HP OpenView Operations for Windows®

Software Version: 7.5

Installation Guide

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

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To register for an HP Passport ID, go to:

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Obsolescence Announcements

Obsolete in OVO 7.5

The following platforms will become obsolete with OVO 7.5. Also review the support matrix available at:

http://support.openview.hp.com/tech_docs/ovo-win/OVOWSuppMatrix.pdf

Managed Node / Agent Platforms

- Debian Linux 2.x
- Novell Netware 4.1x
- HP-UX 10.20

Web Console Platforms

- Microsoft Internet Explorer 4.0 and 5.0
- Netscape 4.7

Solution Integrations

- Reporter 3.01, 3.02 and 3.5
- NNM 6.2 and 6.41
- PD 1.1
- OVIS 4.0, 4.5 and 5.0

Obsolete after OVO 7.5

The following Managed Node platforms may no longer be supported with the next major HP OpenView Operations for Windows release after 7.5.

HP appreciates your feedback. Contact your HP sales or support representative if you would like HP to continue supporting the managed node platforms listed in this section with the next major release.

Management Server Platforms

HP plans to obsolete the following management server platforms:

- Microsoft Windows 2000 Server/Advanced Server/Datacenter Server Edition

Managed Node Platforms

HP plans to obsolete the following agent platforms:

- Microsoft Windows NT 4.0 Workstation/Server/Enterprise Edition
- HP-UX 11.22
- Tru64 UNIX 4.x, 5.0A, 5.1
- AIX 4.3.1, 4.3.2, and 4.3.3
- OpenVMS 7.3.1
- SuSE Linux 6.x, 7.x, and 8.0
- RedHat Linux 6.x, 7.x, 8.0, and 9.0
- Mandrake Linux 9.2
- Turbo Linux 6.x and 7.0

Web Console Platform

HP plans to obsolete the following web console platform:

- Microsoft Internet Explorer 5.5

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About this Book

This guide is for experienced Windows administrators. It provides the following information:

- This chapter describes the scope of the guide and includes:
  - An overview of OVO for Windows and core SPIs
  - A list of products included with OVO
  - An installation planning checklist
- Chapter 2, Requirements, provides
  - Software and hardware requirements for installing the management server and management console of OVO
  - Security and account information needed to properly implement OVO
  - OVO firewall configuration
- Chapter 3, Installing a Remote Database, provides the steps for installing a remote database.
- Chapter 4, OVO Standard Installation, and Chapter 5, Cluster Installation for OVO, provide the instructions for installing OVO in a non-cluster and cluster environment.
- Chapter 6, Uninstalling & Reinstalling OVO, guides you through the uninstallation and reinstallation process of OVO.
- Chapter 7, After You Install, provides introductory information on using OVO.

- Appendix A, Documentation, lists available documentation, file name, and location

Please familiarize yourself with the documentation listed in the appendix as it provides you with many sources of useful information.

Some information previously included in the OVO for Windows Installation Guide 7.21 has been relocated, as follows:

- "Security groups & accounts" – Online Help → Administering Your Environment → OVO Security → HP-OVE-User account & HP-OVE-Group account
- "Access Requirements for NTFS" – Online Help → Administering Your Environment → OVO Security → Access Requirements for NTFS partitions
- "Configuring tools" – Online Help → Administering Your Environment → Configuring Tools
- OVO 7.5 Supported Agent, Management Server and Console Platforms – Support Matrix at **http://support.openview.hp.com/tech_docs/ovo-win/OVOWSuppMatrix.pdf**

What is OVO for Windows?

HP OpenView Operations for Windows (OVO) is a distributed, client/server software solution designed to provide service-driven event and performance management of business-critical enterprise systems, applications, and services.

OVO enables management of distributed, heterogeneous e-business infrastructures and includes support for a broad range of Windows and UNIX systems and applications, including e-commerce, web and application servers, conferencing and email, databases, ERP software, and more.

OVO provides console and server functionality to centrally monitor performance and events using agents installed on nodes being managed. To install add-ons and SPIs, you must first install OVO on a management server.

Components included as part of the OVO basic functionality (the three core SPIs, NDAOM, NNMA), do not need to be separately purchased or installed.

All other products included on the media and described in this documentation require additional license purchases.

Smart Plug-in for Windows Operating System

The Smart Plug-in for Windows Operating System (Windows OS SPI) provides preconfigured policies and tools for managing the operations and performance of your Windows nodes. This functionality is provided as part of the OVO product and includes system and basic application management, including policies to manage Windows Applications (including selected MS Backoffice Application, MS Web Servers), Anti-Virus Applications, Veritas Backup, Citrix Metaframe, Dell OpenManage, HP Systems Insight Manager, and basic monitoring of Active Directory). Management policies can easily be customized to suit specific needs.

The Windows OS SPI integrates seamlessly with OVO and its related products. The integration provides policies, tools, and a powerful automatic service discovery feature.

Smart Plug-in for UNIX Operating Systems

The Smart Plug-in for UNIX Operating Systems (UNIX OSSPI) integrates fully with OVO and extends its management scope to include distributed environments of UNIX systems.

The UNIX OSSPI is designed to monitor the availability and manage the functionality of UNIX operating systems and associated software and hardware. Esssentially the UNIX OSSPI provides a powerful automatic service discovery along with a set of pre-defined policies, tools, user roles which allow to quickly gain control of the essential elements of your UNIX-based IT infrastructure.

Smart Plug-in for Web Servers

The HP OpenView Web Server SPI is designed to monitor and manage web servers. It provides preconfigured policies to monitor processes, log files, and performance of web servers. For management capabilities, the SPI provides tools. The following web servers are currently supported by the SPI:

- Apache from Apache Software Foundation (ASF) and HP Apache
- iPlanet
- SunONE

Products Included with OVO

Your OVO for Windows CDs

Your HP OpenView Operations 7.5 for Windows product includes two CDs: the Start-up CD and the Standalone agents CD.

- Use the Start-up CD to install the OVO console/server or the remote console to your server. The OVO Start-up CD contains the core SPIs and stores other modules that extend the functionality of OVO with other products such as OV Network Node Manager, when OVO is integrated with the other products. These modules are the Network Node Manager Adapter, and the Network Diagnosis Add-On Module.
- Use the Standalone agents CD to manually install OVO agents via a CD to nodes you plan to manage after you have installed the OVO console/server.

The OVO Installation and Upgrade Guides, OVO Release Notes, Core SPIs Release Notes, Reporter 3.6 ReadMe, and White Papers are also stored on the Start-up CD. All release notes documents are available on the CD under \Documentation\Releasenotes. The white papers are available under \Documentation\Whitepapers, and consist of:

- OVOWFirewall_.pdf
- OVOW_6.x_Upgrade.pdf
- OVOW_NodeName_Change.zip
- OVOW_HA-with_SQL_Log_Shipping.zip
- Backup / Restore.pdf

Note the following constraint if you plan to copy the OVO 7.5 installation media files to a file system: Unlike earlier versions of OVO, you can no longer copy all product CDs into a single folder. Ensure that the Foundation and SPI CDs are placed in separate folders.

The English version of OVO for Windows 7.5 will not be installable on a non-English system if the path contains non-English characters.

Your Media Kit

Your HP OV Media Kit will include Smart Plug-Ins (SPIs) and may include "Add-on" products, in addition to the HP OV Operations for Windows CDs. SPIs and Add-on products have been tested with HP OV Operations for Windows so you can build a complete solution right out-of-the box. Your Media Kit includes the following software:

- HP OpenView Operations 7.5 for Windows (Start-up CD and Standalone agents CD)
- HP OpenView New and Upgraded Smart Plug-Ins for OpenView Operations 7.5 for Windows (Volume 1 CD and Volume 2 CD)
- HP OpenView Reporter 3.6
- HP OpenView Performance Manager 5.0 for Windows
- HP OpenView Network Node Manager 7.5 for Windows(r) 2000, Windows(r) XP, Windows ServerTM 2003, (includes Problem Diagnosis which is now built into NNM)
- HP OpenView Performance Agents (see individual CDs for versions by platform).
- HP OpenView Internet Services 6.0

The OVO for Windows Limited Edition does not include add-on products. The Limited Edition also may not be available in localized versions.

Smart Plug-Ins are ready-to-go modules that integrate with OVO and help enterprise operators monitor and manage complex business applications and IT infrastructures such as Microsoft Exchange, databases and Microsoft Active Directory.

Install Smart Plug-Ins after installing OV Operations 7.5 for Windows console/management server. For more details about SPIs, refer to the documentation on Volume 1 of the New and Upgraded Smart Plug-In for OpenView Operations 7.5 for Windows CD.

The contents of the media kit may change during the life of OVO 7.5. Newer versions of products may be included. Products included for trial usage may be added or removed. The packaging content might vary for HP OpenView Operations for Windows Limited Edition.

For product documentation, see Appendix A, Documentation.

Installation Planning Checklist

Use this checklist below to help you plan your installation of OVO and locate important information before you begin installing the console or console/server.

Task 1: Where will you be installing your OVO console/server?

___ On a server that never had OVO installed before?

If so, continue reviewing this check list, then see Chapter 2: Requirements for details on installing OVO for the first time.

___ On a system that had OVO installed before, and then removed?

If so, continue reviewing this checklist AND the Reinstall Planning Checklist below.

___ On a system with OVO already installed, and are you planning to upgrade OVO?

If so, see “HP OV Operations 7.5 for Windows Upgrade Guide” which is stored on the OVOW Start-up CD under the documentation directory. This Upgrade Guide also explains the upgrade/side-by-side migration process for migrating data from a non-Cluster OVO server to an OVO server running in a MS Cluster.

___ On an OVO virtual server on a Microsoft Cluster?

If so, see Chapter 5, Cluster Installation for OVO, and skip the rest of this checklist. This checklist is not applicable for OVO installs on a Microsoft Cluster.

Task 2: What are your company’s policies governing installation of software (OVO agent and packages) to the nodes you plan to manage?

Do you want the OVO server to automatically manage a Windows node and install the OVO agent to the node, or do you prefer to install the OVO agent/packages manually?

To decide which installation type to use, review Security Requirements on page 35. This section explains what accounts are created during installation, and how they are used in OVO and which install modes limit the OVO server's ability to automatically manage Windows nodes and install agents.

Task 3: Does your company use Microsoft Security templates to enforce adherence to security rules? Were they installed to the server where you plan to install OVO?

If so, review the section Installing and Running OVO in a Highly Secure Windows Environment on page 88, in addition to Security Requirements on page 35 before you start.

Task 4: Is your server configured with the fully qualified domain name (FQDN)?

Ensure that your server is configured to use an FQDN and that this FQDN allows to uniquely identify this server within the entire DNS namespace.

Task 5: Database Considerations. What database configuration are you planning to use? Are you planning to:

(Skip this section if you are performing a reinstall.)

___ Use the default which installs a new database (MSDE) locally?

If yes, then skip to the next checklist item. No special steps are needed if you use the default during install.

___ Use a database (Microsoft SQL Server 2000 Standard Edition or Enterprise Edition) on a remote system (server other than where OVO is installed)?

___ Connect to a database installed by Microsoft SQL Server 2000 Standard Edition or Enterprise Edition?

- If you are installing a database locally, no special actions are needed.
- If you are installing the database to a remote system, that is, a system other than where OVO is installed, review the section OVO Remote Database Setup Tool on page 53 before you begin installing OVO. The remote database must be setup before you install OVO. This requirement applies if using Microsoft SQL Server 2000 Standard Edition or Enterprise Edition.

Installing Agents

Agent installation is automatic when you select a Windows node to be managed by the OVO Windows server. (See Adding Managed Nodes on page 36.)

You will need to manually install the agent for UNIX and LINUX systems. For information on the systems that are supported, go to **http://support.openview.hp.com/tech_docs/ovo-win/OVOWSuppMatrix.pdf.**

You can also manually install the agent to Windows nodes if desired; the agent can be manually installed from the OV Operations for Windows Agent CD or from the management server.

For information on manually installing the agent, see the OVO help topics "Manual Agent Installation on Windows Computers" or "Agent Installation on UNIX Computers" under Administering your Environment → Policy Management and Deployment → Deployment-related tasks.

Reinstall Planning Checklist

Use this list only if OVO was previously installed on the server, was uninstalled, and now you plan to reinstall it.

Task 1: Does the HP ITO Account exist and if so, do you still want to use it?

OVO 7.5 by default, installs its Windows agents to run under the Local System Account. But if the HP ITO account exists, then the installer retains use of the HP ITO account (in case an agent is using it). To use the Local System Account, the agent must be manually switched over. (See Accounts Used on the Managed Node on page 38 for more details.)

Task 2: Does the HP-OVE-Group account exist?

If you want to reuse an existing Domain HP-OVE-Group account, specify the existing Group account during installation.

Task 3: Does the HP-OVE-User account exist?

If you want to reuse it, then you will need to enter the password to this account during reinstall.

Task 4: Database Considerations (Reinstalls Only). Are you planning on:

___ Creating a new OVO database server (in MSDE or SQL2000) even though an older one exists?

If so, remove the old database file prior to starting the installation. For a local MSDE install (and not a remote SQL 2000), the old database files are located in %OvDataDir%\Databases. All files in that folder can be deleted to remove the old "Openview" and "Reporter" databases.

___ Using an existing OVO database server installed by OVO 7.2x?

- If your existing database is MSDE, the OVO 7.5 installer will reinstall MSDE, reuse the existing database files, and upgrade the Database schema to the new OVO 7.5 structure.
- If your existing database OVOPS is a SQL2000 server, the OVO 7.5 installer can reconnect to it. You must have the administrative rights to this instance and the 'sa' user passwords to enable OVO to reconnect to the OVOPS instance in the SQL Server. During installation the Database schema will be upgraded to the new OVO 7.5 structure as well.

  Note: A backup is recommended before proceeding when using an existing database. See the `Backup/Restore.pdf` file located in the Documentation\Whitepapers directory on the OVO Start-up CD.

___ Upgrading an existing OVO database server in MSDE to SQL2000?

If so, your SQL Admin must perform the update AFTER the OVO installation is complete. Refer to your SQL2000 documentation on how to upgrade MSDE to SQL2000. OVO does not perform MSDE database upgrades to SQL2000.

2 Requirements

Hardware Requirements

Listed below are the minimum hardware requirements for OVO.

Remote Console

An OVO Remote Console system requires a minimum of 180MB of free disk space, however additional 3rd party SPI or other integrated OVO application may require additional disk space.

- PC with 500 MHz Intel Pentium (or compatible) processor, 1GHz recommended
- CD-ROM or DVD-ROM drive required unless you are installing from a network share
- 256 MB Physical Memory, with at least 512 MB Virtual Memory (page file)
- 180 MB required for installation, recommended a minimum 1 GB free hard disk space
- Minimum: 17-inch monitor with 1024x768 resolution and at least 256 colors. Recommended: 19-inch monitor with 1280x1024 resolution and at least 256 colors

Management Server and Console

- PC with at least 1.4 GHz Intel Pentium 4 (or compatible) processor (AMD Opteron and Athlon 64 CPU supporting in 32-Bit mode), 2 GHz or higher dual CPU system recommended.

- 512 MB Physical Memory, with at least 512 MB Virtual Memory (page file); 1GB Physical Memory recommended.
- Minimum 10 GB hard drive, 1.2 GB disk space required for installation (depending on selected product options). The management server only supports installation on NTFS volumes.
- Recommended at least 4 GB free disk space for event and performance databases; high-performance hard drive recommended.
- CD-ROM or DVD-ROM drive required unless you are installing from a network share.
- Minimum: 17-inch monitor with 1024x768 resolution and at least 256 colors. Recommended: 19-inch monitor with 1280x1024 resolution recommended (if used as console system) and at least 256 colors.
- Multiprocessor systems are supported.
- Microsoft Cluster is supported.
- Microsoft Data Access Components (MDAC) 2.62.7400.0001 or higher.

Agent

Consult the support matrix at **http://support.openview.hp.com/tech_docs/ovo-win/OVOWSuppMatrix.pdf** for OVO 7.5 Supported Agent, Management Server and Console Platforms.

See also in the online help the readme files “Manual Agent Installation on Windows Computers” or “Agent Installation on UNIX Computers” (Administering your Environment → Policy Management and Deployment → Deployment-related tasks) for the prerequisites on these platforms.

Software Requirements

Management Console/Server Combined System, Windows 2000 and 2003 Only

- Windows 2000 Server Edition or Advanced Server Edition, (SP3 or higher) or Windows 2003 Standard Edition, Enterprise Edition, or Data Center Edition.
- Adobe Acrobat Reader 5.0 (or higher) is required to view the documentation. It is available on the installation media, or you can download it from the www.adobe.com web site.
- Internet Explorer 6.0 or higher.
- Internet Information Services (IIS) 5.0 or 6.0. See page 26 in this chapter for minimum requirements.
- You must configure the DNS server if you are running OVO and want to use DNS discovery. The DNS server should be set to Allow Zone Transfers. If the DNS and AD (Active Directory service) domain names are different you will also need to create a New Zone in the DNS server configuration to match the AD domain name. You can also add secondary DNS servers to the name servers list so that they can be searched by OVO. It may take several hours for the data to be propagated throughout the domain and appear correctly in OVO discovery. Please consult your DNS Server documentation for details on how to configure these zones correctly.

Remote Management Console

OVO supports remote consoles on Windows 2000, XP, and 2003.

- Adobe Acrobat Reader 5.0 (or higher) is required. It is available on the installation media, or you can download it from the www.adobe.com web site.

- Internet Explorer 5.5 or 6.0 or higher.

Remote OVO consoles are supported only if the OVO Server system and Remote Console system are in the same Windows domain, or have an equivalent 2-way domain trust in place. The OVO Server installation may use a domain or local HP-OVE-User/HP-OVE-Group.

OVO Web Console

OVO provides a web console, supported on the following platforms:

- Internet Explorer 5.5 on Windows 2000 SP2 and later
- Internet Explorer 6.0 on Windows 2000 SP2 and later
- Internet Explorer 6.0 on Windows Server 2003
- Internet Explorer 6.0 on Windows XP
- Netscape 6.1 on Windows 2000 SP2 and later
- Netscape 6.1 on RedHat Linux 7.x

Consult the support matrix at **http://support.openview.hp.com/tech_docs/ovo-win/OVOWSuppMatrix.pdf** for OVO 7.5 Supported Agent, Management Server and Console Platforms.

Before You Install

Some of the components you will install have prerequisites and require you to take some action before proceeding with the installation. Prerequisites are described below. If you are upgrading from a previous installation of HP OpenView Express, HP OpenView VantagePoint for Windows, or HP OpenView Operations for Windows, read the upgrade information below before proceeding with any installation steps.

If You are Upgrading

If you are upgrading from HP OpenView VantagePoint for Windows 6.0, HP OpenView Express, or HP OpenView for Windows, you may need to perform certain steps before installing HP OpenView Operations for Windows. Depending on your current product, you may be required to save your data or save any custom policies you developed. Tools are provided in some instances to make this process easier.

If you are upgrading from HP OpenView for Windows 7.0 to 7.5, see the instructions to back up and restore the reporting components database in the `Backup/Restore.pdf` file in the Documentation\Whitepapers directory on the OVO Start-up CD. You can also consult in the online help "Back up the reporting component database" and "Restore the reporting component database" under Administering your Environment\Database Maintenance\Backing up your database, and also Restoring your database.

If you are upgrading from HP OpenView for Windows 7.0, 7.10 or 7.21 to 7.5, refer to the Upgrade Guide 7.5 for details.

Do not uninstall your current product before reading the Upgrade Guide that applies to your current installation. See the *HP OpenView Operations for Windows Upgrade Guide Version 7.5*. The uninstall procedure otherwise results in permanent loss of management server data.

Windows Service Requirements

OVO and Internet Information Services (IIS)

During management server installation, OVO connects to and configures IIS. You should first ensure that IIS contains all security patches deemed necessary for your site.

Consult your IIS documentation and relevant Microsoft web sites for information regarding available IIS patches.

OVO supports Internet Information Services (IIS) version 5.0 or 6.0 and requires certain components in order to run. You may wish to install only the required basic web page services listed, to minimize your vulnerability to virus attacks.

- Common Files (must be selected for any IIS installation)
- World Wide Web (WWW) server
- Active Server Pages (.asp) enabled on the management server to support the web console.
- Internet Information Services Manager (forced by WWW server selection)

All other IIS components are optional.

Should you wish to change the IIS default port, refer to “Configure OVO if the Default Port is Changed” in the online help, under Reports → Configure OVO if the Default Port is Changed. See also Administering Your Environment → Change the default port number.

If you plan on upgrading the OS (Windows 2000 to Windows 2003) after OVO 7.5 is installed, the IIS configuration has to be adjusted to re-enable the OVO Web Console and Graphing Component IIS extensions.

