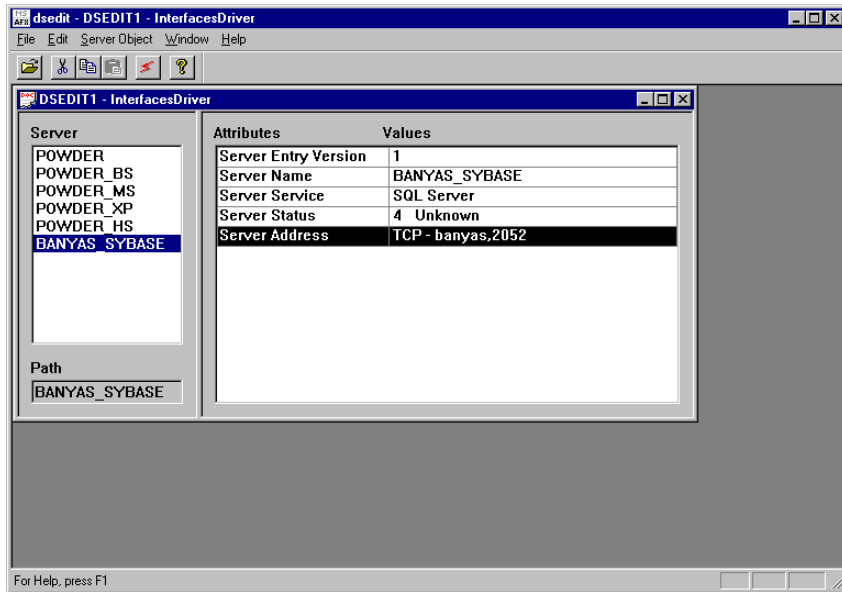
12 Click the **Ping** icon to test the connection to the specified server.

The Ping dialog box opens.
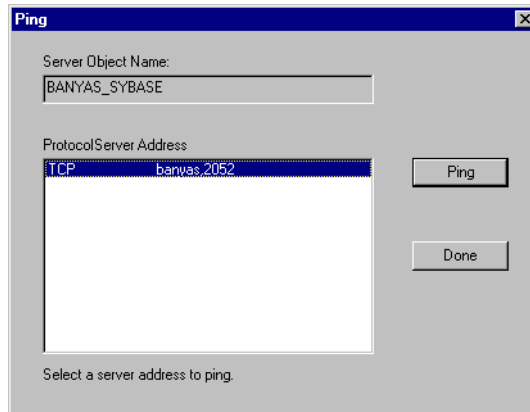
13 Click **Ping**.

A message similar to the following displays in the dsedit window if you have successfully opened a connection to the specified server.

```
dsedit                                                    [×]

Open connection to server at (banyas,2052) succeeds.
Close connection succeeds.

Loaded the Dynamic Link Library NLWNSCK.DLL (e:\sybase\DLL\NLWNSCK.DLL).

                          [  OK  ]
```
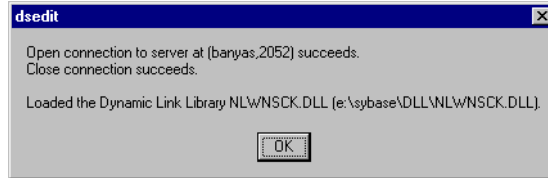
▶ If the message you receive indicates that the server is not recognized, you have incorrectly specified the host name of the server, the port number, or the server is down. In this case, verify the host name of the server and its port number. If you are still having difficulties, contact Support.

14 Click **OK** to close the message.

15 Click **Done** to close the Ping dialog box.

16 From the dsedit utility's File menu, select **Exit**.

C

Pre-Upgrade Checker Error Messages

This appendix provides detailed information used to resolve errors reported by the Pre-Upgrade Checker in an OVPI 4.6 to OVPI 5.1 upgrade.

During the pre-upgrade check, OVPI generates a report log called called `formatted_output.log` and places it in **$DPIPE_HOME/puc/log**. To view the report, use the viewReport tool located on the OVPI 5.1 CD as follows:

- Windows

  cd Data
  .\puc\bin\viewReport.bat

- UNIX

  cd Data
  ./puc/bin/viewReport.sh

➤ You *must* run the command from the command prompt and directory specified, exactly as shown. (Windows users cannot use File Explorer.)