1. Select **My Computer** → **Manage**
2. In **Computer Management** expand **Services Application**
3. Select **Internet Information Services (IIS) Manager**, then expand **Web Services extension**
4. Make sure that the following 2 Web Service Extensions are set to "Allowed"
   - Active Server Pages
   - OV Operations performance graphs

When the Microsoft tool URLScan is installed with OVO for Windows, the graphing capability in OVO breaks. Change the following settings in the `urlscan.ini` file to correct the problem:

- Change UseAllowExtensions=0 to UseAllowExtensions=1;.
- Add the following lines to the AllowExtensions section:
  - .exe
  - .xml
  - .jar
  - .class
- Restart IIS for the changes to take effect.

By default, the `urlscan.ini` file for URLScan 2.0 is downloaded to this directory: `C:\WINNT40\system32\inetserv\urlscan`

The Microsoft technet link to the utility is:
http://www.microsoft.com/technet/treeview/default.asp?url=/technet/security/tools/URLscan.asp

Services Required for Windows Agents

Windows NT 4.0, 2000, XP, and Windows Server 2003 agent requirements include basic services, services needed for installation, services required for certain policy types, and services required to launch tools. Required services vary slightly between the platforms.

Policy Types include "Windows Management Interface" and "Service Discovery". SNMP and WMI are optional. WMI, however, is recommended on Windows NT 4.0 as all WinOSSPI policies depend on it. See "WMI provides the infrastructure for system monitoring" in the Windows Online Help).

Basic Services

The following basic services are required; they cannot be stopped.

- Event Log (Windows 2000/2003, Windows NT 4.0, Windows XP)
- Plug & Play (Windows 2000/2003, Windows XP)
- RPC Service (Windows 2000/2003, Windows NT 4.0, Windows XP)
- Security Accounts Manager (Windows 2000/2003, Windows XP)

Installation and Uninstallation

The same services required for installation are required if you uninstall OVO. Required services vary somewhat by platform. For Windows 2000/2003 and Windows XP, required services include the following examples. The stated purpose is an example of the use of the service, but may not be the only use of the service.

The “Net Logon” service is not required when the node is a member of a workgroup (that is, is not a member of a windows domain). The “Net Logon” service cannot be started on a node in a workgroup at all.

Table 1 Windows 2000/2003, XP Required Services for OVO Installation

Service	Purpose
Net Logon	• Required for authentication
Remote Registry	• Checks whether the node is already managed
Server	• Enables automatic OVO agent installation via the Admin share
Workstation	• Required by the Net Logon service

Table 2 Windows NT 4.0 Required Services for OVO Installation

Service	Purpose
Net Logon	• Required for authentication
NT LM Security Support Provider	• Required for authentication
Server	• Enables automatic OVO agent installation via the Admin share
TCP/IP Net BIOS Helper	• Required by the Net Logon service
Workstation	• Required by the Net Logon service

Additional Services Required for Policy Types

The additional services required for policy types are the same on both Windows 2000/2003, Windows XP, and Windows NT 4.0, as shown.

Table 3 Services Required for Policy Types on Windows 2000, 2003, XP, NT 4.0

Policy Type	Service
WMI	• Windows Management Instrumentation
Service Auto Discovery	• Windows Management Instrumentation
SNMP	• SNMP Trap Service
Measurement Threshold • Source type: MIB • Source type: WMI	• SNMP Service • Windows Management Instrumentation

In addition to the services listed above, additional services might be required by instrumentation binaries. This includes instrumentation shipped with OVO and SPIs.

Additional Services Required for Launching Actions and Tools

Additional services required after installation for launching actions and tools are the same on both Windows 2000/2003, Windows XP, and Windows NT 4.0, as shown.

Table 4 Services Required for Launching Actions and Tools on Windows 2000, 2003, XP, NT 4.0

Services	Purpose
Net Logon	• Required for authentication
NT LM Security Support Provider	• Required for authentication

Network Requirements & Protocols

Windows 2000/2003 Fully Qualified Domain Name (FQDN)

Before installing the OVO server software, make sure that the FQDN (Fully Qualified Domain Name) is set correctly. The FQDN is used by all installed OVO agents to communicate with the OVO server. While it is possible to change the FQDN of the system and your OVO server later, all current managed systems would have to be updated, thus it is strongly recommended that the FQDN be set to its final value beforehand and that the DNS server resolve this FQDN the same way.

Active Directory and integrated DNS servers: Typical AD Domain setups on Windows 2000/2003 include the AD domain identifier as part of the FQDN of the system:

1. Prior to installing OVO, make sure that the Windows server is in its final domain and that the domain suffix is set correctly and registered correctly in DNS. Check the properties of the server and check DNS by using the nslookup utility.
2. OVO requires the DNS server to provide proper PTR records (Reverse lookup of IP to FQDN); the PTR records must be consistent. Again use the nslookup utility to verify that the IP address is resolved to the correct FQDN.
3. All agents must resolve the FQDN domain name of the OVO server consistently. This is especially important if you are managing a Unix system which can use a different DNS server than the AD integrated DNS your Windows environment provides.

Check and Set the Primary DNS Suffix

If the management server is installed in a DNS environment that uses domain suffixes (FQDN), follow these directions to verify and set the Primary DNS suffix.

1. Right-click **My Computer** on the Windows 2000/2003 desktop and select **Properties.**
2. Select the **Network Identification** tab on a Windows 2000 system, or the **Computer Name** on a Windows 2003 system.
3. The screen contains a field **Full Computer Name**. This is the FQDN of your Windows system and this is the FQDN which will be used for OVO.

4 If the **Full Computer Name** value does not reflect the desired value, you can either change the value in this dialog, or in the TCP/IP setting of your NIC (Network Interface Card) configuration if you use embedded an AD/DNS setup. Please refer to your Windows 2000/2003 documentation for information on how to implement a DNS suffix change.

Network Protocols

The following network protocols are used in OVO:

- OVO uses TCP and/or UDP.
- DCE RPC is used for connections between the management server and UNIX managed nodes.
- MS RPC is used for some communication between the management server and Windows managed nodes.
- DCOM is used for communication between the server and the consoles. DCE is used for some communication with Windows managed nodes. For the remote installation of the Windows agent, DCOM is still used.
- HTTP is used by components for server and agent communication.
- Novell NetWare 6 can process Internet Protocol (IP) network packets and traditional Internetwork Packet Exchange (IPX) packets. The IPX protocol is required for the OVO Smart Plug-in for Windows Operating System. For further details, see the manual *Novell NetWare 6 Overview and Installation*, provided with your NetWare product.

If the OVO management server is installed on a machine which is member of a Windows NT4 domain, then a WINS server must be configured in the Advanced TCP/IP settings on this machine.

Database Requirements

Microsoft SQL Server 2000 and Microsoft Desktop Engine Support

The OVO installer program installs the Microsoft SQL Server 2000 Desktop Engine (MSDE 2000) as the default database for storing OVO management information. If you have an existing database (i.e. from a prior installation of OVO in MSDE), the installation program also allows you to reuse the OVO MSDE database. OVO supports:

- Full MS-SQL Server 2000 with an instance named OVOPS.
- Microsoft SQL Server 2000 Enterprise Edition
- MS SQL Server 2000 Standard Edition.

In order to install OVO 7.5 using a remote MS SQL Server 2000 database, the MDAC version 2.62.7400.0001 or higher is required.

OpenView Performance Agent

The OpenView Operations Agent and the OpenView Performance Agent can coexist on the same managed node. If you plan to install the OpenView Performance Agent (formerly called HP OpenView MeasureWare Agent) on this system in the future, make sure to install in a directory path with no spaces. This is not a requirement if the OpenView Performance Agent already exists on the system.

Manual Agent Installation

You can manually install the OVO Agent on the following computers:

- Windows:
  - Windows 2000
  - Windows NT 4.0
  - Windows XP
  - Windows Server 2003
- UNIX
  - HP-UX
  - Linux (RedHat, Suse, Debian, or Turbolinux)
  - Solaris
  - HP Tru64
  - AIX

See the help topics “Manual Agent installation on Windows computers” and “Agent installation on UNIX computers” under Administering your Environment → Policy Management and Deployment → Deployment-related tasks, for details on manually installing agents..

Refer to the Support Matrix at **http://support.openview.hp.com/tech_docs/ovo-win/OVOWSuppMatrix.pdf** for OVO 7.5 Supported Agent, Management Server and Console Platforms.

Unsupported Configurations

HP OpenView Operations for Windows (OVO) does not support the following scenarios:

- Remote, unattended installation of OVO on the management server/ console
- Installing OVO on a network drive
- Encrypted file systems
- Management server configured to use DHCP without a fixed IP address (DHCP is supported for managed nodes.)
- Installing the management server or console on Windows NT

The OVO management server and remote console are not supported on a domain controller.

Security Requirements

Security is involved in many of the OVO tasks performed by administrators and operators, such as installing the management server, adding managed nodes, and using OVO from a console, management server, or managed node. The information below explains how these tasks relate to security.

Installing the Management Server

To install a management server, you must be a member of the local or domain Administrators group. You are prompted for the domain, group, user, and user password of the accounts you want OVO to use for its security. See Installing a Management Server and Console on page 66 for installation procedures. If new domain accounts are created by the OVO installation, you must be logged on as a domain administrator (not a local administrator).

During the installation, Windows will try to look up the SID (security identifier) of the installing user. This operation only works if the Computer Account of the management server can browse objects in the Active Directory. By default, this privilege is enabled. If you tightened your security by removing rights from the machine accounts, then re-enable the privileges during the management server install.

Installing the Remote Console

To install the remote console, you must be a member of the local Administrators group. See Installing a Management Server and Console on page 66 for installation procedures.

To use the remote console, the Windows user running the console must be a member of the groups HP-OVE-ADMINS or HP-OVE-OPERATORS or a Domain administrator relative to the OVO management server system which the console connects to.

Adding Managed Nodes

To add a managed node, you must be a Windows administrator on the management server or a member of the HP-OVE-ADMINS group on the management server. For installing agent software to Windows nodes from the console, the user you are logged in as on the console also must be a member of the local Administrators group(s) on the managed node(s) you are adding. Table 5 on page 36 shows the three available options for installing managed nodes.

Table 5 Options for Adding Managed Nodes

Configuration	Result
• Domain installation: the managed node is in same domain or has a trust relationship with the domain, and • Current user (OVO Administrator) has administrative privileges on the node to be added.	The group HP-OVE-Group can be added automatically to the Local Administrators group on the node to be managed. The Windows agent can be automatically installed.
• Domain installation: the managed node is not in the same domain and no trust relationship exists, or • Installing user (OVO Administrator) has no administrative privileges.	The node can be added. Agent installation must always be done manually.
• Local installation:	The node can be added. Agent installation must always be done manually.

The system you are adding as a managed node must be up and running. OVO attempts to configure security for nodes you are adding as Windows NT/2000/XP, or Windows Server 2003 managed nodes (or nodes you are updating to the Windows NT/2000/XP/2003 type) as follows:

1 Based on the user you are logged in as, the utility attempts to do some security setup and reports the results. Specifically, it checks to see if the HP-OVE-GROUP account is part of the local Windows Administrators group on the managed node. If it is not, OVO adds the account to the group. It also makes sure that this group has the “Logon as a batch job” and “Logon as a service” privileges.

2 If the security configuration attempt fails (for example, if the node is not up and running), you are notified but OVO makes no further attempt to configure security for the node. In this case, you must correct the problem and then configure security manually on any nodes for which configuration failed, using the Node Configuration tool (`Tools → Openview tools → Windows Node Security Setup`). If the HP-OVE-GROUP account is already an Administrator account on the node and the account has the correct privileges, you can ignore the failure.

If you add the Windows NT Primary Domain Controller (PDC) or Windows 2000 Domain Controller (DC) as a managed node, you allow tools and scheduled commands to be defined to run without a password. This means that any administrator who configures tools in this environment can configure a tool to run as any user (including domain administrator) in that domain without a password.

You can close this security concern by setting the **`/auth /on`** switch in the SetMgmtServer tool. This sets the server to require authentication. Tools and scheduled task policies have to be configured with a password. See the help topic “Set the management server and other options in the Operations agent package” under Administering Your Environment.

For Windows Domain Controllers (including Win NT PDC and BDC) it is recommended to install the agent using the local system account.

Adding Managed Nodes from other Domains and across Domains

Managed nodes can be added from other domains in two ways:

- Automatic agent and deployment package installation: This requires the domain of the managed node to trust the domain of the HP-OVE-User and the console user.
- Manual agent installation: This approach does not use Windows security; it is possible to manage nodes across different domains without any Windows domain trust relationship. With this approach, you must install the Windows agent manually.

Accounts Used on the Managed Node

This section provides information to help you understand the different types of OVO accounts:

- Local System account
- HP ITO Account and opc_op account
- root

Local System Account

Beginning with OVO for Windows 7.20, the OVO for Windows agent package is installed by default as using the Local System account; the HP ITO Account and opc_op account that were used in previous versions of OVO are no longer created on Windows nodes.

If, in a previous version of OVO for Windows, you configured actions, tools, and scheduled tasks to run as an HP ITO Account, these tools, scheduled tasks, and actions will continue to run because they are mapped to the Local System account. The installation program does not force you to use the Local System account; if you are upgrading you can keep any user that you previously configured.

Additionally, if a tool or policy is configured to run as Local System, it will run on all agents because Local System is mapped to the HP ITO Account on agents where the agent runs as HP ITO Account.

However, if in a previous installation you have configured tools or policies to run as opc_op user, these tools and policies are not automatically mapped to the Local System account. You must either create the opc_op account manually or reconfigure such tools and policies to specify another user, such as $AGENT_USER.

Switching tools from opc_op to $AGENT_USER means switching the tools from a "Guest" to an administrative account; the tools will then be able to perform administrative operations.

See the documentation for individual SPIs to determine how specific policies might be affected by this change.

Benefits of Default Local System Account

HP strongly recommends using the default Local System account, which offers several advantages:

- Adds no additional accounts on managed nodes (HP ITO Account and opc_op are not created.)
- Eliminates problems with agent installation in Active Directory environments when HP ITO Account cannot be created.
- Does not conflict with password policies.
- Does not conflict with domain policies that do not allow local accounts.
- Does not conflict with domain policies that remove necessary privileges or user rights.
- Takes advantage of improvements to certain Smart-Plug-ins, such as the Smart Plug-in for Exchange Server. Refer to specific SPI documentation for details.

Restrictions of the Local System Account

The Local System account cannot be used when using message synchronization between this and another OVO for Windows server. In this case, both agents that run on the management server systems have to use the HP ITO Account. Agents on other systems can run using the Local System account. See in the online help “Scalable Architecture for Multiple Management Servers” under Administering your Environment.

This limitation for the message forwarding does not exist when forwarding between OVO 7.5 servers or 7.5 to Unix servers when using the new message forwarding mechanism, performed at the server level.

HP ITO Account and opc_op Account

In previous releases, the two local user accounts (HP ITO Account and opc_op account) were created on every Windows node and random passwords were generated. Beginning with OVO for Windows 7.20, and including OVO 7.5, the HP ITO Account and opc_op are no longer created on the node. Instead, the Local System account is used as the default.

You might want to use the tool ovchangepassword to change users and passwords. See the online help topic “Update HP-OVE-Users Password” under Administering your Environment.

If you are upgrading from a previous release that used the HP ITO Account, you can continue to use this account. Upgrades keep the existing user on the node. In the following situation, you must continue to use the HP ITO Account and opc_op:

- Default tools supplied with OVO for Windows are migrated to use the $AGENT_USER account. If you are upgrading from a previous release, custom tools that were previously configured to run as opc_op user must be manually changed to use the $AGENT_USER account. If you do not change your custom tools, then you have to continue to use your old accounts if you want these tools to run.

Table 6 Differences between Operating Accounts

	opc_op	HP ITO Account	Local System account
When created?	During Operations agent package installation (OVO 7.10 and earlier)	During Operations agent package installation (OVO 7.10 and earlier)	Created by Windows Operating System. Always present.
Member of Administrator’s Group?	No	Yes: added during Operations agent installation	Yes: by default

Table 6 Differences between Operating Accounts (cont'd)

	opc_op	HP ITO Account	Local System account
Member of user's group?	Yes	Yes	N/A
Password aging: expires and has to be changed	Switched off by default. Can be turned on.	Switched off by default. Can be turned on. Should not be turned on for domain controllers.	No. System account does not have a password.
Typically used for	Tools and programs that run under a normal user account	All agent processes Tools/programs that run with administrator privileges.	Most Windows services

HP ITO Account

The HP ITO Account is no longer automatically created when OVO for Windows is installed. (Upgrade installations that used the HP ITO Account can continue to use this account.)

The HP ITO Account user has administrative privileges and is automatically added to the local Administrators group when created. The password is different on every machine, and you may experience difficulties if you must change the password.

OVO does not recommend changing the password of the HP ITO Account. If the password for this account is changed, you must manually reconfigure the Windows service that starts the ITO agent. To do this, use **Control Panel** → **Administrative Services** → **HP ITO Agent** → **Properties** → **LogOn** and change the password here as well. If this is not done, the ITO agent cannot start up after it has been stopped or the system has been rebooted.

OVO does not support changing the password of the HP ITO Account on domain controllers. The agent installation on domain controllers requires that the password must not be changed. If this is a problem, use the Local System account to run the agent.

If you are installing the OVO Agent software on a Windows domain controller, this user is automatically set up as a domain administrator. Windows NT PDC and Windows 2000/2003 DC do not have local accounts.

On domain controllers, password aging should not be turned on and the password should not be changed because all domain controllers share the same domain-user account and password. Passwords can only be changed when all necessary agents are installed on the domain controllers. To install any new agents on domain controllers, you must first delete all existing agents on the domain controllers and reinstall them again.

opc_op Account

Beginning with the 7.20 release, the opc_op account is no longer provided by default with the OVO for Windows installation and its use is not recommended. (The opc_op account is still created on UNIX managed nodes.)

Default tools and policies included with OVO for Windows do not use the opc_op account. If you have customized tools or policies from an earlier installation that require the opc_op account, you must take one of the following steps so that these tools and policies will continue to function:

- Create the opc_op user manually using Microsoft administrative tools so that this account is available for the tools or policies that require it.
- Change the user account for these tools or policies to use another account which exists on the node.
- Use the new variable $AGENT_USER, which means that the tool or policy will be executed using the account the agent currently uses (this could be Local System or HP ITO Account). In this case the tool or policy has administrative privileges.

The opc_op account is a domain user on Domain Controllers and a local user on all other systems. This account is a member of the Users Group and does not have any special privileges.

This user can be used as a valid user for tools. However, to use tools, the opc_op user must have the correct access on the NTFS partition that will be accessed by the tool. The password is different on every machine.

UNIX Systems Root Agent Account

On UNIX systems, root is used as an agent account. The installation also creates an opc_op user account, which you can use to execute tools.

Using OVO in a Firewall Environment

Consult the Product Manual website at **http://ovweb.external.hp.com/lpe/doc_serv** for the latest version of the Firewall Configuration white paper. The Firewall white paper not only explains how to configure the Windows Internet Connection Firewall (ICF), but also contains important information for setting up the agent in complex environments. It describes:

- Firewall configuration for Windows nodes
- Firewall configuration for Unix DCE nodes
- Firewall configuration for OpenView components and products

Configuring the Windows Built-in Firewall

OVO Management Server

The OVO management server hosts several processes that act as RPC server for remote clients. This includes the WMI interfaces accessed by the console (for firewall configuration instructions see “OVO Remote Console” below) and the OVO message receiver component which receives messages and message operations forwarded by an agent system or another management server system. When the Windows Firewall (WF) is turned on, then these RPC servers are by default not accessible from remote systems. So you must either turn off the WF completely which is not recommended (for instructions how to do that, see below), or you have to configure the OVOW management server and the WF to make the RPC servers accessible again.

Configure Firewall on the Management Server

Follow these steps to configure the firewall to allow remote access to the management server’s RPC server:

1 Force the OVO management server to use a fix port for the message receiver RPC server, so that you can open this port in the firewall. To configure the RPC server port, add the following entry to the registry on the OVO management server system:

```
[HKEY_LOCAL_MACHINE\SOFTWARE\Hewlett-Packard\
OVEnterprise\Management Server\MsgActSrv]
"COMM_PORT_RANGE"="12001" (Value Type: String/REG_SZ)
```

You can also use a port different than 12001.

2 Restart the RPC server on the OVO management server system by restarting the OvEpMessageActionServer service.

3 On the firewall configuration, open the configured port as well as the RPC endpoint mapper port:

   a Select **Network Connections** from the Control Panel.

   b Right-click on **Local Area Connections** and select **Properties**.

   c Select the **Advanced** tab and click on **Settings**.

   d Select the **Exceptions** tab on the Windows Firewall dialog.

   e Use the **Add Port...** button to add TCP port 135 and UDP port 135 to the exceptions list (as name use 'TCP 135' and 'UDP 135' or similar).

   f Use the **Add Port...** button to add the port you configured in step 1 (in this example: port 12001) as TCP port to the exceptions list (as name use 'OVOW message receiver' or similar).

To make these exceptions more secure click on the **Change Scope...** button and select **My network (subnet) only** (if your RPC clients like the agents are in the same subnet). This will ensure that the ports that are opened up will not be accessible from other systems.

Enable ICMP Echo Requests on the Management Server

Each agent sends ICMP echo requests to the management server in configured time intervals. This functionality is part of the agent health monitoring and it helps reduce the load on the management server system. If the management server does not receive an ICMP echo request from an agent for an extended amount of time, then the management server itself needs to start checking for the health of the agent.

As the Windows Firewall by default blocks off all ICMP echo requests, the server has to do all agent health checks by itself. You can configure the WF to allow ICMP echo requests as follows:

1 Select **Network Connections** from the Control Panel.

2 Right -click on **Local Area Connections** and select **Properties**.

3 Select the **Advanced** tab and click on **Settings**.

4 Select the **Advanced** tab on the Windows Firewall dialog.

5 Click on the **Settings**… tab in the **ICMP** section.

6 Check the **Allow incoming echo requests** checkbox.

OVO Remote Console

The OVO Remote Console uses bidirectional DCOM communication between the OVO Management Server and the OVO Remote Console. Part of this communication consists of asynchronous callbacks from the OVO Management Server back to the OVO console. This is considered incoming communication by a firewall software. Desktop Firewall programs (also call Personal Firewall) typically block all communication to the system initiated from the outside. Therefore it is required to configure such Desktop Firewall application to allow using the OVO Remote Console.

Using the Console on Systems with Enabled Windows Firewall

In Windows XP, Microsoft introduced a built-in firewall: the Internet Connection Firewall (ICF). Starting with XP SP2 and Windows 2003 Server SP1, the firewall is called Windows Firewall (WF). On Windows XP Service Pack 2 the firewall is enabled by default, whereas on Windows 2003 Server SP1 it is disabled.

The following description is specific to the Windows Firewall as part of Windows XP SP2 and Windows 2003 Server SP1 . It lists what ports need to be opened for incoming communication as well as which programs are allowed to receive the communication.

Other Personal Firewall implementation may allow different setups, for example by defining trusted zones.

Configure Firewall

First you have to decide whether you want to switch off the Windows firewall completely (not recommended) or configure it to allow OVO console communication.

The Windows firewall offers several configuration options. It is possible to configure the Windows firewall via Network Connections, the Control Panel, the command line utility Netsh and via Global policy objects. (The WF settings are contained in the GPO container Computer Configuration\Administrative Templates\Network\Network Connections\Windows Firewall.) The following describes the configuration via “Network connections” only.

Turn Off Firewall Completely (Not Recommended)

1. Select **Network Connections** from the Control Panel.
2. Right-click on **Local Area Connections** and select **Properties**.
3. Select the **Advanced** tab and click on **Settings**. Select **Off** (not recommended) to turn off theWindows firewall completely.

Configure Firewall for OVO Console Communication

Change the default firewall settings on the console system to allow WMI on the management server to communicate via DCOM to the remote console components as follows:

1. Select **Network Connections** from the Control Panel.
2. Right-click on **Local Area Connections** and select **Properties**.
3. Select the **Advanced** tab and click on **Settings**.
4. Select the **Exceptions** tab on the Windows Firewall dialog.
5. Use the **Add Port...** button to add TCP port 135 and UDP port 135 to the exceptions list (as name use ‘TCP 135’ and ‘UDP 135’ or similar).
6. Use the **Add Program...** button to add the following programs to the exceptions list:

   ```
   \Windows\System32\mmc.exe

   \Windows\System32\wbem\unsecapp.exe

   \Program Files\HP OpenView\bin\ovunsecapp.exe
   ```

```
\Program Files\HP OpenView\bin\OvServiceTypeEditor.exe
\Program Files\HP OpenView\bin\OvServiceEditor.exe
\Program Files\HP OpenView\bin\OvPmdPolicyEditorFrame.exe
```

To make these exceptions more secure, click on the **Change Scope...** button and select **My network (subnet) only** (if your management server is in the same subnet). A better solution is to specify the management server's address in the "Custom list". This will ensure that the ports that are opened up will not be accessible from other systems. Installing the management server on a FAT32 file system is also not supported.

Change Remote Access

Furthermore, you have to change the computer-wide access to allow the anonymous account to have "remote access" as follows.

1. Click on **Start**, click on **Run**, type in **`dcomcnfg`**.
2. Go to **Component Services** → **Computers** → **My Computer**.
3. Right-click on **My Computer** and select **Properties**.
4. Select the **COM Security** tab.
5. Click on **Edit Limits...** button within the Access Permissions frame.
6. Enable **Remote Access** permission for the "Anonymous Logon" account. (By default, "Anonymous Logon" has Local Access permission.)

Using the Console to Connect to Management Server Systems with Enabled Windows Firewall

An OVOW management server can be installed on a Windows 2003 SP2 system with enabled Windows firewall (WF). In such a setup, no remote console can connect to the management server because the communication is blocked off by the WF.

In order to enable remote consoles to connect to the management server, you need to change the firewall configuration on the management server system.

Configure Program Exceptions in Firewall

Change the default firewall settings on the management server system to allow the console to connect to PMAD and the OvSecurity component as follows:

1. Select **Network Connections** from the Control Panel.
2. Right-click on **Local Area Connections** and select **Properties**.
3. Select the **Advanced** tab and click on **Settings**.
4. Select the **Exceptions** tab on the Windows Firewall dialog.
5. Use the **Add Program...** button to add the following programs to the exceptions list:
   - `\Program Files\HP OpenView\bin\OvPmad.exe`
   - `\Program Files\HP OpenView\bin\OvSecurity.exe`

To make these exceptions more secure click on the **Change Scope...** button and select **My network (subnet) only** (if your console systems are in the same subnet) or even better specify the console system's addresses in the "Custom list". This will make sure that the ports that are opened up will not be accessible from other systems.

Check DCOM Remote Access Rights for Programs

Remote access via DCOM to `OvPmad.exe` and `OvSecurity.exe` must be enabled. In the default configuration these rights are already granted, but check to make sure that this is also true for your configuration.

1. Click on **Start**, click on **Run**, type in '`dcomcnfg`'.
2. Go to **Component Services** → **Computers** → **My Computer.**
3. Right-click on **My Computer** and select **Properties**.
4. Select the **COM Security** tab.
5. Click on **Edit Limits...** button within the Access Permissions frame.
6. Enable **Remote Access** permission for the **Anonymous Logon** account (by default "Anonymous Logon" has "Local Access" permission).

Configure Remote WMI Access in Firewall

Change the default firewall settings on the management server system to allow the console to connect to WMI. As this configuration step cannot be performed using the Windows Firewall dialog, you need to configure the WMI access using a command line tool:

1. Open a command shell by clicking **Start** and **Run**… , then typing **cmd** and finally clicking the **OK** button.
2. In the command shell that is opened, enter the following command:

   ```
   netsh firewall set service RemoteAdmin enable
   ```

This command opens quite a big hole in your firewall configuration, so you may want to restrict the RemoteAdmin access to the remote console systems only. You can do so by using the following command instead of the command mentioned above. In this example, the remote console systems have the IP addresses 10.1.2.3 and 10.4.5.6; please adapt the IP addresses to your needs.

```
netsh firewall set service RemoteAdmin enable custom
10.1.2.3,10.4.5.6
```

For more information about the RemoteAdmin configuration options use the command: **netsh firewall set service help**

OVO Web Console

The Web console uses HTTP to communicate with the management server. It uses the standard browser settings for HTTP communication. Therefore communication through firewalls is possible as long as the browser settings are correct and as long as the customers' web and proxy servers are configured accordingly.

3 Installing a Remote Database

This chapter describes the different types of data repository setups that OVO supports for a local database as well as for a remote database. It further provides instructions for installing a remote database.

OVO uses a SQL 2000 or MSDE database instance named OVOPS; within this instance a database “openview” and a database “reporter” are present.

Local Database

OVO supports the following local data repository setups:

- New OVO installation on a single (non-clustered) Windows server with a local database:
  - MSDE 2000 will be installed and new database files will be created.
  - Choose the option MSDE and select to create new database files in the OVO installation dialog
- OVO installation on a single (non-clustered) Windows server with a local database while reusing existing database files:
  - MSDE 2000 will be installed and a prompt will allow you to select existing database files.
  - If the database files already contain a database (openview), choose the option MSDE and select to reuse existing DB files in the OVO installation dialog
- OVO installation in a single (non-clustered) Windows with a local SQL 2000 database:
  - The installation allows you to reconnect to the existing SQL 2000 instance OVOPS, and/or an older OVO database schema (7.21)

— The schema will be upgraded to 7.5. Choose the option SQL 2000 during the OVO installation.

Upgrading from MSDE to SQL 2000: Any OVO installation which uses MSDE can be upgraded to SQL 2000 using the SQL 2000 Installation CD.

Remote Database

OVO supports the following remote data repository setups:

- Remote Windows system running SQL 2000 with a newly created instance OVOPS: The Remote Database Tool creates the databases “openview” and “reporter” in the OVOPS instance. To use this option,
  - — Install SQL 2000. During the SQL 2000 installation, create a new OVOPS instance.
  - — Use the Remote Database Tool to create the databases prior to starting the OVO installation (located in the folder Remote_DB_Setup of the OVO Start-up CD).
  - — Then, choose the SQL 2000 option during the OVO installation.

    The Remote Database Tool does not create the OVOPS instance, this step is performed by the SQL 2000 installation. The instance must be called OVOPS, other instance names are not supported.

- Remote Windows system running SQL 2000 with an existing OVOPS instance and an existing older OVO database schema (7.21). The schema will be automatically upgraded during installation of OVO; it is not required to run the Remote Database Tool.

  You can use only the Remote Database option to install OVO into a MS cluster. The MSDE installation is not possible. See Chapter 5, Cluster Installation for OVO for details.

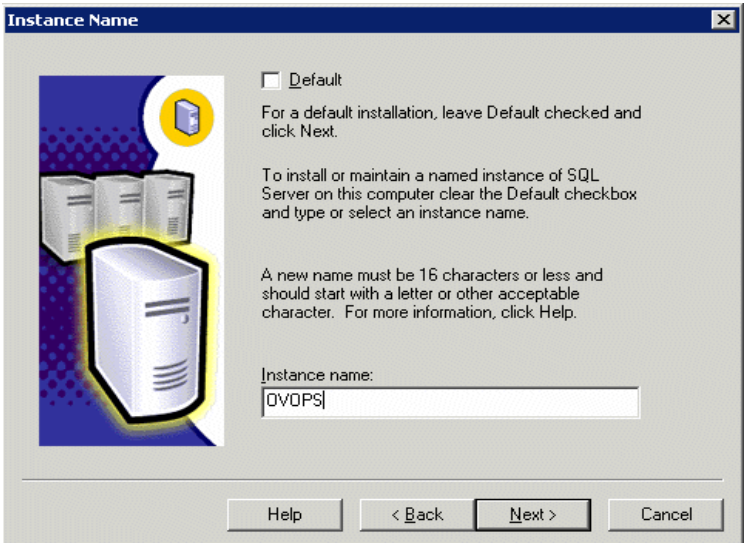
OVO Remote Database Setup Tool

With release 7.5, OVO supports the guided setup of a remote MS SQL 2000 database.

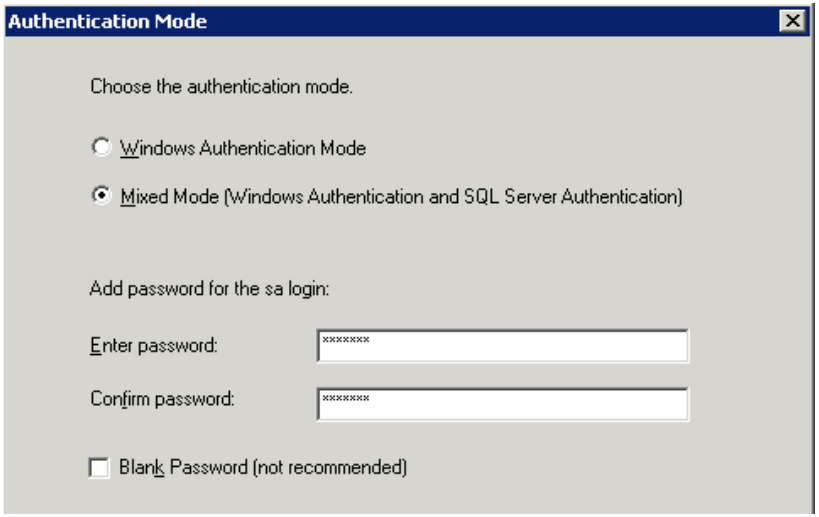
Prior to running the Remote Database setup tool, you need to install MS SQL 2000 (Standard or Enterprise Edition) on the remote system. OVO requires the Database instance to be called “OVOPS” and requires SQL Server Mixed Mode authentication.

Insert your MS SQL 2000 Standard or Enterprise installation CD. The following steps are part of the SQL Setup. Not all screens are depicted.

1 In the **Instance Name** screen, create the OVOPS instance. Then click **Next**. (The instance name must be OVOPS. It cannot be changed with OVO 7.5.)

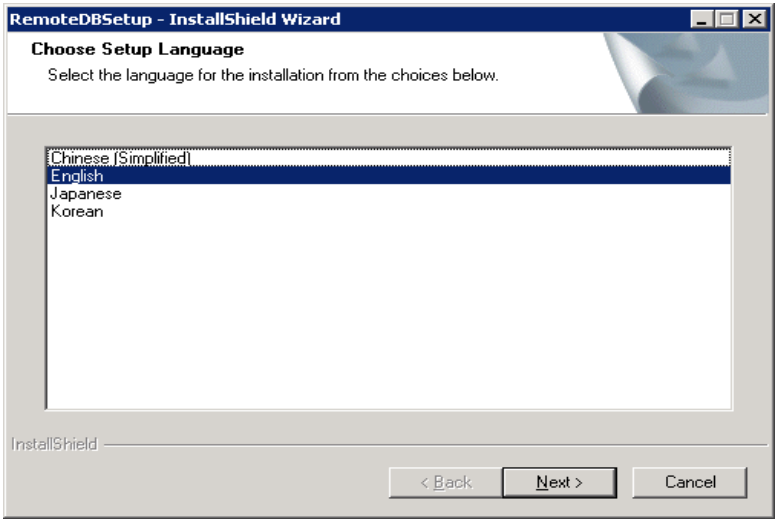


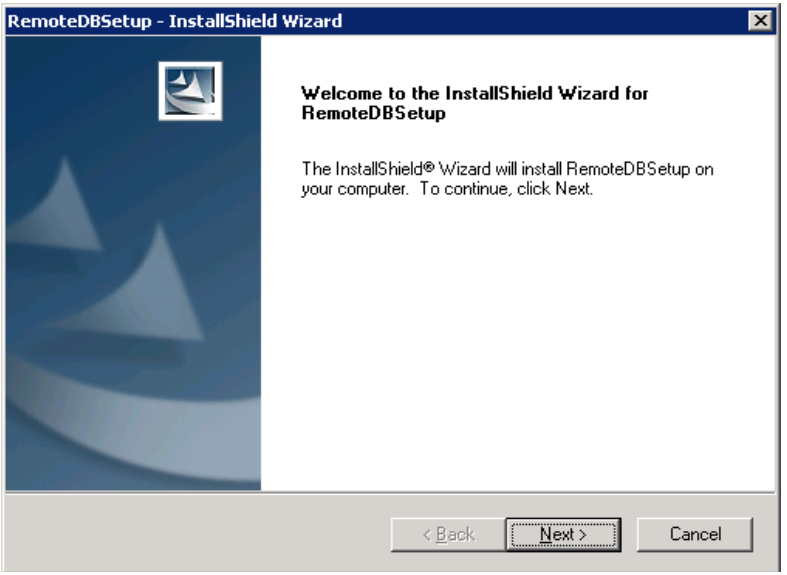
2 Select **Mixed Mode** Authentication in the **Authentication Mode** screen, and set and remember the 'sa' password which is required during the OVO installation.



3 Insert the HP OpenView Operations 7.5 for Windows Start-up CD and click **Next**.

4 After the SQL Server 2000 OVOPS instance is created, run the Remote DB Setup Tool, located in the folder Remote_DB_Setup of the OVO installation CD.





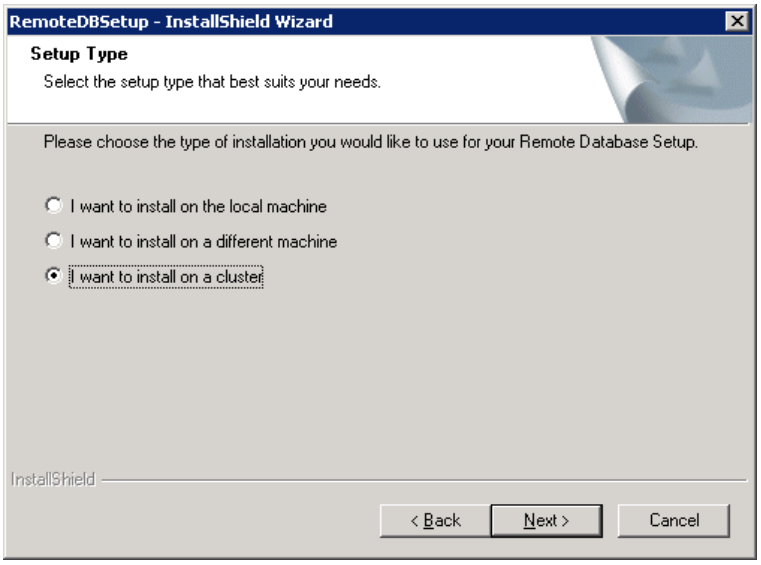
5 On the **Setup Type** screen, select the type of installation you would like to perform and click **Next**. There are three options you can choose from.

> The tool can be run on the system which hosts the SQL Server 2000 instance, or on a remote node (for example the system designated as the OVO server). If you run this tool remotely to the SQL server and define a folder which is not already available on the SQL Server host, the tool may have insufficient privileges to be able to create this folder.

— I want to install on the local machine – that is, to install the database on the machine currently running the setup.

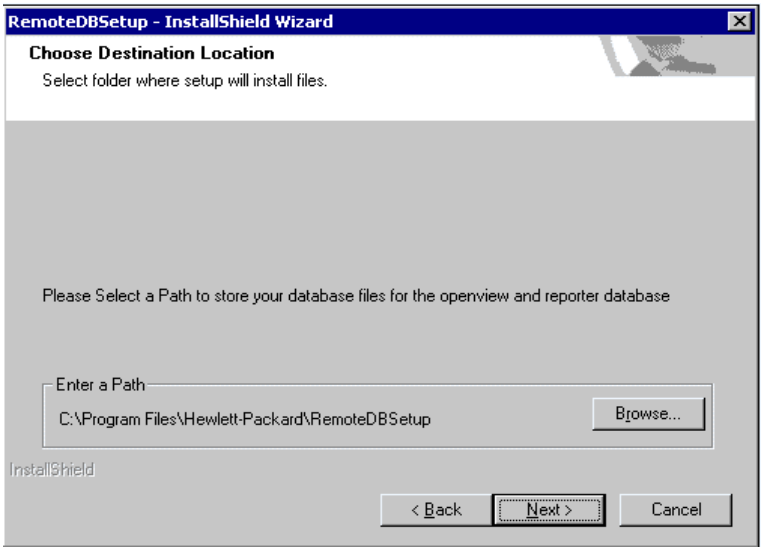
— I want to install on a different machine – that is, to install the database on a machine other than the current machine running setup.

— I want to install on a cluster – that is, to install the databases intended for a clustered SQL server.