The report lists each error and information as to where the error was encountered.

- For problems reported against HP-supplied report packs, you need only upgrade the report packs after upgrading to OVPI 5.1. The problems are reported for informational purposes only.

- For problems reported against custom report packs, you must take actions that are described in this appendix. Actions may also include recreating the procedures, tables, and views of the custom report pack.

An unclassified error is one that could not be attributed to a registered report pack.

You can ignore messages identified as INSTALL_ERROR, which indicates that the version of the report pack, which is in **<DPIPE_HOME>/packages**, is incompatible with OVPI 5.1.

Each message reported is identified with an ID for reference to this appendix, where you will find the appropriate actions.

MSG01

```
MSG01:To upgrade to OVPI 5.1, please install OVPI 4.6 or later on
your system.
```

Action

The OVPI 4.6 upgrade is included as a separate CD (OVPI 4.6U CD) in the OVPI 5.1 kit. Upgrade to OVPI 4.6 first and then to OVPI 5.1.

MSG02

```
MSG02:OVPI 5.1 is currently not supported on this platform. Please
refer to OVPI Installation Guide for details of supported
platforms.
```

Action

For the list of platforms supported by OVPI 5.1, refer to Chapter 2, Preparing for Installation.

MSG03

```
MSG03:Connection to database cannot be established using password
specified. Please enter correct password for user dsi_dpipe.For
additional troubleshooting help, refer to OVPI Installation Guide.
```

Action

Retry by entering the correct password. You should verify the value set for DSQUERY and that the server is running. Also, refer to the db_error.log file in the PUC directory for error information.

To set DSQUERY, run the command:

- UNIX

    setenv DSQUERY <*Sybase_server_name*>

- Windows

    set DSQUERY=<*Sybase_server_name*>

MSG04

```
MSG04:Rexx row processors are not being supported in OVPI 5.1. You
can use perl routines to preprocess your data.For more information,
refer to OVPI Installation Guide.
```

Action

Rexx routines have to be rewritten in Perl, unless the Rexx routine is found in a supported Report Pack, in which case you do not have to create a new Perl routine.

The following example illustrates Rexx routines (sample.rexx) being rewritten in Perl (sample.pl).

The Teel file must also be updated as follows:

```
RowProcess = REXX,sample
RowProcess = PERL,sample.pl,ported_in_perl


/***********************************

# sample.rexx

***********************************/


dpipe_home = getenv($DPIPE_HOME)
dpipe_home = getenv($DPIPE_HOME)
/* the next parse statement breaks the whole input row into
tokens */
parse arg ip ',' yy ',' mm ',' dd ',' hh ',' min ',' ss ',' rest
```

```
if length(mm) = 1 then mm = '0'mm
if length(dd) = 1 then dd = '0'dd
if length(hh) = 1 then hh = '0'hh
if length(min) = 1 then min = '0'min
if length(ss) = 1 then ss = '0'ss

tap = yy'-'mm'-'dd hh':'min':'ss

newstring = ip','tap','yy','mm','dd','hh','min','ss','rest
return newstring


/**********************************

# sample.pl

**********************************/

sub ported_in_perl{
my ($ip,$yy,$mm,$dd,$hh,$min,$ss,@rest) = split(",","@_",-1);

if(length($mm) == 0){ $mm = "0"; }
if(length($dd) == 0){ $dd = "0"; }
if(length($hh) == 0){ $hh = "00"; }
if(length($min) == 0){ $min = "00"; }
if(length($ss) == 0){ $ss = "00"; }

$tap = "$yy-$mm-$dd $hh:$min:$ss";

$newstring =
"$ip,$tap,$yy,$mm,$dd,$hh,$min,$ss,".join(",",@rest);

return $newstring;
}
```

MSG05

MSG05:trendit is obsolete in OVPI 5.1. trend_sum can be used as a replacement. There is no direct method to port existing implementation to trend_sum. For details on how to use trend_sum, refer to OVPI Reference Guide.

Action

The functionality of **trendit** can be replaced by **trend_sum**. However, there is no direct method to port the existing implementation to **trend_sum**. For more information about **trend_sum**, refer to the *Performance Insight Reference Guide*.

MSG06

```
MSG06:trendstep is obsolete in OVPI 5.1. For more information and
possible workarounds, refer to OVPI Installation Guide.
```

Action

Trendstep is an obsolete utility and its functionality is replaced by **trend_sum** in OVPI 5.1.