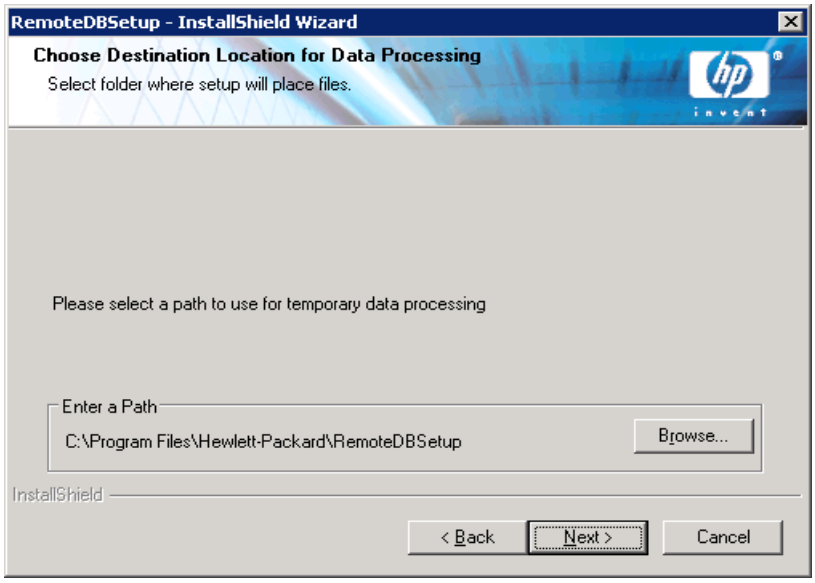


6 The **Choose Destination Location** dialog will appear.

a If you choose to install on the local machine, enter the location where you would like to install your database file and click **Next**.

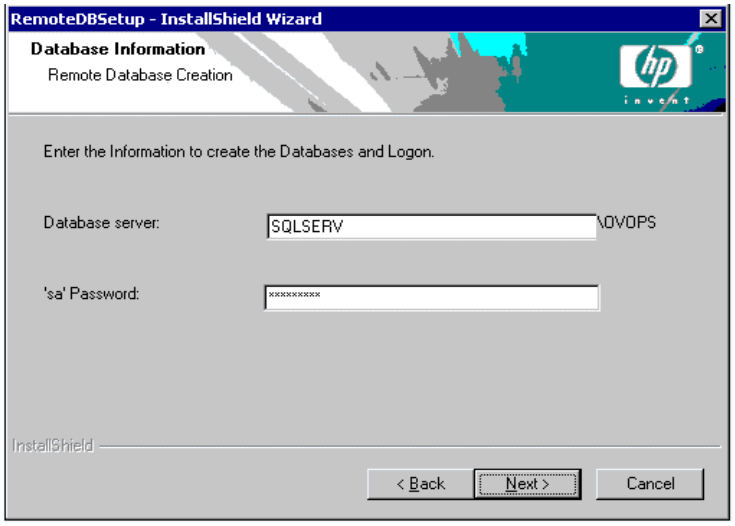


b If you choose to install on a different machine or on a cluster, enter a temporary location to use for temporary data processing and click **Next**.

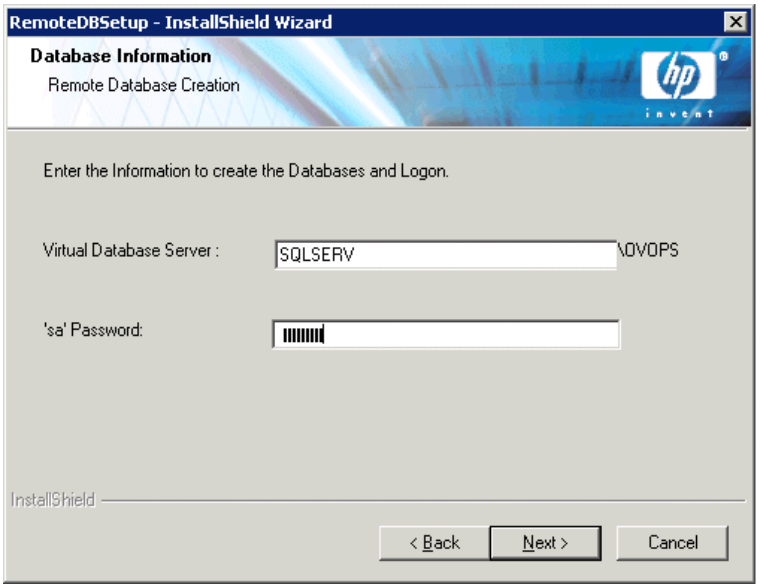

RemoteDBSetup - InstallShield Wizard
Choose Destination Location for Data Processing
Select folder where setup will place files.
Please select a path to use for temporary data processing
Enter a Path
C:\Program Files\Hewlett-Packard\RemoteDBSetup
Browse...
InstallShield
< Back
Next >
Cancel

7 In the **Database Information** screen,

a Specify the name of the Database server and the **`'sa' password`** used during the creation of the OVOPS instance.

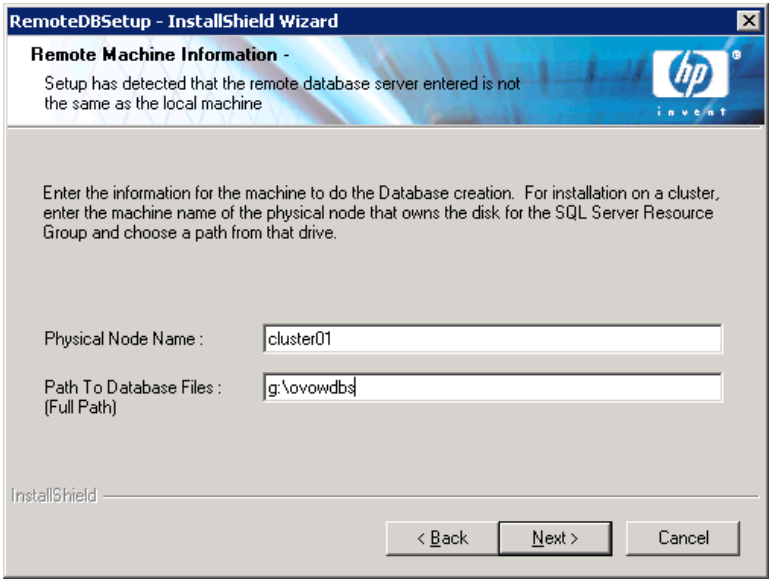


b If you are installing to a clustered SQL Server, enter the name of the Virtual Database Server and password.

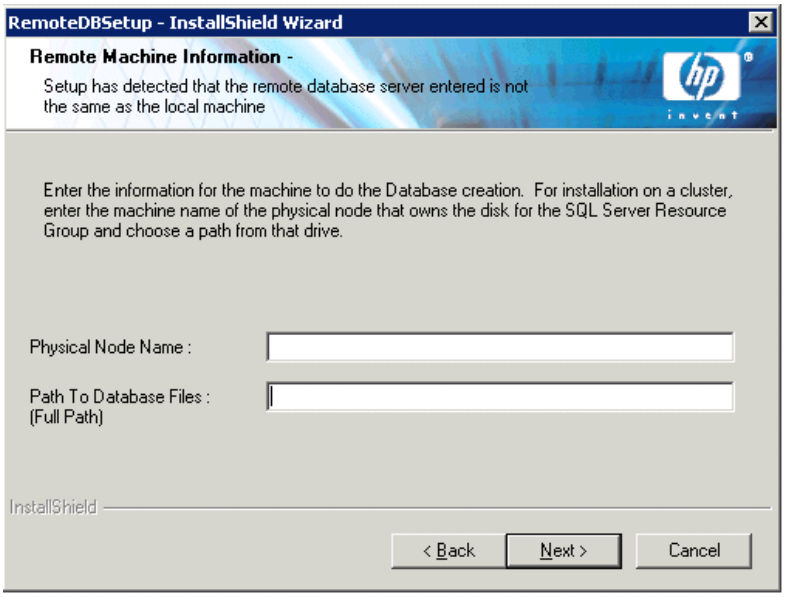


8 The **Remote Machine Information** dialog will only appear if you are trying to install on a different machine or on a cluster.

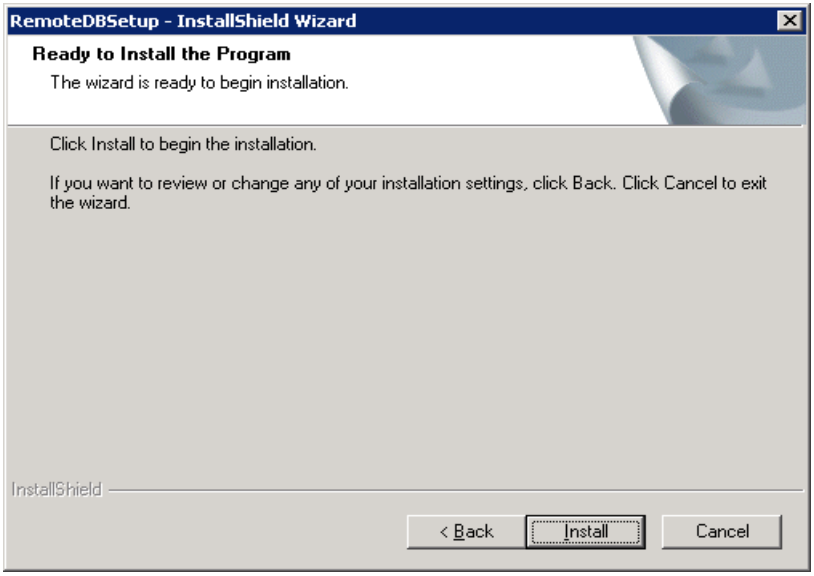
a For a cluster, enter the physical node name of the machine currently running setup, as well as the full path to the location where you would like your database files installed.



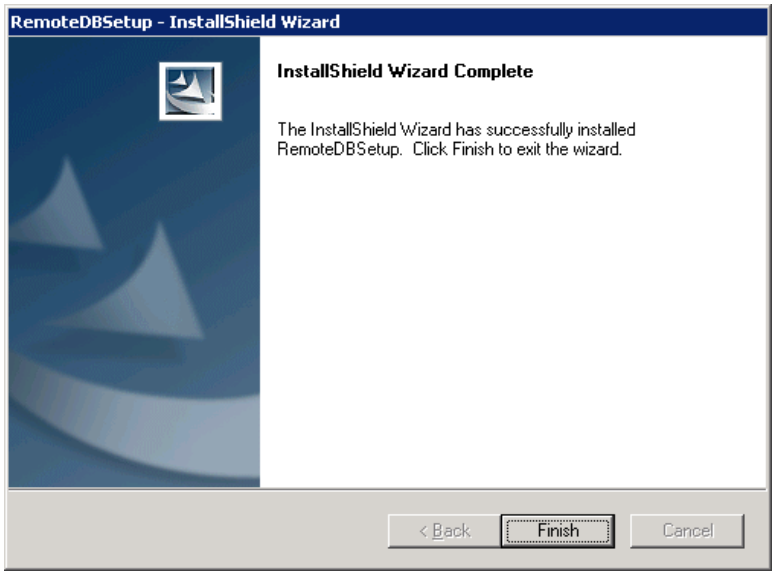
b If you are trying to install a different machine, the machine name will come prefilled with the name you entered for the database server. You only need to enter the full path to the location where you would like your database files installed.



9 On the **Ready to Install the Program** screen, click **Install** to begin the installation.



10 The installation is finished when the **InstallShield Wizard Complete** screen appears. Click **Finish** to conclude the installation.



4 OVO Standard Installation

A standard OVO installation is on a regular non-cluster Windows server. This chapter contains the following instructions:

- Installing the OVO management server and console
- Installing OVO in a highly secure environment

This section assumes you are an experienced Windows administrator and that you understand Windows security concepts and terminology.

If this is your first time installing OVO, we recommend installing it on one or more test systems so that you can become familiar with OVO before using it in your business environment.

If you have a version of HP OpenView Operations 6.0 (VantagePoint for Windows), HP OpenView Express, or HP OVO 7.0, 7.10, or 7.21 already installed and need to upgrade to a new version, see the appropriate Upgrade Guide for your current installation. Upgrade Guides are available on the installation media in .pdf format and provide instructions on preserving your data before upgrading, agent upgrades, and policy upgrades. Upgrade Guides are also available in printed format if you ordered manuals.

Installing a Management Server and Console

The information below explains how to install an OVO management server and console on Windows 2000/2003 systems. You have 2 options:

Option 1 (recommended option)

- Install SQL Server 2000 with an OVOPS instance
- Install OVO

Option 2

- Install OVO
- Upgrade the MSDE instance through the SQL Server 2000 installation

To install a remote console, the installing user must have local administrative rights. To connect from a remote console to an OVO server, the domain user running the remote console must be any one of the following (via direct or indirect group membership).

1. Local administrator on the OVO for Windows server
2. Member of the user group HP-OVE-ADMINS
3. Member of the user group HP-OVE-OPERATORS

For items 1 and 2, the domain user on the remote console is considered to be an OVO for Windows Administrator. For item 3, the user is considered to be an OVO for Windows Operator.

During installation, the Windows Management Instrumentation (WMI) and World-Wide-Web Publishing Server services must be temporarily stopped and restarted in order to configure the system for OVO use. Ensure that this action will not disrupt any applications before you start installation.

Refer to Appendix B, System Requirements Checking for a list of errors/warnings that would prevent OVO from installing correctly.

Installing a Remote Console

The information below explains how to install an OVO remote console on Windows XP/2000/2003 systems.

To install a remote console you must have local administrative rights. To connect from a remote console to an OVO server, the domain user running the remote console must be any one of the following (via direct or indirect group membership).

1. Local administrator on the OVO for Windows server
2. Member of the user group HP-OVE-ADMINS
3. Member of the user group HP-OVE-OPERATORS

For items 1 and 2, the domain user on the remote console is considered to be an OVO for Windows Administrator. For item 3, the user is considered to be an OVO for Windows Operator.

Refer to Appendix B, System Requirements Checking for a list of errors/ warnings that would prevent OVO from installing correctly.

OVO does not support installing the management server or console on a domain controller. See Unsupported Configurations on page 34 for scenarios that are not supported.

OVO Installation via Terminal Services

The OVO management server and remote console may be installed either via a Remote Desktop Connection or via a Terminal Services session when the following criteria are met:

- Terminal Services is running in Remote Administration Mode.
- Setup.exe for either component is run from the local file system on the target server (not from CD).

For further information on the Terminal Services please refer to the OVO Support Matrix at **http://support.openview.hp.com/tech_docs/ovo-win/OVOWSuppMatrix.pdf**.

Prior to Installation

- Ensure that all system requirements are met.
- Review the Security Requirements on page 35 in Chapter 3 of this manual.

License Information

OVO comes with a 60-day trial license that allows you to use the product for 60 days after you install it. When you first start the OVO console you are prompted to request a permanent license password. A permanent password can be obtained at this time or deferred. Upon reaching the 61st day, the product is disabled until a permanent license is obtained. See Entering License Information on page 84.

Installing OVO

You can install other products (such as SPIs or add-ons) as available in the OV media kit. However, OVO must be installed first or already be on the system in order to install the SPIs or add-ons.

1 Close all open applications to minimize the need for a reboot.

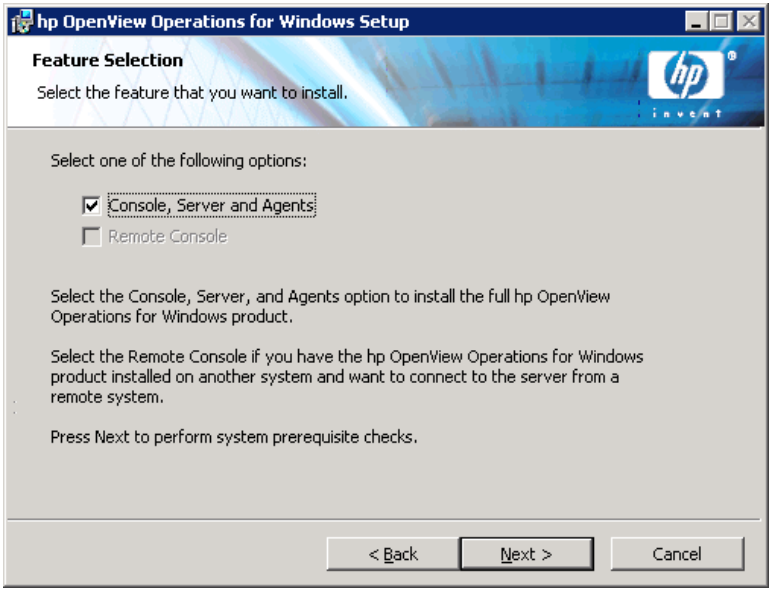
2 Insert the OV Operations 7.5 for Windows disk into the CD drive of the system you will use as the console.

- If `Autorun` is enabled, the installation will start automatically.
- If `Autorun` is disabled, run **autorun.vbs** from the root of the installation media.

The following sections describe how to perform tasks required by the installation wizard.

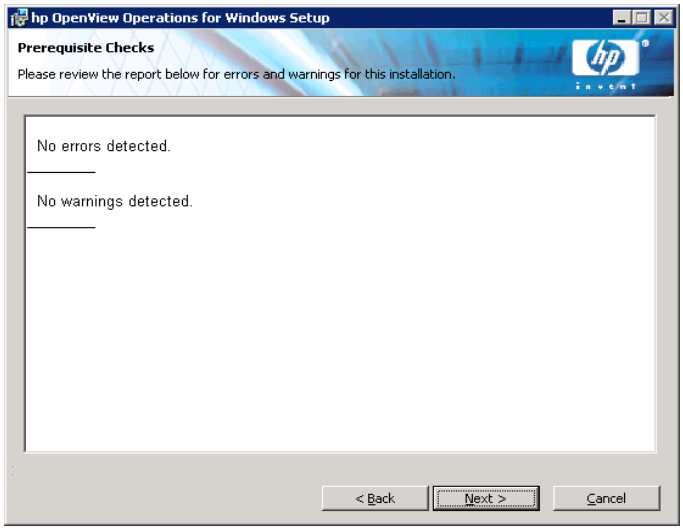
3 On the **Welcome** screen, click **Next** to go to the Feature Selection screen.

4 In the **Feature Selection** screen, select to install **Console, Server and Agents 7.5** . If installing a remote console, select the Remote Console option. After making your selections, click **Next** to perform system prerequisite checks.



The **Prerequisite Checks** screen displays errors and/or warnings that would prevent OVO from installing correctly. All errors must be resolved before installation can continue. See Appendix B, System Requirements Checking for the list of hardware and software items checked during installation.

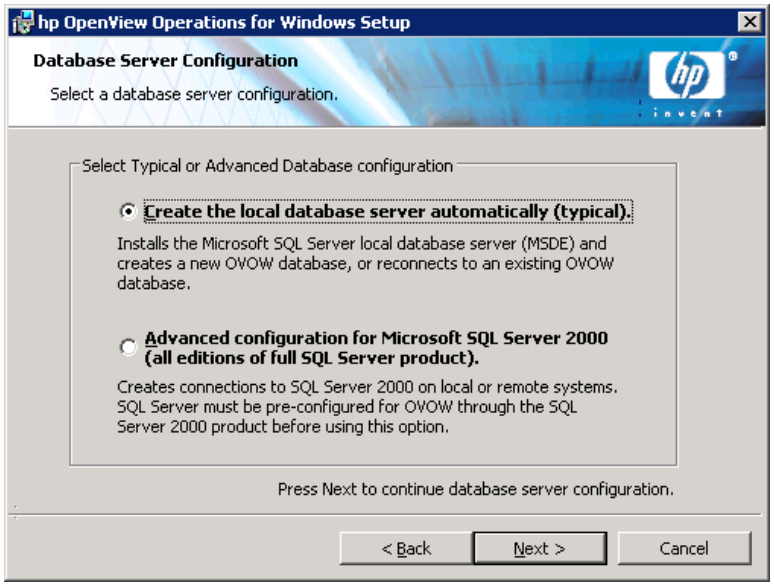
If no errors were detected, click **Next** to continue.



The **Restart Services** window informs you that the services listed are restarted. This is done automatically during the installation process. Click **OK** (with the hourglass cursor) to continue the installation .

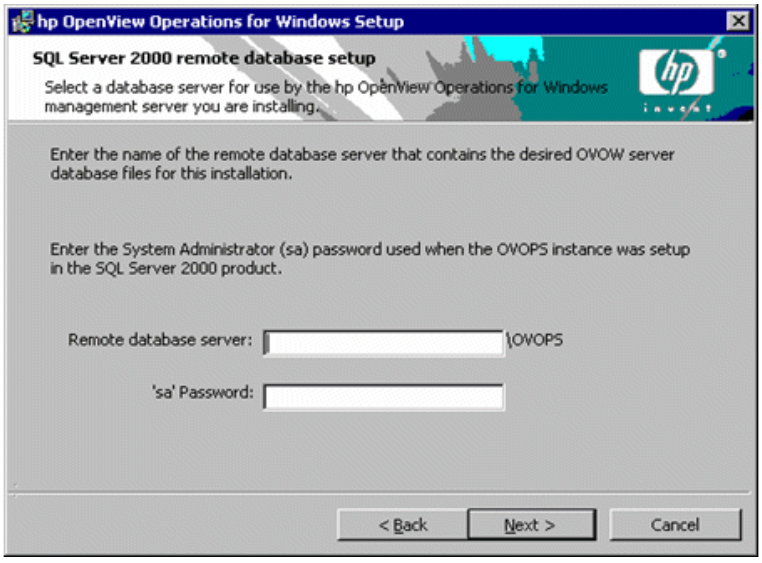
5 In the **Database Server Configuration** screen, you can select either Create Local Database Server Automatically, or Advanced Configuration for MS SQL Server 2000.

a Choose **Create Local Database Server Automatically**, if you are doing a typical installation. Click **Next**, then proceed to Step 6.