Where **Trendstep** is being invoked, for example:

trendstep -f {DPIPE_HOME}/scripts/*filename*.rot

it must be changed to invoke **trend_sum** as follows:

trend_sum -f {DPIPE_HOME}/scripts/*filename*.sum

trend_sum cannot accept a **Trendstep** file (.rot). These files must be converted to a syntax acceptable to **trend_sum**, as specified in the *Performance Insight Reference Guide*.

The example below illustrates a sample trendstep file (sample.rot) replaced by an equivalent **trend_sum** (sample.sum) file.

```
/**********************************

# sample.rot

**********************************/

#define IGNORE_TIMEADJUST;
#define IGNORE_NULL;

input_table:SH_San;
output_table:SD_San;


target1=0+src1;
target2=src2-src3;
target3=src3;
if (src4 = 1);
```

```
target4=1;
else;
target4=0;
endif;

byvariable:KEY.dsi_key_id;

/***********************************

# sample.sum

***********************************/

source table:SH_San
destination table:SD_San

column:!target1=src1:max
column:!target2=(src2-src3):max
column:!target3=src3:max
column:!target4=CASE WHEN (src4 = 1) THEN 1 ELSE 0 END:max

by variable:keyid
```

MSG07

```
MSG07:trendmapper is obsolete in OVPI 5.1. For more information and
possible workarounds, refer to OVPI Installation Guide.
```

Action

Trendmapper is an obsolete utility and its functionality is replaced by **trend_sum** in OVPI 5.1.

Where **Trendmapper** is being invoked, for example:

trendmapper -f {DPIPE_HOME}/scripts/*filename*.rot

it must be changed to invoke **trend_sum** as follows:

trend_sum -f {DPIPE_HOME}/scripts/*filename*.sum

trend_sum cannot accept a **Trendmapper** file (.rot). These files must be converted to a syntax acceptable to **trend_sum** as specified in the *Performance Insight Reference Guide*

Refer to the example provided in the previous message. The example illustrates a sample.rot file replaced by sample.sum file.

MSG08

```
MSG08:In OVPI 5.1, trend_export does not support the same interface
as in OVPI 4.6. Option -q is obsolete and trend_export now expects
a .rep file instead of a .qss file. For more information refer to
OVPI Installation Guide.
```

Action

The functionality of `trend_export` has changed in OVPI 5.1. `Trend_export` supports only report definition file (.rep extension) in OVPI 5.1. Support for legacy TREND Table Data Definition file (.qss extension) is discontinued. Use the `QSSconverter` tool available in OVPI 5.1 to convert the .qss file to .rep file.

The `QSSconverter` command uses the following syntax:

`QSSconverter` *qss_file report_name*

For more information about `QSSconverter`, refer to the *Performance Insight Reference Guide*.

Also note that `-q` option is obsolete in OVPI 5.1. It is replaced by the `-S` option. For more information about the usage of `trend_export`, run the command:

`trend_export -h`

MSG09

```
MSG09:trendrank is obsolete in OVPI 5.1. trend_sum can be used as a
replacement for some of the functionality. There is no direct
method to port existing implementation to trend_sum. For details on
how to use trend_sum, refer to OVPI Reference Guide.
```

Action

While some of the functionality of `trendrank` can be accomplished by `trend_sum`, there is no direct method to port existing implementation of `trendrank` to `trend_sum`. For details on how to use `trend_sum`, refer to *Performance Insight Reference Guide*.

MSG10

```
MSG10: The command line options "-c", "-b" and "-w" are not
supported any longer. Use corresponding keywords (column,
by_variable, first_day_of_week) in the trend_sum file. For more
information, refer to OVPI Installation Guide.
```

Action

When obsolete command line options are found, the Pre-Upgrade checker reports their location (file name and line number). You can then replace the options no longer supported by OVPI 5.1 with the equivalent keywords.

The example sum file below illustrates the use of the keywords. For more information, refer to the *Performance Insight Reference Guide*.

```
source table:SDTable

destination table:_dow

baseline days:90

first_day_of_week:Mon


column:var1=TOTvar1:avg,f30,f60,f90

column:var2=TOTvar2:avg,f30,f60,f90


by variable:keyid

by variable:day_of_week
```

MSG11

```
MSG11:Keywords max_tran_row_cnt, log_high_water_mark and
high_water_mark are not supported any longer. Use equivalent
commandline options -C, -L and -W while invoking trend_sum. For
more information, refer to OVPI INstallation Guide.
```

Action

When obsolete keywords are found, the Pre-Upgrade checker reports their location (file name and line number). You can then replace the keywords no longer supported by OVPI 5.1 with the equivalent command line options.

OVPI 4.6 (keywords in sum file)	OVPI 5.1 (command line option)
`max_tran_row_cnt` *num_rows*	`-C` *num_rows*
`log_high_water_mark`: *log_hwm_number*	`-L` *log_hwm_number*
`high_water_mark`: *db_hwm_number*	`-W` *db_hwm_number*

For more information about their usage, refer to the *Performance Insight Reference Guide*.

MSG12

```
MSG12:datapipe_manager commandline options "-c suffix, -r asset, -r
trendit and -r default" are not supported any longer. For more
information, refer to OVPI Installation Guide.
```

Action

There is no workaround for this problem. Contact Support.

MSG13

```
MSG13:Tables in this database may have been created using legacy
column suffix format, which is not supported in OVPI 5.1. For more
information, refer to OVPI Installation Guide.
```

Action

In earlier versions of OVPI, tables could be created using the legacy column-suffix format. In this format, the last three letters of the column name were represented as a numeric suffix. For example, a table created in this format would have columns named as dsi_target_name001, dsi_table_key002 etc.

This format is no longer supported. There is no workaround for this problem. Contact HP support. However, this error can be ignored for a table that was not created in column suffix format.

MSG15

```
MSG15:Import_nodes is not being supported in OVPI 5.1. node_manager
should be used to replace this functionality. For more information,
refer to OVPI Installation Guide.
```

Action

The **import_nodes** functionality is replaced by **node_manager**. There are many differences including expected file formats, parameters, etc. For more information, refer to the *Performance Insight Reference Guide*.

Command invocation:

import_nodes -f *file_name*

node_manager -import -file *file_name*

import_nodes file format:

node_name, read_community, write_community, poll_type,type_name, view_name, group_name

Example: `10.0.0.0,public,public,DevResCiscoRouter,,,`

node_manager. file format:

node_name, read_community, write_community, type_name, view_name, snmp_v1_flag, snmp_v2_flag, node_status, desc, snmp_profile, port_num, num_retries, timeout_sec, num_oids, get_bulk_size

The **import_nodes** example after conversion looks like this:

```
10.0.0.0,public,public,DevResCiscoRouter,,1,0,1,,Remote,161,5,1
000,20,50
```

MSG16

```
MSG16:Incorrect commandline usage. Ensure that you add a space
between option and value (for example, "program_name -d2" should be
"program_name -d 2"). For more information, refer to OVPI
Installation Guide.
```

Action

A space between the option and value is mandatory in the command. For example, use *program_name* **-d 2** instead of *program_name* **-d2** . This error applies only to **trend_sum, datapipe_manager, db_delete_data** and **ee_collect** programs.

MSG17

```
MSG17:Installed report pack does not have an upgrade available to
RNS 5.0 or is a custom report pack. It may not work with OVPI 5.1
unless the incompatibilities are resolved.
```

Action

If a report pack does not have a upgrade version to RNS 5.0, it is either an unsupported HP report pack or a custom report pack. Though the Pre-Upgrade checker can run a check on such report packs, it may not be able to report all the problems. Please go through the list of reported problems and resolve them before upgrading to OVPI 5.1.

MSG18

```
MSG18:Custom stored procedures may not work post upgrade as some
dependencies may be affected. Backup any custom stored procedures
you have created and ensure that they work after upgrading to OVPI
5.1.
```

Action

Custom stored procedures can be created and registered in OVPI using **trendpm**. These stored procedures must be backed up before you upgrade. After the upgrade, you should verify that the procedures exist on the system.

To capture a procedure for backup, do the following:

1   Create a temporary file (*<filename>*.sql) containing the following lines:

```
sp_helptext procedurename

go
```

2   From the command line, run the command:

```
isql -Udsi_dpipe -Pdsi_dpipe -i filename.sql -o
procedurename.sql
```

This will create a backup of the SQL code used to create the procedure. If you already have the SQL code that generates the procedure, then these steps are redundant.