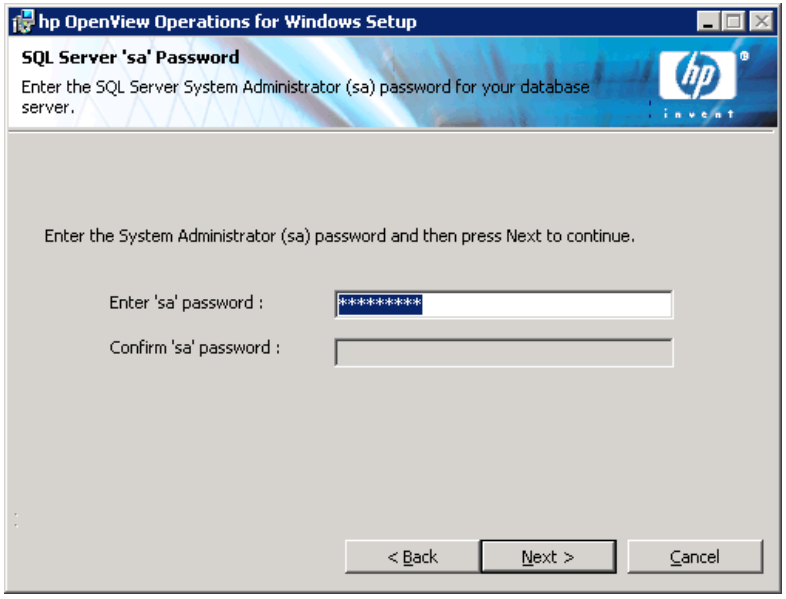


b Choose **Advanced Configuration for MS SQL Server 2000** if you want to use MS SQL 2000 either with or without OVOPS instance.

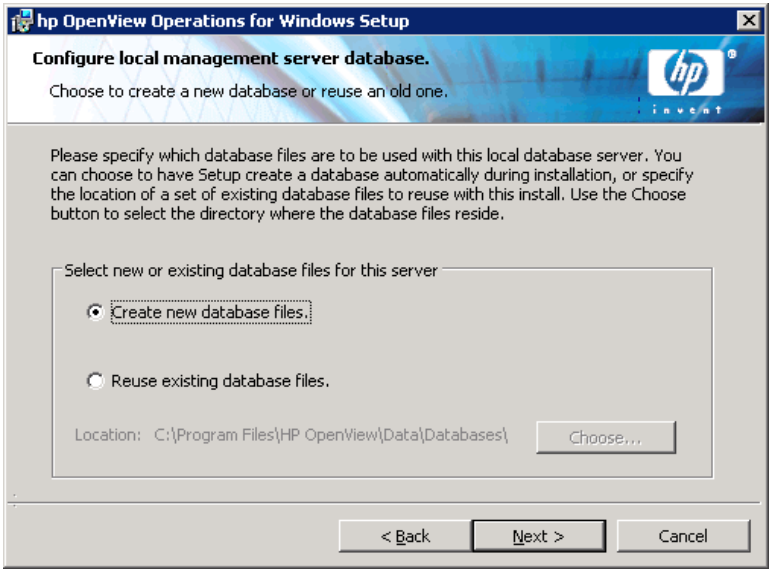
If you do not have OVOPS instance, the system assumes that you want to use a remote database and will take you to the **SQL Server 2000 Remote Database Setup** screen. Enter the Remote database server name and the sa password. Click **Next**. This will take you to the License Agreement screen. (See step 8.)



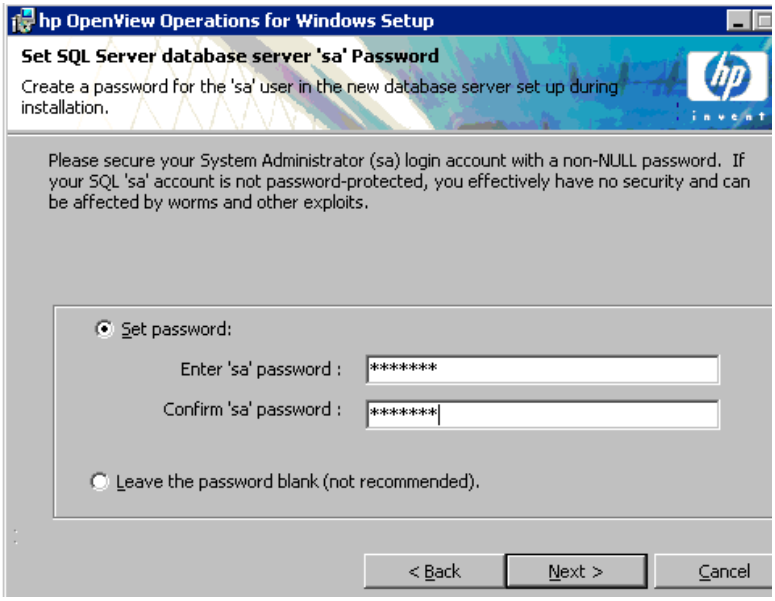
If you have OVOPS instance on the local machine, you will go directly to the **SQL Server SA Password** screen from the **Prerequisite Checks** screen. You will not see the **Database Configuration** screen. Enter and confrm the sa password for the local SQL server. Click **Next**. This will take you to the License Agreement screen (see step 8).


hp OpenView Operations for Windows Setup
SQL Server 'sa' Password
Enter the SQL Server System Administrator (sa) password for your database server.
Enter the System Administrator (sa) password and then press Next to continue.
Enter 'sa' password :
****
Confirm 'sa' password :
< Back
Next >
Cancel

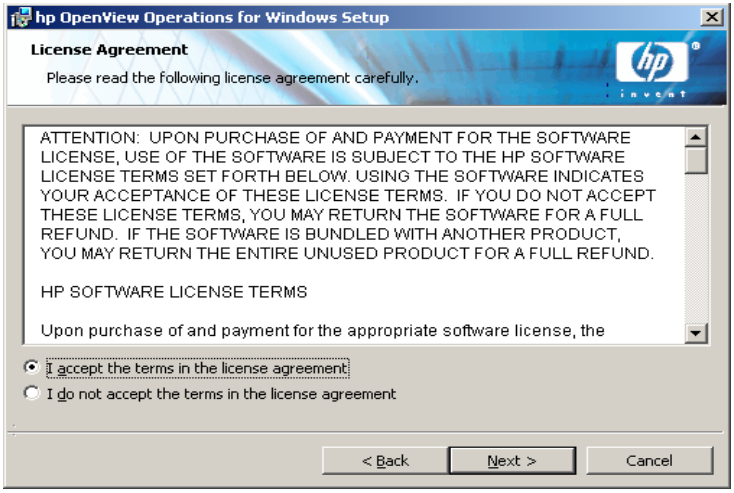
6 In the **Configure Local Management Server Database** screen, select **Create New Database Files** as the files you want to use with the local database server. Then click **Next**.



7 Enter your SQL System Administrator (SA) password. After confirming your password, click **Next** to open the **License Agreement** screen.



8 In the **License Agreement** screen, accept the license agreement and click **Next** to continue with the installation. If you decline, the installation is cancelled.



See details on obtaining a permanent license on page 84.

9 In the **Destination Folders** screen, you can use the default destination directory or select a destination directory where you want to install OVO. The destination location you select here will be used as the default directory for other OpenView products you are installing from this CD and cannot be changed for subsequent installs. The first installed OpenView application dictates the installation directory for OVO and other OpenView products such as Reporter, OVPA, and the like.

The default installation directory is:

```
C:\Program Files\HP OpenView\
```

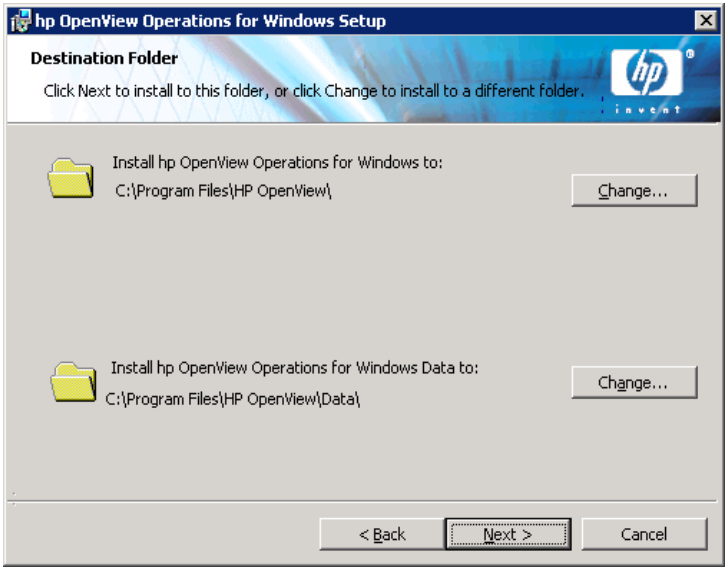
a To install to the default destination directory, click **Next**.

b If you want to install to a destination other than the default directory, click the appropriate **Change** button. The **Change Current Destination Folder** dialog box will appear.

The **Change** buttons in the **Destination Folders** dialog box are only available for the first OV installation (OVO, Reporter, or OVIS). If other Openview products are already installed, the Change buttons are disabled.

c In the **Change Current Destination Folder** screen, specify the directory you wish and click **OK** . If you have insufficient disk space, you see a message here when you click **OK**.

d In the **Destination Folders** screen, click **Next** to proceed.



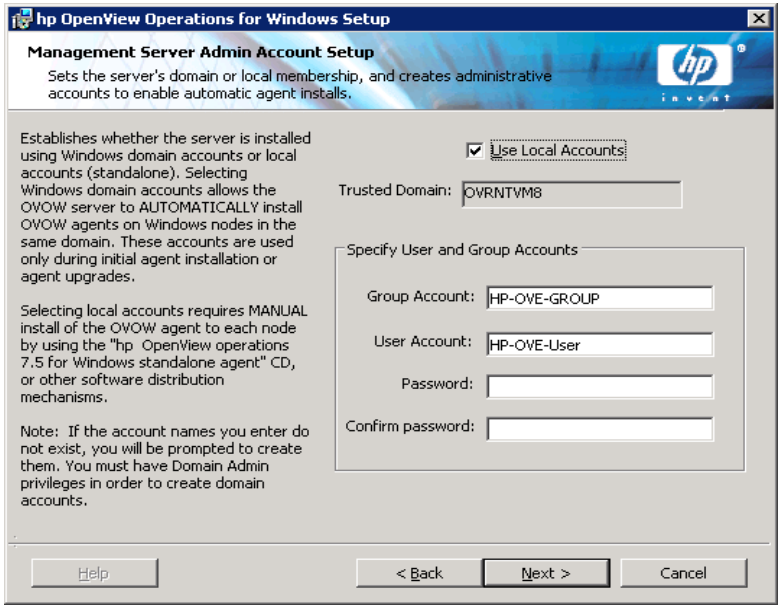
10 In the **Management Server Admin Account Setup** dialog box,

a Check **Use Local Accounts** if you want to install OVO using local (non-domain) accounts; otherwise, leave it blank if you want to use Domain accounts.

b Specify the Group and User Accounts or use the default values.

The HP-OVE-GROUP name that you specify during installation cannot be changed without completely uninstalling the product and then reinstalling it. Carefully read the information in Security Requirements on page 35 before specifying an account name.

c After entering and confirming your password, click **Next**.



Domain installation: This installation assumes the OVO management server to be a member of a Windows domain. This method creates (or uses existing) domain accounts and groups (default HP-OVE-User and HP-OVE-Group).This domain group allows the OVO server to automatically manage a Windows node and install the agent software to this node.

This is only possible if a Windows node is in the same domain as the management server or has a trust relationship in place with the domain of the management server. To add the HP-OVE-Group successfully to a Windows node, the user running the OVO console must have administrative permission on that Windows node (direct or indirect via the Domain Admins group).

Local installation: This installation does not require any Windows domain accounts or groups. The management server can be either a member of a Workgroup (=workgroup) or member of a Windows domain. This installation method has the following limitations:

— Automatic agent software installation of Windows managed nodes is not possible, except for the agent on the management server itself. All remote managed Windows nodes have to be installed using the Windows Manual Agent package.

— Agent functionality packages which are used by some SPI products cannot be auto-deployed and require manual installation on the Windows managed node (please refer to the installation instructions for each SPI).

— Remote MMC consoles are not supported with an OVO installation where the management server is in a workgroup (that is not a member of a domain). In this case, you can use Terminal Services to connect to the OVO server and run the console on the server.

  Remote MMC Consoles are supported for an OVO Management Server using either the domain installation setup, or the setup using local accounts, however the OVO Server system and Remote Console system must be in the same Windows domain, or have an equivalent 2-way domain trust in place.

— If you perform a local account installation on a production machine, you cannot later change this to a domain account.

— For management server to agent communication, events, policies, deployment, drawing graphs, and so on are not affected by the local account installation.

— UNIX managed nodes are not affected by the domain versus local account setup and always require a manual install process.

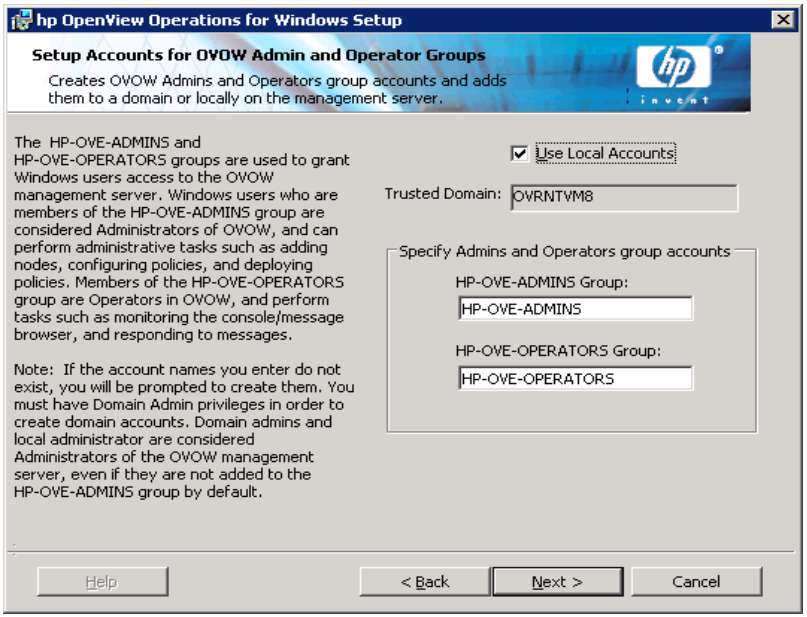
Once established, this account information is used by other products you install from the installation media. (for remote console installation only, this screen does not appear). Enter the security information for the type of install selected as follows.

— The domain to use for the security accounts (needed only for a domain installation)

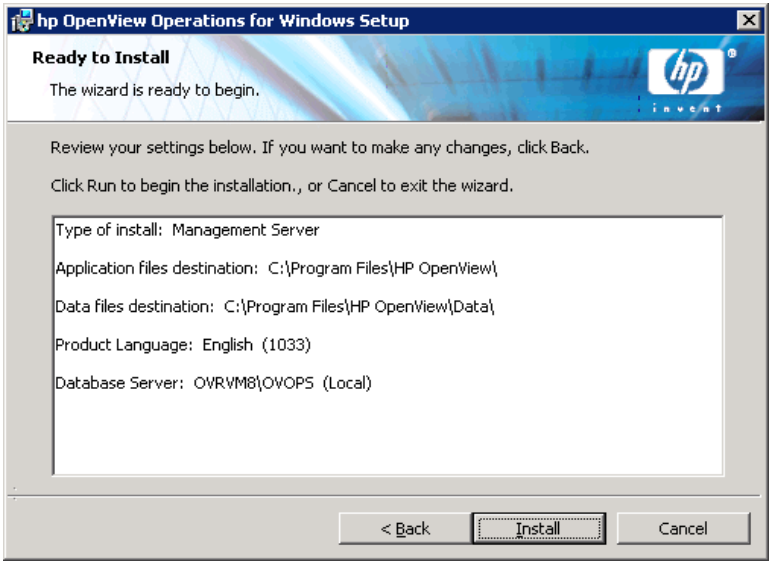
— The group name for the HP-OVE-GROUP account

— The user name and password for the HP-OVE-User account

11 In the **Setup Accounts for OVO Admin and Operator Groups** screen, specify the Admins and Operators Groups, then click **Next**.



12 On the **Ready to Install** screen, click **Install** to begin the installation.



13 You will see various status dialogs as the install program proceeds. Each installation component displays individual status dialogs, such as for example, the licensing component, the reporting component, the graphing component, and the three SPIs that are included with the product.

Depending on the speed of your system and the components selected for installation, this process could take from several minutes to over an hour.

14 The installation is finished when the **Installation Completed** screen appears. Click **Finish** to conclude the installation.

15 You are encouraged to view the basic training tutorial presented at the conclusion of the install program. Simply check the **Launch Tutorial** box in the **Installation Completed** dialog. The tutorial introduces you to OVO features, provides a product overview, and details configuration and deployment steps you need to perform before you can begin working in OVO.

Entering License Information

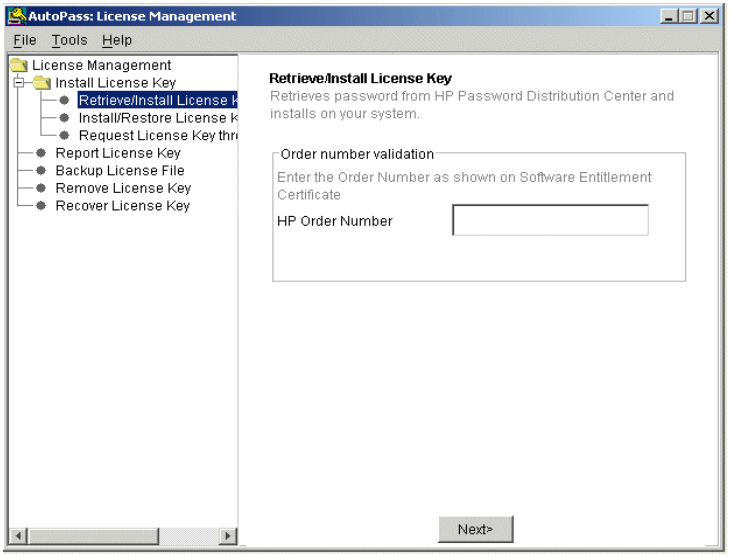
When you start the OVO console, the **License Request** dialog box is displayed.

To obtain your permanent license key, select **Get License** to open the AutoPass licensing program and follow the instructions on the screens.

With the license for the management server you will also obtain a license for the agent being installed on the management server.

With a managed node limited license, you will NOT be able to manage more than the license-specified number of nodes, even if there are additional standard OVO agent licenses being installed. A managed node, limited-management server license can be upgraded with a full management server license at any time. However, in this case, you also need to buy the appropriate amount of licenses for the OVO agents running on all the nodes managed by the OVO for Windows management server and the OV Smart Plug-ins to be used. For OV Smart Plug-ins that were incrementally purchased on top of the managed node limited management server license, no new OV Smart Plug-in license has to be purchased.

For details about the managed node limited license, its extension, and migration possibilities, contact your sales representative or see the customer letter included with your media bundle.



If you prefer, you can postpone licensing by launching the licensing program at a later time, as follows:

1. From the **OVO management server**, select the **Tools** folder from the console tree.
2. Select **Tools** → **OpenView Tools** → **Licensing** to display a list of tools.

3 Select **Obtain License**, which allows you to request permanent license passwords for the management server, agents, or SPIs. Right-click to open the shortcut menu.

4 Select **All Tasks** → **Launch Tool** to open the **Obtain License** dialog box.

5 Select the Management Server product from the list and click **OK**.

Refer to the AutoPass online help for details on using the licensing program. (AutoPass is located in `\Program Files\Common Files\Hewlett-Packard`.)

In the OVO console, under **Tools** → **OpenView** → **Licensing** you can also select the License Report tool, which gives you information on the passwords in use.

See the help topics "License HP OpenView for Windows" and "SPI License Report" for more information under Getting Started → License HP OpenView for Windows, and SPI License Report.

Requesting a Permanent License

To request a permanent license password, you need the following:

- Your HP order number
- IP address of the server
- Your company information

To obtain a license, you must provide the number of the HP Purchase Order number you received from your HP OpenView authorized reseller when you bought the product that you want to license. If you have not yet purchased the product, call 1-877-686-9637 (in the United States and Canada) or visit **www.hp.com** to locate an HP OpenView authorized reseller.

Results of the Installation

After completing the installation of OVO, you can access the following:

- A folder is added to the Start Menu to allow you to open the console: **Start** → **Programs** → **HP OpenView** → **Console**

- OVO documentation (in Adobe Acrobat .pdf format) is available in the subdirectory `%OvInstallDir%\NLS\1033\Manuals` and on the first installation CD under `Documentation\OVO Guides`. See Appendix A, Documentation, for a complete list of available documentation.

Installation Log Files

After installation, several log files are created and placed in the Data directory, the location chosen for data files, under the **log** subdirectory:

```
%OvDataDir%\HPOVInstall
```

Installing and Running OVO in a Highly Secure Windows Environment

Windows 2000 and Windows 2003 feature Security Templates which allow the Windows administrator to implement strict and enforced security rules on individual systems or globally on all systems member of a Windows domain level.

These security templates are available per default on Windows 2000 and Windows 2003 system (folder %SystemRoot%\security\templates) and are accessed via the MMC snap-in "Security Configuration and Analysis." For details on implementing security templates please refer to the Windows documentation.

Highly Secure Settings and Impact on OVO

Several high security templates (for example, the template identified by hisecws.inf and hisecdc.inf) implement a security policy setting that requires OVO to be installed and implemented as described below.

This security policy implements a "Restricted Group" setting for the local administrators group of the system. It does not allow this group to contain any non-administrative user or group. Allowed members are only the local administrator, the Domain groups "Domain Admins" and "Enterprise Admins".

Note that this policy can be implemented independently of the templates listed above, and it can be implemented locally on a system or globally in a domain via a Global Policy Object (GPO). Consult the Windows domain administrator prior to installation of OVO if such a "Restricted Group" setting is implemented.

The requirement of using a local group as the "HP-OVE-Group" implies that all remote Windows managed nodes have to be installed using the Manual Agent Installation method.

Implementing OVO with a "Restricted Group" Setting

Requirements

The OVO server **must** be installed **using the existing local Administrator account for "HP-OVE-User" and the local Administrators for "HP-OVE-Group"**. (The actual group name may vary for different localizations of Windows.)

All OVO Windows Agents must be installed using the Manual Agent installation method (excluding the OVO Agent on the OVO Management server which is automatically installed during the installation of the server)..

Remote consoles are supported (this requires the Remote console systems and the OVO Managements server to be members of the same domain or have an equivalent 2-way domain trust in place.)

The groups HP-OVE-ADMINS and HP-OVE-OPERATORS either as local groups or domain groups are supported.

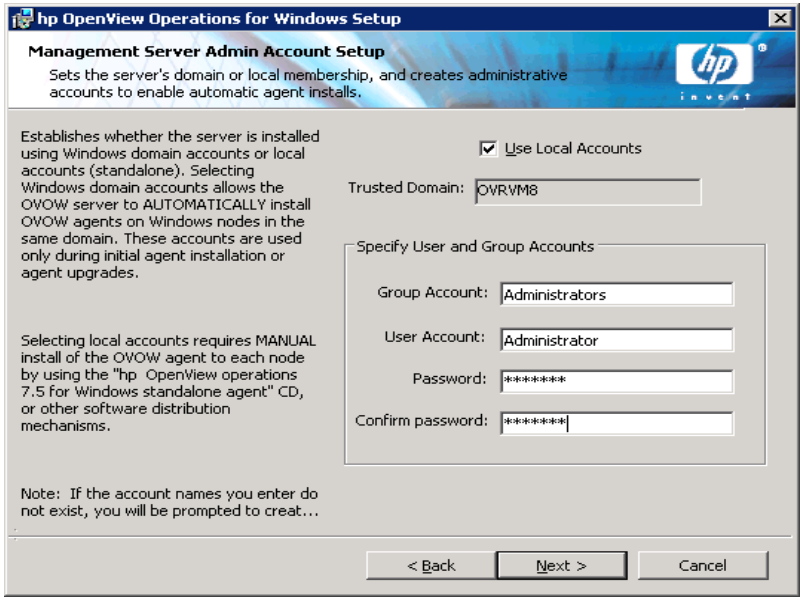
While it is possible to use any Domain admin user and the group "Domain Admins" or "Enterprise Admins" for "HP-OVE-User/HP-OVE-Group" it is not recommended since it would grant the OVO Management server (and any OVO Admin user) administrative access on the Windows domain and all member systems.

High Security settings implement a strict password policy and password expiration policy for all users including the local administrator. Since OVO runs several of its services in the context of the local "Administrator" it is necessary to update the password frequently according to the password expiration period (use the utility **OvChgPass.exe** to update the password).

Be advised that even with the "Restricted Group" setting for the administrators group it is possible to add temporarily another user or group to the local administrators group. Eventually the GPO will however remove the user or group silently again (typical setting is every 15 minutes).

Example: Management Server Admin Account setup Dialog for installing in Highly Secure environment. Note that you must select **Use Local Accounts** and use the existing User Account **Administrator** and group Account **Administrators** (or equivalent on the specific system).

Make sure to use the already defined Group Account and User Account values. Do not create an additional user or group.



5 Cluster Installation for OVO

This chapter provides instructions to install OVO in a clustered environment. This includes:

- A description of different cluster setup options
- The requirements for setting up clusters as well as unsupported configurations
- How to prepare prior to installing OVO
- Installing OVO and verifying the installation

This section assumes you are an experienced Windows administrator and that you understand Windows cluster concepts and terminology.

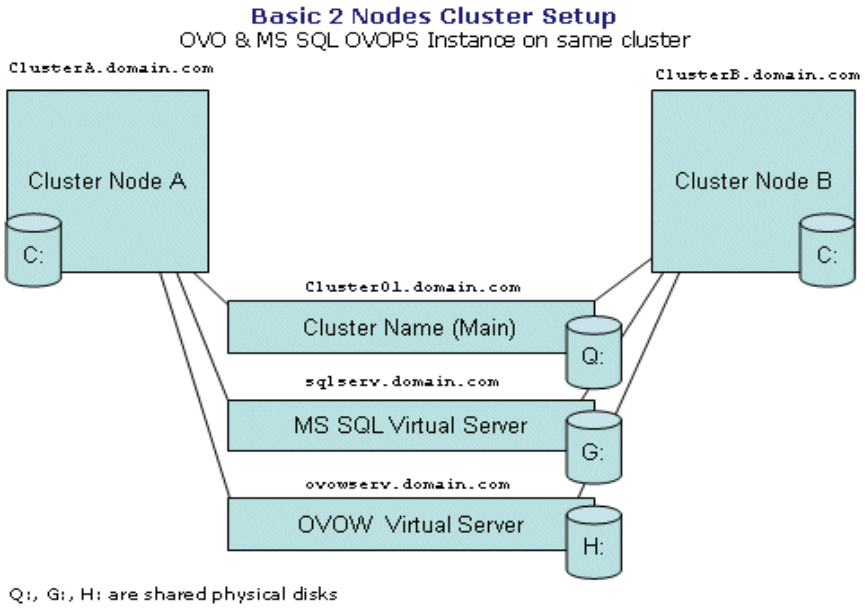
If you have a version of HP OpenView Operations 7.21 or 7.5 already installed on a standalone non-clustered system and need to upgrade to a high-available cluster installation, see the OVO Upgrade Guide, HP OpenView Guide for Upgrading to OpenView Operations for Windows Version 7.5 (OVOWUpgrade.pdf) on the OVO Start-up CD. The Upgrade Guide provides instructions on how to migrate your existing single system OVO installation to a high-available clustered OVO installation.

Your Media Kit is the same as for standard installation.

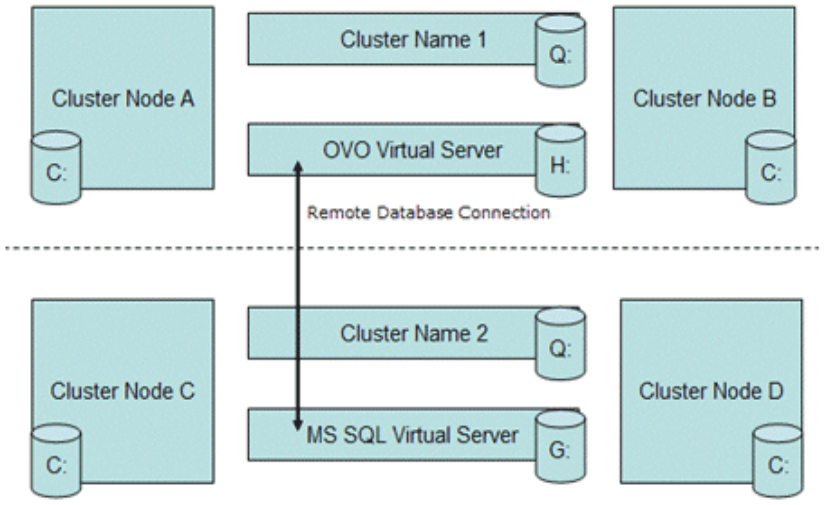
Cluster Setup Overview

The following 3 graphics show 3 different options for OVO cluster configurations.

- The first graphic depicts all 3 virtual servers operating within the same cluster.
- The second graphic shows OVO virtual server running in one cluster and MS SQL virtual server running in a separate cluster. Both are connected remotely.
- The third graphic illustrates MS SQL installed in a non-clustered system with OVO installed in a cluster. This option is not recommended since MS SQL can cause a single point of failure.

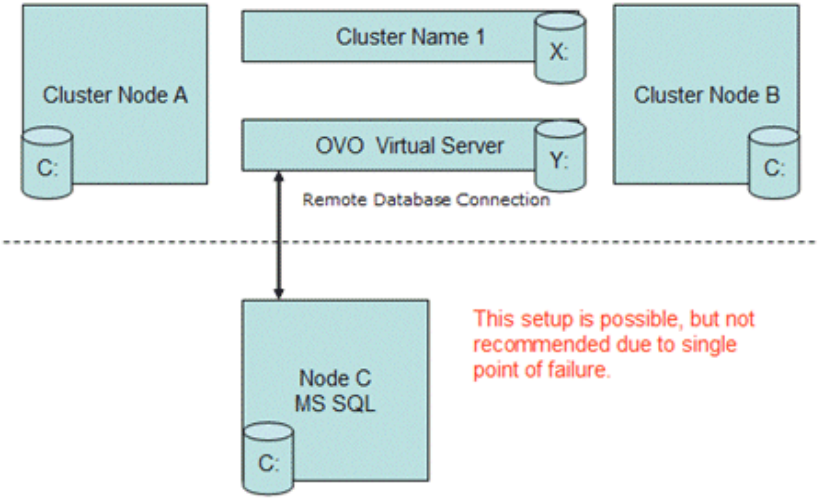


OVO Cluster with MS SQL in Remote Cluster



Q:, G:, H: are shared physical disks

OVO Cluster with MS SQL OVOPS Instance on Standalone System



The Configuration Data shows the data needed for each example configuration. Make sure to gather your own values, as illustrated below, to perform the installation.

Table 7 Configuration Data

Terminology	Name	FQDN	IP-Address	Local Disks
Cluster Virtual Server (Main)	Cluster01	Cluster01.domain.com	15.8.153.30	Q: (Quorum)
MS SQL Virtual Server	sqlserv	sqlserv.domain.com	15.8.153.31	G: (SQL Data)
OVO Virtual Server	ovowserv	ovowserv.domain.com	15.8.153.32	H: (OVO Data)
MS SQL Database Instance	OVOPS	Not applicable	Not applicable	Not applicable

Installing the Management Server and Console

OVO 7.5 is the first release of OVO to support installation and operation of the Management Server in a failover configuration running a Microsoft Windows 2003 Cluster.

Since the management server availability is depending on its data repository (Microsoft SQL Server 2000), it is strongly recommended (but not required) to install MS SQL Server 2000 in a Windows cluster as well. Typically the MS SQL Server database instance is located in the same cluster as the OVO Management Server.

To simplify the installation instructions, it is assumed that OVO and MS SQL Server run on the same Windows cluster as independent resource groups. It is possible for the MS SQL Server to run on a different cluster, or on a standalone non-clustered system. The later option is supported, but not recommended as it introduces a single point of failure to the management server setup

When installing the OVO management server on a cluster node, the new managed node representing the cluster node will not be visible in any OVO consoles that are connected to that cluster's management server. The console must be shutdown and restarted in order to see the cluster node.

To install OVO management server, the installing user must have domain administrative rights.

OVO does not support installing the management server or console on a domain controller. See Unsupported Configurations on page 34 for other scenarios that are not supported.

Prior to Installation

- Ensure that all system requirements are met and review the Unsupported Configurations on page 98.
- Review the Security Requirements on page 35 of this manual..

License Information

OVO comes with a 60-day trial license that allows you to use the product for 60 days after you install it. When you first start the OVO console you are prompted to request a permanent license password. A permanent password can be obtained at this time or deferred. Upon reaching the 61st day, the product is disabled until a permanent license is obtained. See Entering License Information on page 84.

Cluster Requirements

- Minimum two node hardware cluster with attached shared storage and Windows 2003 Enterprise or Datacenter Edition as operating system.
- MS SQL Server 2000 (Enterprise Edition) SP3 or higher installed and running a database instance called OVOPS. Configured to allow mixed mode authentication.
- A dedicated resource group for OVO. The name of the resource group may only contain ASCII characters. For details, see release notes entry QXCR1000125936.
- Microsoft Cluster Server (MSCS) as cluster software with the following resources available:
  - At least three dedicated shared disks:
    - Cluster quorum
    - MS SQL Server databases storage
    - OVO data storage

      The cluster quorum is optional if the Majority Node Set Quorum is used instead of a Quorum Disk. For details about the differences, see the MS Cluster online help topic on Windows 2003 Server Enterprise Edition "Choosing a cluster model".
  - At least five dedicated static IP addresses, configured in DNS (FQDN) including name and reverse lookup entries:
    - Each cluster node stationary name and IP address (two minimum)
    - One cluster's virtual server name and IP address
    - MS SQL Server virtual server name and IP address
    - OVO virtual server name and IP address

Unsupported Configurations

- MS SQL Server and OVO management server installed in the same cluster resource group using the same shared storage.
- OVO management server installed in the same cluster resource group as the Quorum disk.
- A cluster running Windows 2000 Advanced or Datacenter server.
- MSDE Microsoft SQL Server 2000 Desktop Engine as data repository.
- Any database instance name different from OVOPS.
- Any other cluster software as Microsoft Cluster Server.
- In-place upgrade of an existing OVO non-cluster installation to a clustered installation.
- Multiple single-system OVO installations in the same cluster.
- Multiple instances of one OVO management server in the cluster using load-balancing.
- Any OpenView products already installed on the cluster prior to installing OVO.

Preparing for the Installation of OVO

Prior to installing OVO on the management server, you need to ensure that MSCS is installed and working correctly and meeting all the requirements.

For information about how to install Windows 2003 Cluster Server, see the *Guide to Creating and Configuring a Server Cluster under Windows Server 2003* at **http://www.microsoft.com/technet/prodtechnol/windowsserver2003/technologies/clustering/confclus.mspx**

An MS SQL Server database instance called OVOPS is setup and working.

For information about how to install a named instance of SQL Server 2000 virtual server on a Windows 2003-based cluster, go to **http://support.microsoft.com/default.aspx?scid=kb;en-us;815431**

Follow the steps below as described.

Task 1: Verify Cluster

1. Verify that the cluster is operational – move the cluster resource group containing the Quorum disk to all configured cluster nodes. Make sure that the designated shared disk for MS SQL Server and OVO are visible from each cluster node and have the same drive letter assigned (My Computer → Manage →Disk Management)
2. Verify that you have one FQDN and IP addresses for MS SQL (example sqlserv.domain.com) and one FQDN and IP address for OVO Server (example ovowserv.domain.com) available. Make sure that the name resolution is available for both names and IP addresses.

   If your environment uses integrated Active Directory/DNS setup, the virtual server names and IP addresses are not resolvable until the virtual servers are active.

Task 2: Create Cluster Resources and Assign Shared Disks

1. Designate a cluster resource group containing a shared disk for the MS SQL Server database storage. These groups are typically created by the MS Cluster Wizard for all shared disks discovered. Otherwise the group needs to be created in the MS Cluster Administrator manually. Name or rename the group to, for example “SQL Group”

2 Designate another cluster resource group and shared disk for the OVO data storage. Call this group for example “OVOW Group”.

Do not change the name of the cluster resource group after OVO is installed on the first cluster.

3 Make sure that all groups can be successfully moved to all designated cluster nodes and that the shared disks are accessible (read- and writeable)

Task 3: Install MS SQL Server 2000 Enterprise Edition

To install MS SQL 2000 on Windows 2003, an alias needs to be created (for example SQLSERV\OVOPS), assuming the `sqlserv.domain.com` as the FQDN for the SQL Virtual Server. Before starting the installation, perform the steps as described below.

The following description is taken from the Microsoft Knowledge-base document *PRB: Installation of a named instance of SQL Server 2000 virtual server on a Windows 2003-based cluster fails*, which can be found at **http://support.microsoft.com/default.aspx?scid=kb;en-us;815431**

Minor HP customizations are in-between parentheses.

1 From the node where you intend to run setup, create a server alias for the client connection:

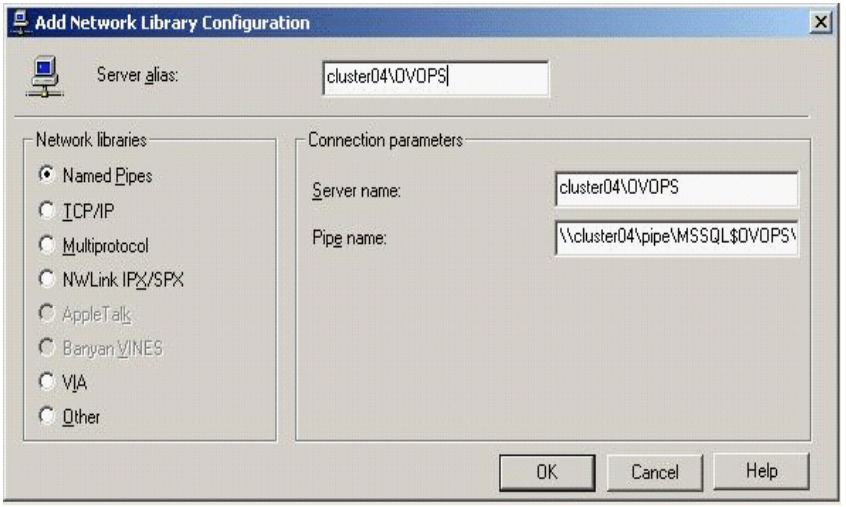
a Run **Cliconfg.exe** on the cluster node where you will run Setup.

— If Cliconfg.exe is not installed on your computer, install it by running **Sqlredis.exe** from the MS SQL Server 2000 installation files. To do so, type the following information at a command prompt:
`\x86\Other\sqlredis.exe /q:a /C:"setupre.exe WARN=1 -s -SMS`

— You may have to restart your computer if Cliconfg.exe is not immediately available.

b In the **SQL Server Client Network Utility** dialog box, click the **Alias** tab.

c Click **Add** to open the **Add Network Library Configuration** dialog box.



d Select the **Named Pipes** check box.

e Type the alias name in the Server alias box. The format of the alias is (MSSQL)VIRTUALSERVERNAME\(MSSQL)INSTANCENAME, for example: SQLSERV\OVOPS

f Type the (MSSQL) virtual server instance name in the Server name box. For example: SQLSERV\OVOPS

g Verify the name in the Pipe name box. By, default, the value in the Pipe name box is: \\(MSSQL)VIRTUALSERVERNAME\pipe\MSSQL$instancename\sql\query

2 Run MS SQL Server 2000 Setup.

During the installation of MS SQL Server

- You must create an **instance named OVOPS**
- You must select **Mixed Mode Authentication**
- Assign and remember the password of the System Administrator (sa) user – this password is required during the installation of OVO later on

3 For the (MSSQL)virtual server name, use the same virtual server name (for example: SQLSERV\) and instance name (for example: SQLSERV\OVOPS) that you used in steps **e** and **f**.

4 Run MS SQL Server 2000 SP3 (or higher) Setup.

5 Remove the named pipes alias that you created in step 1.

Task 4: Configure SQL Instance OVOPS

This step is the same procedure as for an OVO installation using a remote MS SQL Server installation (non-clustered). On the OVO Start-up CD, access the folder **Remote DB Creation** (Remote Database Setup) and launch Setup.exe. See OVO Remote Database Setup Tool on page 53.

Connect to the MSSQL virtual server and enter the System Administrator (sa) password as defined in step 2.