MSG19

```
MSG19:Table/View is registered in OVPI dictionary but does not
exist in the database. Such inconsistency may cause OVPI programs
using this table/view to give an error. For more information, refer
to OVPI Installation Guide.
```

Action

One or more table/views registered in OVPI dictionaries are not actually present in the database. This is an inconsistency that should be corrected.

Verify that this table/view is required. If it is needed, then recreate it using the configuration that was used to initially create it. Also be sure that all dependent tables/views are recreated.

To find dependent views or tables, use the Sybase command, **sp_depends**. For more information about the usage of the command, refer to the Sybase documentation.

To delete an unwanted data table /view (for example, SH_Test), at the isql prompt, execute the commands:

```
delete dsi_column from dsi_column, dsi_table

where dsi_column.table_id = dsi_table.table_id

and dsi_table.name = 'SH_Test'

go


delete from dsi_table where name = 'SH_Test'

go
```

To delete an unwanted property table /view (for example, K_Test), at the isql prompt, execute the commands:

```
delete dsi_property_column from dsi_property_column,
dsi_property_table

where dsi_property_column.property_table_id =

dsi_property_table.property_table_id
```

```
and dsi_property_table.name = 'K_Test'

go


delete from dsi_property_table where name = 'K_Test%'

go
```

MSG20

```
MSG20:Number of columns registered with OVPI dictionary and number
of columns registered with database do not match for table/view.
Such inconsistency may cause OVPI programs using this table/view to
give an error. For more information, refer to OVPI Installation
Guide.
```

Action

One or more columns registered in OVPI dictionaries are not present in the database. To fix this inconsistency, do the following:

1 Locate the teel file which was used to create this table/view.

2 In the **Management Console**, click **Table Manager**.

3 Select the table/view to be dropped.

4 From the menu bar, click **Edit** > **Drop Table.**

5 Recreate view/table using **datapipe_manager.** If SQL is being used for creation, ensure that columns in teel file and SQL file match. Execute the command:

    datapipe_manager [-p create -a teelfilename.teel**]**

    (*teelfilename.teel* is the teel file which was used to create this table/view).

    (Optional) Use this command to create the view using an sql script.

    ovpi_run_sql -sqlscript sqlfilename.sql

    (*sqlfilename.sql* is the sql file containing view creation statement).

6 If there are dependent views or tables, make sure they are also recreated correctly. To find dependent views or tables, use the Sybase command, **sp_depends**. For more information about the usage of the command, refer to the Sybase documentation.

MSG22

```
MSG22:trendcopy is being invoked with -S option. Ensure that the
destination database being referred to using -S option is correctly
configured in OVPI. For more information, refer to OVPI Installa-
tion Guide.
```

Action

Previously, `trendcopy` was invoked using a DSQUERY value of source and target databases. In OVPI 5.1, you must specify the hostname of source and target database.

For example, when `trendcopy` is invoked:

`trendcopy -S` destination_dsquery1 **`-s`** source_dsquery2

This must be changed as follows:

`trendcopy -S` destination_hostname1 **`-s`** source_hostname2

Ignore this error if you have already configured the database correctly.

MSG24

```
MSG24:Incorrect syntax in column specification in teel file.
Placeholder or valid numeric value required for size. For more
information, refer to OVPI Installation Guide.
```

Action

Previously, it was not mandatory to have a placeholder for size field while specifying the DataColumn/PropertyColumn. It is now mandatory to have a placeholder (,) or a valid numeric value for size.

Syntax of DataColumn/PropertyColumn directives:

`DataColumn` = cntrl,sqlname,datatype,size,alias [,nulls={yes/ no},default=value,descr="text"]

`PropertyColumn` = n,sqlname,datatype,size,alias [,default=value,nulls={yes/no} ,object_byvar= {yes/ no},collection_byvar={yes/ no},foreign_key(parent_tbl.dsi_key_id),descr="text"]

For more information and examples, refer to the *OVPI Teel Reference Guide.*

MSG25

```
MSG25:OVPI dictionary table dsi_server seems to contain some null
or blank entries. The host name and port number entries should be
populated correctly. Refer to OVPI Installation Guide for more
information.
```

Action

The dsi_server table should not have blank entries for hostname and port. Populate the rows containing null or blank values with correct data.