Installing OVO

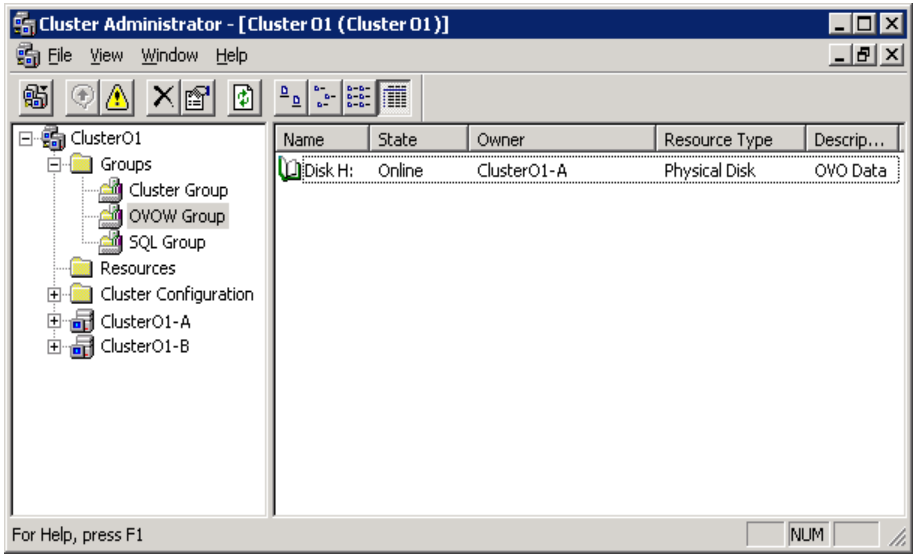
For a high-availability OVO installation to work, it needs to be installed on all cluster nodes which are designated to run OVO. The installation of the first cluster node differs from the installation of subsequent nodes.

Do not start the OVO installation on different nodes in the same cluster in parallel. Install one node first and after the installation finished successfully start it on the next node. Repeat until all designated nodes are installed.

You can install other products (such as SPIs or add-ons) as available on the installation media. However, OVO must be installed first or already be on the system in order to install the SPIs or add-ons.

Installing OVO on the First Cluster Node

1. Select a cluster node and designate this system as the first cluster node to be installed. Make a note of this node because for uninstallation this first node needs to be uninstalled last.
2. Check if the Shared disk designated for the OVOW management server is available and accessible to the current system. If not, move the group to the current node using the **Microsoft Cluster Administrator**.

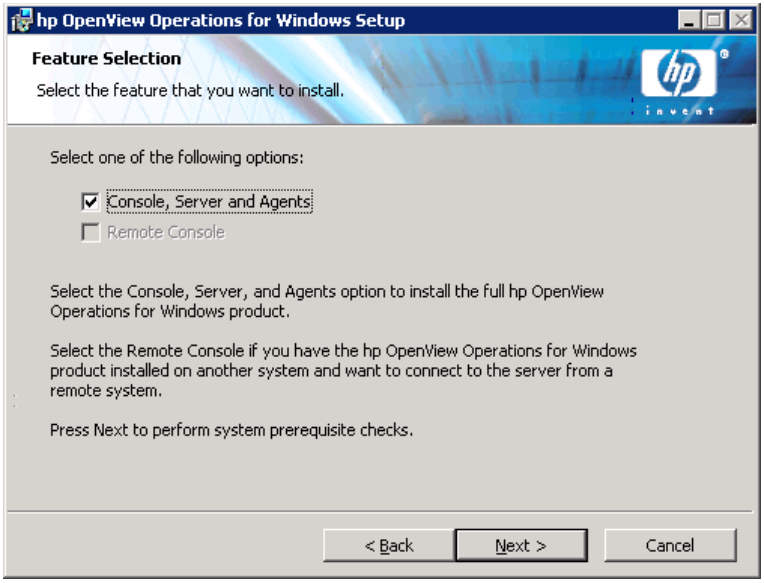


This image shows the OVO Cluster Resource Group prior to installing OVO. The shared disk is online and owned by the node which is designated to be the first cluster node to be installed.

3 Insert the OV Operations 7.5 for Windows disk into the CD drive of the system. On the **Welcome** screen click **Next** to open the **Feature Selection** screen.

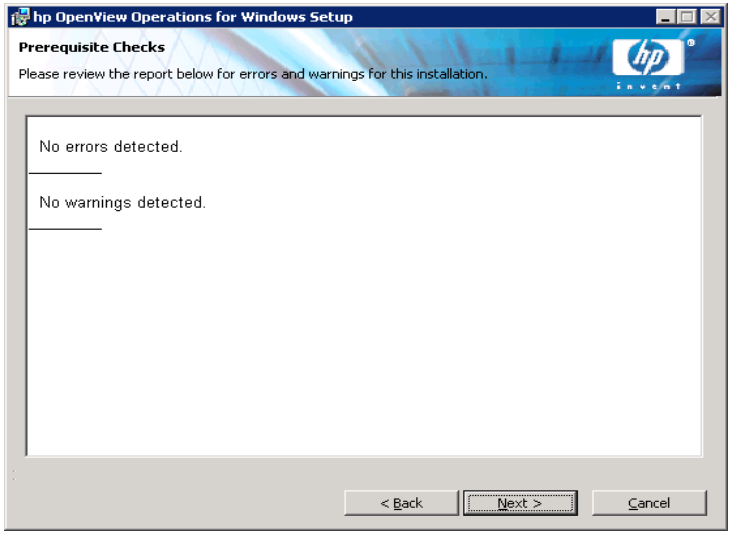
- If `Autorun` is enabled, the installation will start automatically.
- If `Autorun` is disabled, run **autorun.vbs** from the root of the installation media

4 Select to install **Console, Server and Agents 7.5** in the **Feature Selection** screen. Then, click **Next** to open the **Prerequisite Checks** screen. If your DNS primary suffix is not set, you will see a warning message.



5 The **Prerequisite Checks** screen displays the results of requirement checks performed on the products you selected for installation. All errors must be resolved before installation can continue.

Refer to Appendix B, System Requirements Checking for a list of errors/ warnings that would prevent OVO from installing correctly.

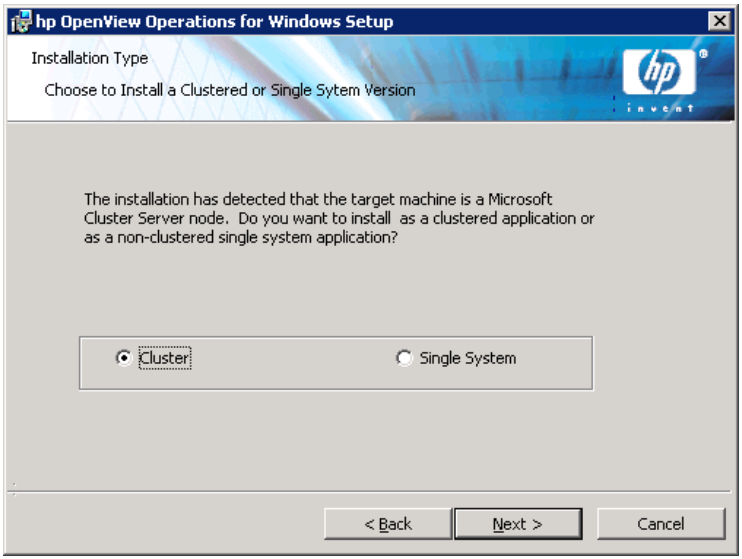


6 Click **Next** to open the **Installation Type** dialog box, where you can choose between a single system and a cluster installation. Choose **Cluster** for a high-availability OVO installation, then click **Next** to open the **Virtual Server Information** dialog.

.

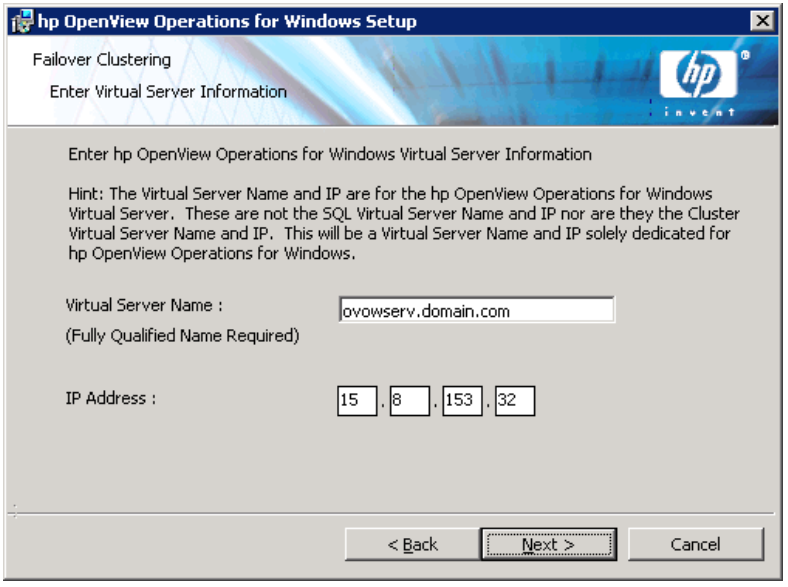
Although you are able to do a single system installation on a cluster, we advise against this. Doing so will not increase the availability of the OVO installation from a non-clustered single system installation.

Disable any firewalls at this time. Any running firewall should be temporarily disabled during installation. The java package we install fails if any firewall is enabled.

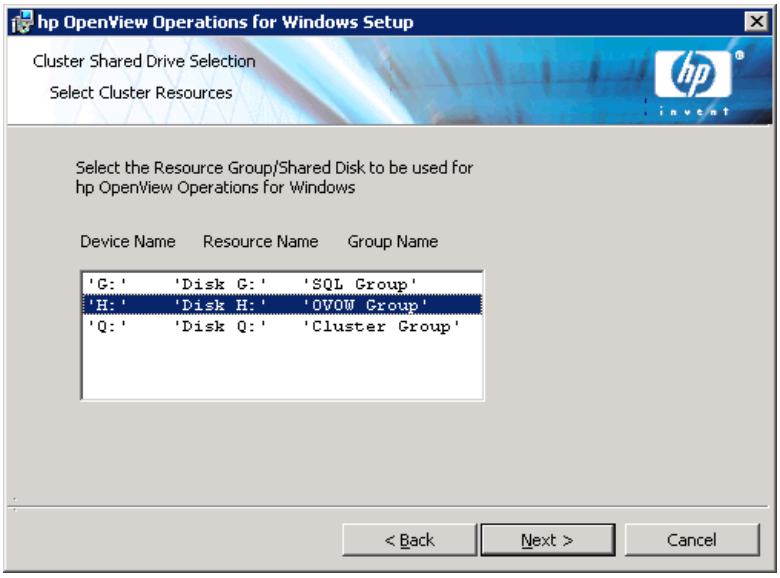


7 In the Virtual Server Installation screen, enter the OVO Virtual Server Name and the OVO Virtual IP Address.

- The OVO Virtual Server Name has to be entered as fully qualified domain name (FQDN).
- The OVO Virtual IP Address has to be from the same network the cluster is using. However, it must not be an IP currently used.
- The installation will check the IP and will display an error message if the IP is not from the same network. The installation takes this information and will create cluster resources for them. This will fail if the OVO virtual server name and the OVO Virtual IP address are already setup as cluster resources. You will then be prompted to enter a different OVO virtual server name and the OVO Virtual IP address.



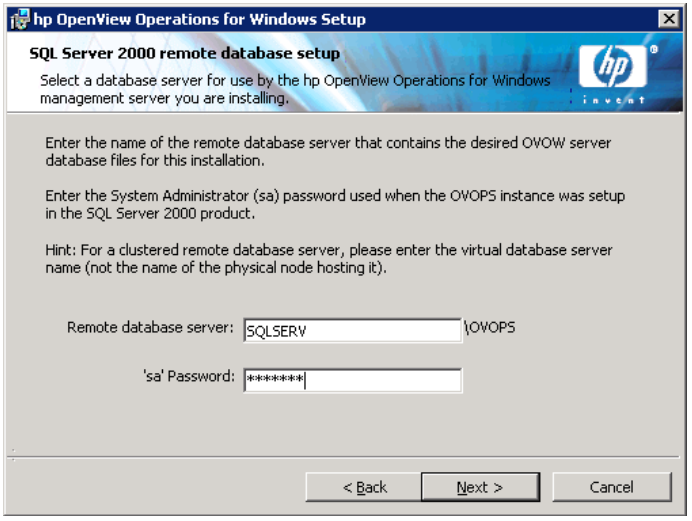
8 Click **Next** to open the **Cluster Shared Drive Selection** dialog box, where you can select the shared disk/cluster resource group that will host the OVO shared data files.



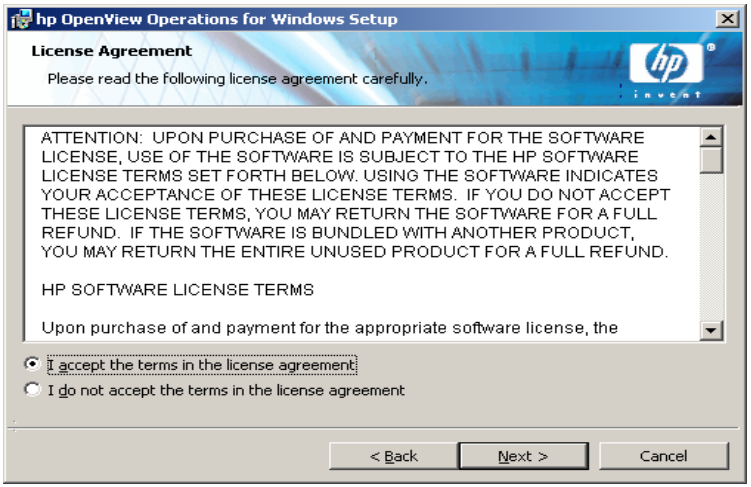
- Selecting the cluster resource group or a resource group already used by another application (e.g. MS SQL Server or Cluster Quorum) is not supported.

- Selecting a resource group that contains non-ASCII characters is not supported. For details see release notes entry QXCR1000125936.

9 Click **Next** to open the **SQL Server Remote Database Setup** dialog. Enter the name of the MS SQL Virtual Server. Enter the short name of the MS SQL Server, for example **SQLSERV**. Do not enter SQLSERV\OVOPS, or sqlserv.domain.com. Also enter the System Administrator **(sa) password**.



10 Click **Next** to open the **License Agreement** screen. Accept the license agreement and click **Next** to continue with the installation. If you decline, the installation is cancelled.



See Entering License Information on page 84 for details on obtaining a permanent license.

11 In the **Destination Folders** screen you can use the default destination directory or select a destination directory where you want to install OVO. The destination location you select here will be used as the default directory for other OpenView products you are installing from this CD and cannot be changed for subsequent installs. The first installed OpenView application dictates the installation directory for OVO and other OpenView products such as Reporter, and OVPA.

- The default installation directory is:

  `C:\Program Files\HP OpenView\`

- The default data directory is:

  `C:\Program Files\HP OpenView\Data\`

- The default shared directory is:

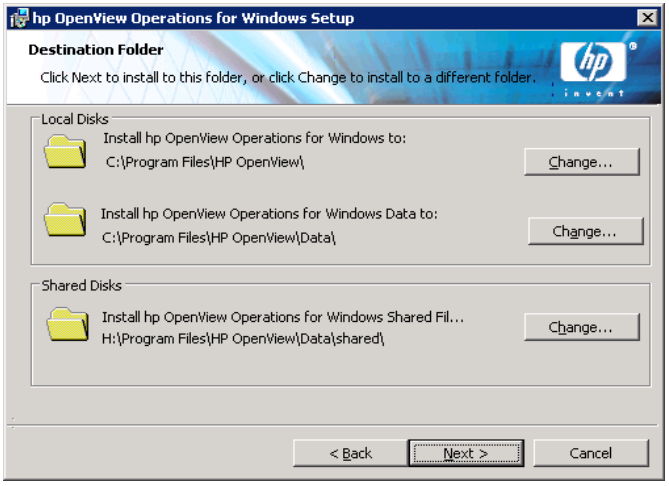
  `<shared drive>\Program Files\HP OpenView\Data\shared\`
  where <shared drive> is the logical drive assigned to previously in the **Cluster Shared Drive Selection** dialog.

If you want to install to a destination other than the default directory, click the appropriate **Change** button and the **Change Current Destination Folder** dialog box will be displayed.

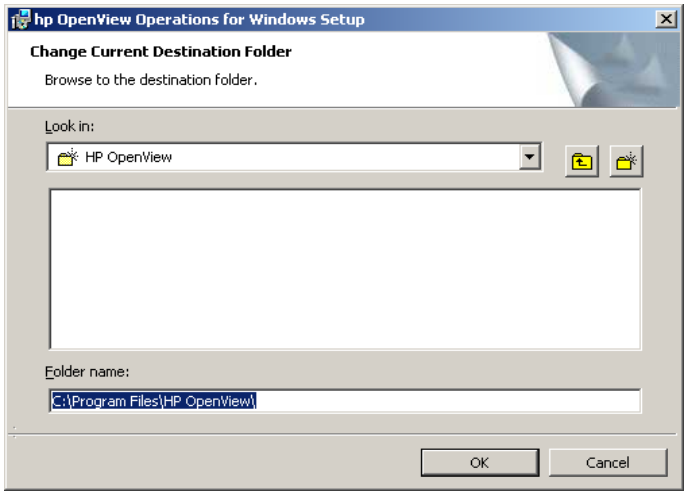
Neither the installation nor the data directory should point to a cluster shared disk.

To change the drive of the shared directory you have to go back to step 8, page 109.

To install to the default destination directory, click **Next**.



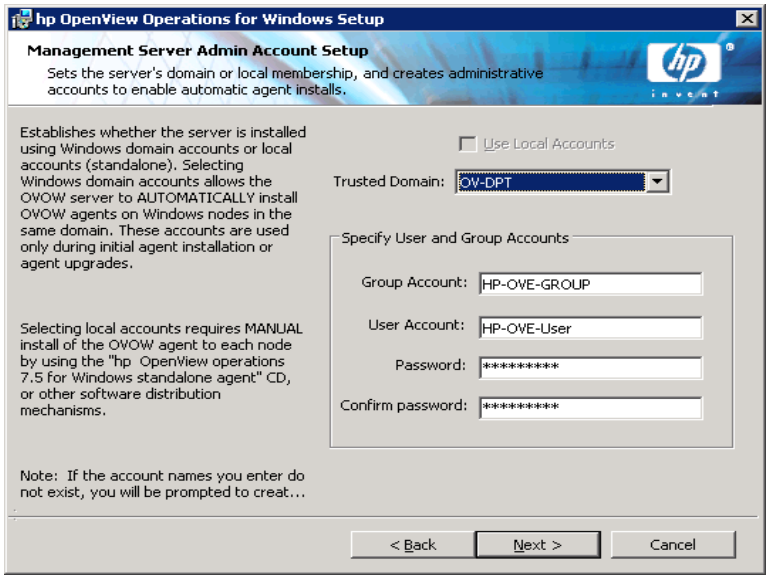
The **Change Current Destination Folder** screen only appears for the first OV installation (or OpenView product installation). If you have insufficient disk space, you will see a message when you click OK. When you close the message dialog, you return to the install menu.



To change the drive of the shared directory you have to go back to step 8, page 109.

12 In the **Management Server Admin Account Setup** dialog box, specify a domain account name and password used to run part of the OVO management server.

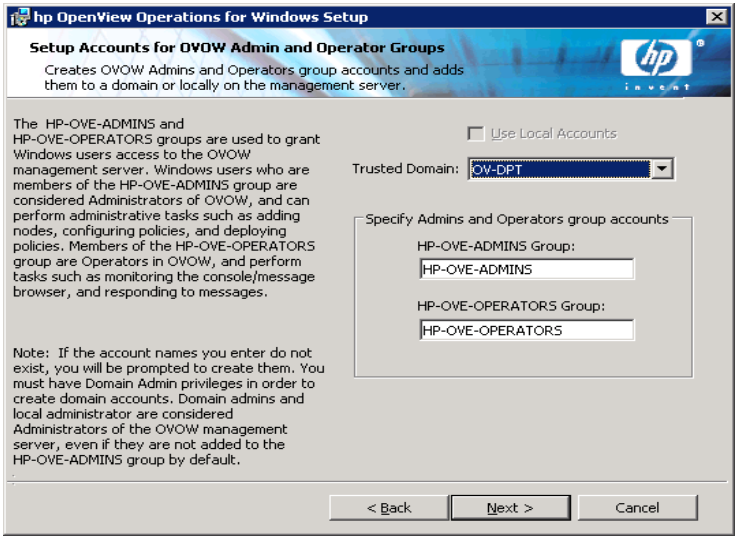
The HP-OVE-GROUP name that you specify during installation cannot be changed without completely uninstalling the product and then reinstalling it. Carefully read the information about security in the online help and see Security Requirements on page 35, before specifying an account name.