For example, for a database running on system my_host with port number as 2052 and DSQUERY value as **MY_HOST_SYBASE**, the commands to populate the table correctly are:

update dsi_server set host_name="my_host" where name="MY_HOST_SYBASE"

go

update dsi_server set port_number="2052" where name="MY_HOST_SYBASE"

go

Note that 2052 is the default port number for UNIX-based Sybase systems. 5000 is the default port number for Windows-based Sybase systems. Because these are defaults only, the actual port number may be different. If you have configured a port number other than default, make the change appropriately.

MSG26

```
MSG26:One or more entries in dsi_server table are not present in
interfaces file. Use dsedit to add entry manually.
```

Action

One or more entries in dsi_server table are not present in the Sybase interfaces file. This file is %SYBASE\ini\sql.ini on Windows systems and $SYBASE/interfaces on UNIX systems. Use dsedit to add the entry manually. For more information about using dsedit, refer to Appendix B.

MSG27

```
MSG27:Invalid entry in interfaces file - hostname or port not
specified correctly. Use dsedit to validate entry.
```

Action

An invalid entry was found in the Sybase interfaces file. This file is %SYBASE\ini\sql.ini on Windows systems and $SYBASE/interfaces on UNIX systems. The hostname or port may not be specified correctly. Use dsedit to validate the entry. For more information about using dsedit, refer to Appendix B.

MSG28

```
MSG28:Specifying tz_in/tz_out may not have the expected results.
Refer to OVPI Installation Guide for details.
```

Action

Normalization of time zones may not happen as expected. This is a known defect (ROSmm35797). As of now, tz_out defaults to tz_in, so the data collected by ee_collect will be imported with the timestamp that the data arrived at.

MSG32

```
MSG32:Perl script search_dir.pl exited with errors.
```

Action

This is an unclassified error. Please report the error to the Support center, including the log files found in the **$DPIPE_HOME/puc/log** directory.

MSG33

```
MSG33:Perl script search_db.pl exited with errors.
```

Action

This is an unclassified error. Please report the error to the Support center, including the log files found in the **$DPIPE_HOME/puc/log** directory.

MSG34

MSG34:File parse_config.txt is corrupted. Please report this
problem.

Action

This is an unclassified error. Please report the error to the Support center,
including the log files found in the **$DPIPE_HOME/puc/log** directory.

MSG35

MSG35:An I/O error occurred. Skipping directory parsing. Log file
checker.log gives exception trace.

Action

This is an unclassified error. Please report the error to the Support center,
including the log files found in the **$DPIPE_HOME/puc/log** directory.

MSG36

MSG36:A fatal error occurred. Exiting pre-upgrade checker.

Action

This is an unclassified error. Please report the error to the Support center,
including the log files found in the **$DPIPE_HOME/puc/log** directory.

MSG38

MSG38:Sybase interfaces file not found in required location.
Upgrade to OVPI 5.1 will fail if file not present in required
location. Refer to OVPI Installation Guide for more information.

Action

The Pre Upgrade checker searches for the Interfaces file,
%SYBASE\ini\sql.ini, on Windows and $SYBASE/interfaces file on
UNIX. If this file is not present, the upgrade will fail. Ensure that the
interfaces file is in the correct location.For more information about Sybase
interfaces file, refer to Appendix B.

index

A

accounts, user, *118*, *149*, *190*

adding
   files to database devices, *107*, *166*
   user accounts, *119*, *149*, *191*

addressable memory limits
   Sybase, *38*

B

browser requirements
   Web Access Server, *26*

C

central server system, *17*

checklist
   for upgrade tasks, *220*
   installation prerequisites, *25*

clients
   See OVPI Clients

compatibility issues
   OVPI and RNS, *237*

component
   order for upgrade, *225*

component name changes, *219*

configuration data
   saving, *242*

creating packages directory, *244*

D

database
   hardware requirements, *32*
   memory configuration requirements
      Sybase, *35*
   See Sybase
   starting
      on UNIX, *223*
      on Windows, *223*
   verify running
      on UNIX, *223*
      on Windows, *223*

database management systems
   supported for installation, *28*

database segments
   modifying, *138*, *180*

database versions (upgrade), *219*

default port numbers
   example, *30*

desktops (UNIX)
   supported for installation, *29*

device size limits
   Sybase, *37*