The OVO cluster installation requires HP-OVE-User and HP-OVE-Group as well as the HP-OVE-ADMINS and HP-OVE-OPERATORS accounts to be domain accounts.

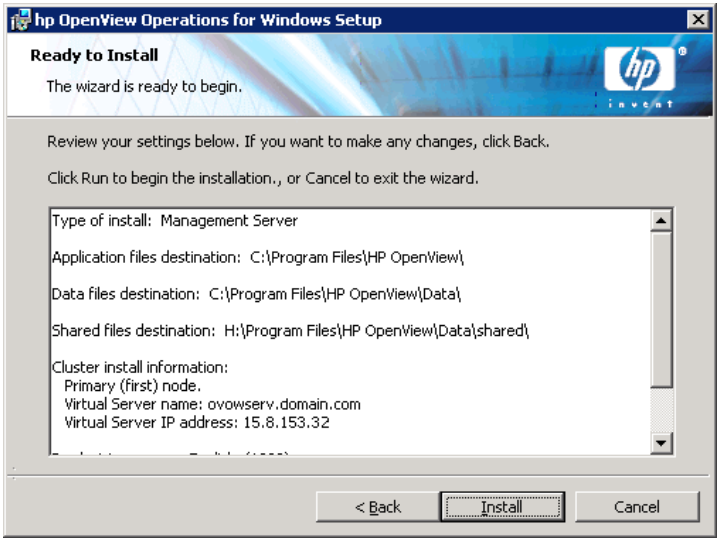
Click **OK** to continue with the installation.

13 In the **Setup Accounts for OVOW Admin and Operator Groups** dialog, specify the domain user groups used to identify OVO operators and administrators.



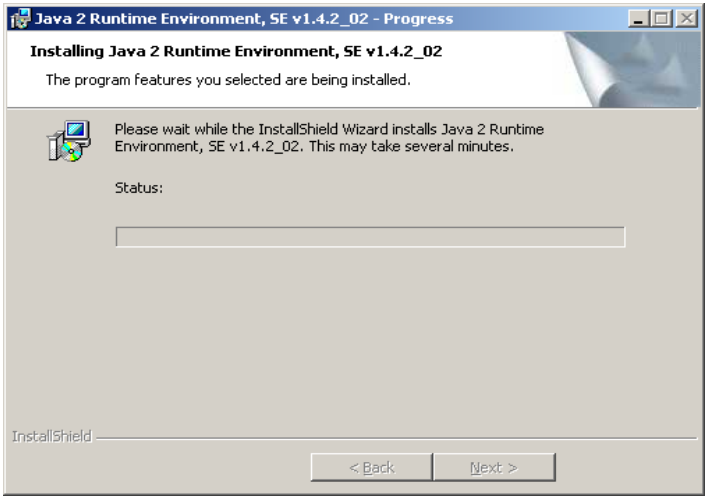
Click **Next** to go to the **Ready to Install** screen.

14 Review the installation setting from the previous dialogs and click **Install** to begin the installation.

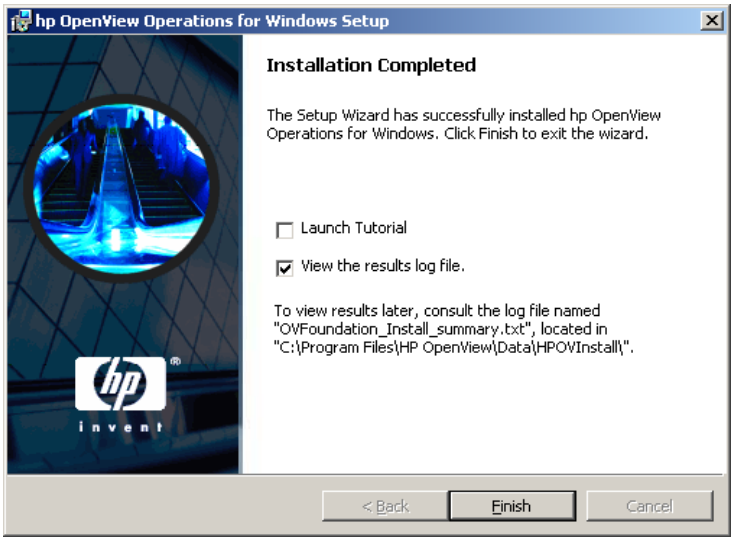


15 You will see various status dialogs, like the example below, as the installation proceeds. Each installation component displays individual status dialogs, such as for example, the licensing component, the reporting component, the graphing component, and the three SPIs that are included with the product.

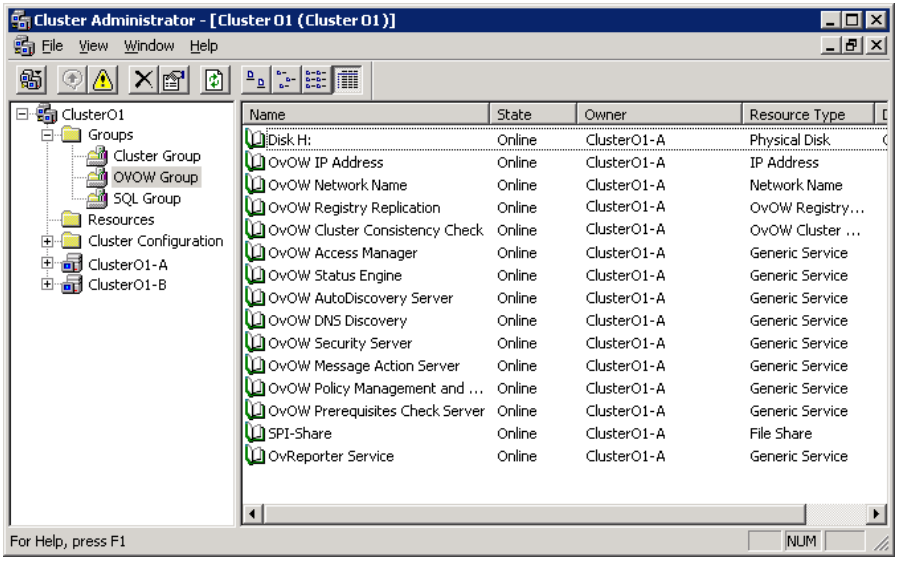
Depending on the speed of your system and the components selected for installation, this process could take from several minutes to over an hour.



16 The installation is finished when the **Installation Completed** screen appears. Click **Finish** to conclude the installation.



17 After finishing the installation of OVO on the first node, several new cluster resources will be found in the chosen OVO Cluster Resource Group.



18 You are encouraged to view the basic training tutorial presented at the conclusion of the install program. Simply check the **Launch Tutorial** box in the **Installation Completed** dialog. The tutorial introduces you to OVO features, provides a product overview, and details configuration and deployment steps you need to perform before you can begin working in OVO.

Installing OVO on Subsequent Cluster Nodes

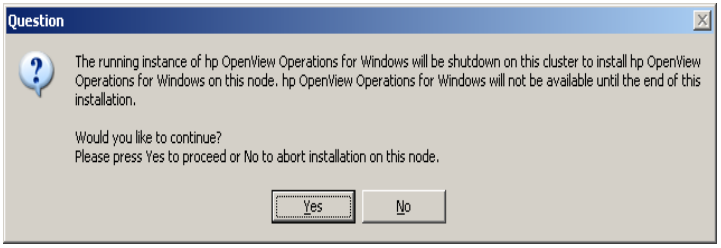
Do not run OVO installations on multiple nodes concurrently. Finish running an OVO installation before starting it on a new node.

The OVO management server functionality will be unavailable during the installation of a subsequent node and will therefore not be available to administrators and operators. Do not attempt to bring the management server online during the installation or to move the cluster resource group used by OVO.

To install OVO on a subsequent cluster node, the first installed cluster node needs to be running and be accessible from the subsequent node.

- If `Autorun` is enabled, the installation will start automatically.
- If `Autorun` is disabled, run **autorun.vbs** from the root of the installation media.

1 Insert the *OV Operations 7.5 for Windows* disk into the CD drive of the system. The following question will popup. To install OVO on a subsequent node, you have to click **Yes**.

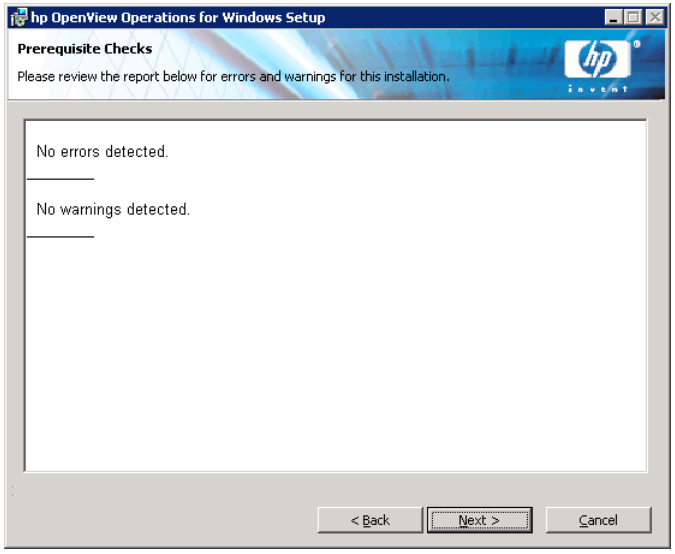


After pressing **Yes**, the installation will shutdown OVO on the active node in this cluster and move the resources to the node to be installed. This will give the installer enough information to continue the installation without asking for the same information again.

2 After OVO has been moved to the current node, you will see the HP OpenView Operations **Welcome** screen. Click **Next** in the Welcome screen to perform system requirements checks.

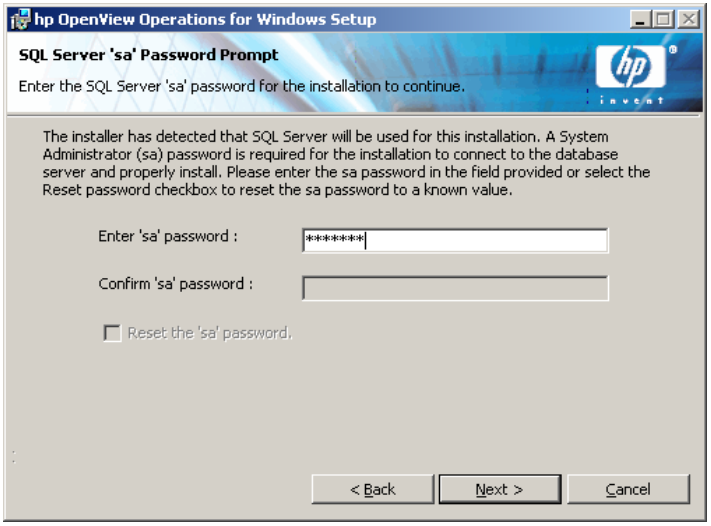
3 The **Prerequisite Checks** screen displays the results of requirement checks performed on the products you selected for installation. All errors must be resolved before installation can continue.

Refer to Appendix B, System Requirements Checking for a list of errors/ warnings that would prevent OVO from installing correctly.



Click **Next** to open the **SQL Server 'sa' Password Prompt** dialog box.

4 In the **SQL Server 'sa' Password Prompt** dialog, you have to supply the System Administrator (SA) password of the MS SQL Server instance you used for installing the first cluster node.

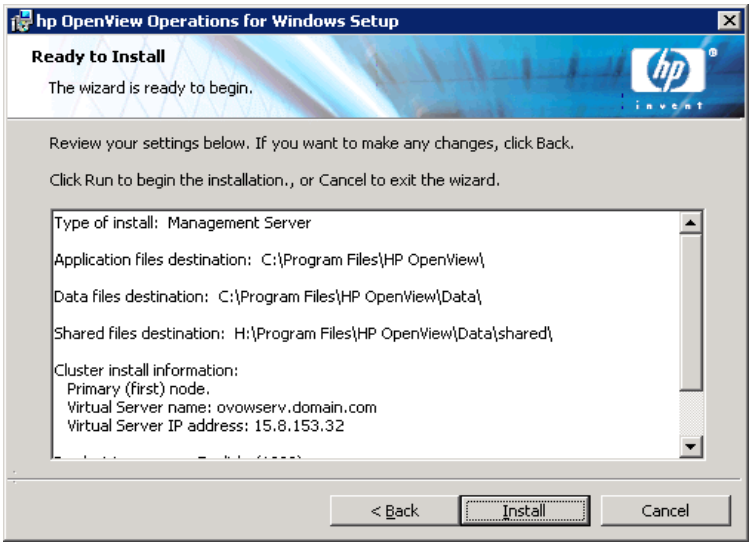


5 Click **Next** to open the **License Agreement** screen. Accept the license agreement. If you decline, the installation is cancelled.

See Entering License Information on page 84 for details on obtaining a permanent license. There is only one license needed for the installation of OVO in a cluster. If you have already obtained and installed a permanent license, you don't need to do this again.

Click **Next** to go to the **Ready to Install** screen.

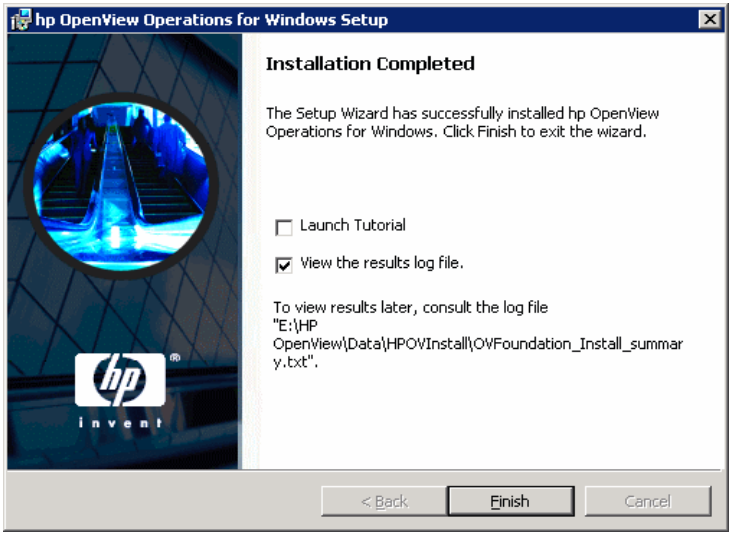
6 Review the installation setting from the previous dialogs and click **Install** to begin the installation.



7 You will see various status dialogs as the install program proceeds. Each installation component displays individual status dialogs, such as for example, the licensing component, the reporting component, the graphing component, and the three SPIs that are included with the product.

Depending on the speed of your system and the components selected for installation, this process could take from several minutes to over an hour.

8 The installation is finished when the **Installation Completed** screen appears. Click **Finish** to conclude the installation.



At the end of the installation the OVOW Resource Group is now active on the currently installed node. If this node was the last cluster node where OVO is installed, you can now move the OVO Virtual Server to the preferred cluster node.

Results of the Installation

After completing the installation of OVO, you can access the following:

- A folder added to the Start Menu to allow you to open the console: **Start → Programs → HP OpenView → Console**
- OVO documentation (in Adobe Acrobat .pdf format) is available in the subdirectory `%OvInstallDir%\NLS\1033\Manuals` and on the first installation CD under `Documentation\OVO Guides`. See Appendix A, Documentation, for a complete list of available documentation.

Installation Log Files

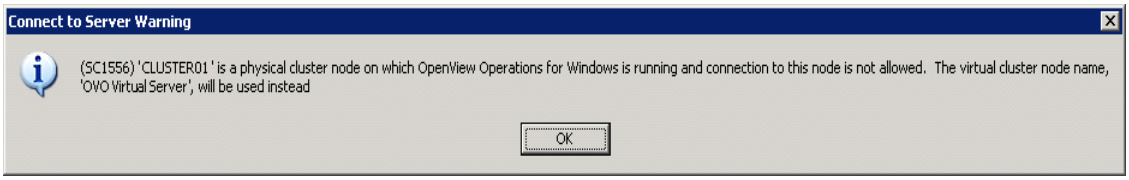
After installation, several log files are created and placed in the Data directory, the location chosen for data files, under the **log** subdirectory:

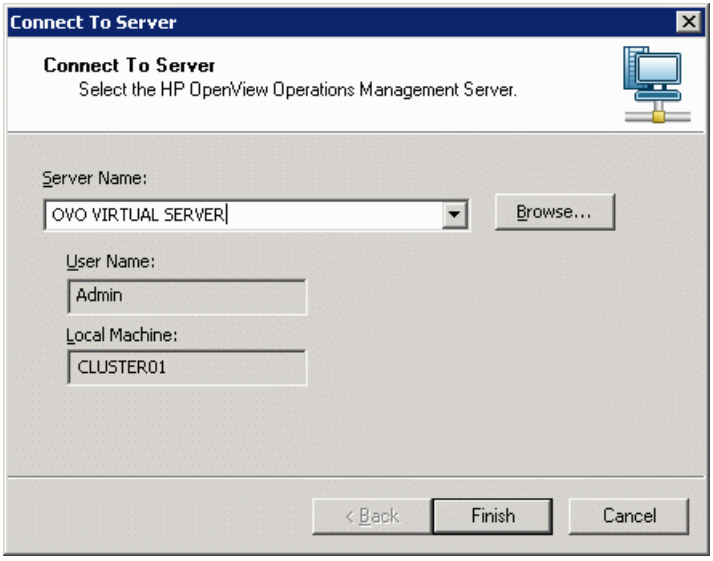
```
%OvDataDir%\HPOVInstall
```

Verifying OVO Cluster Installation

Follow the steps below to verify that your clustered OVO was correctly installed.

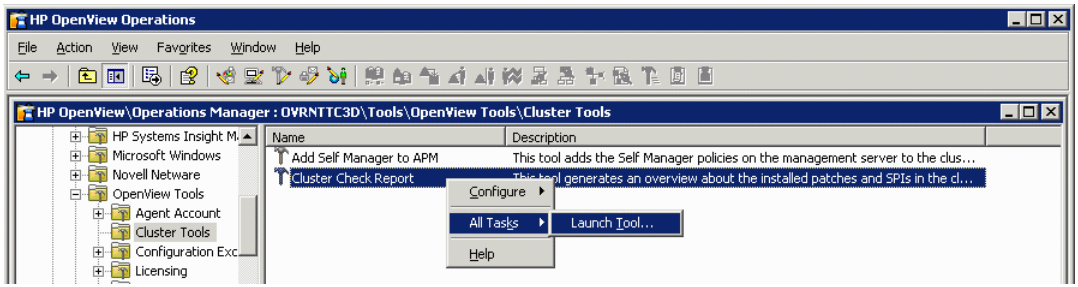
1 Open the OVO console on one of the management servers. Note that the following warning will be displayed. Click **OK**. .



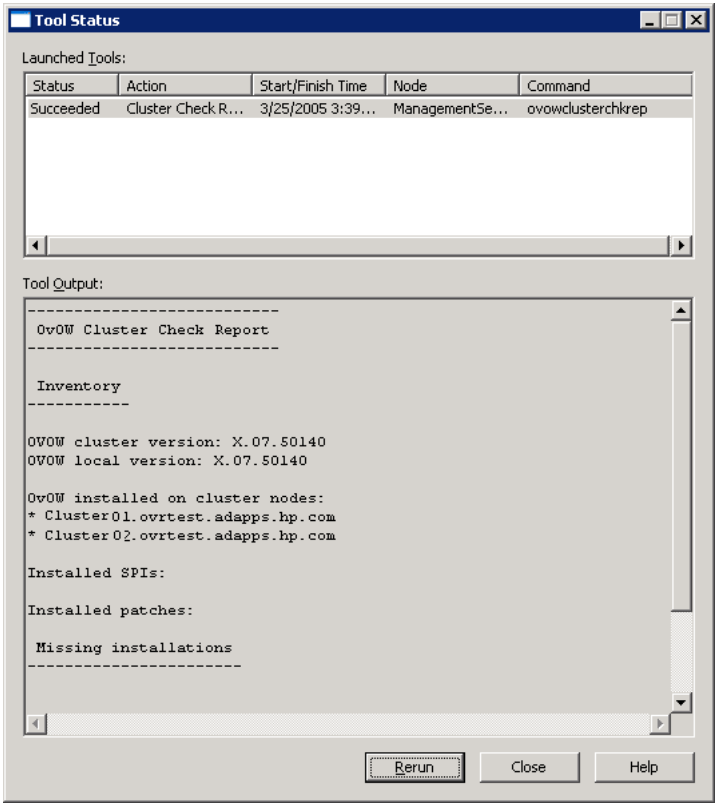


2 Click on **Finish** to connect to the virtual node assigned to the OVO server.

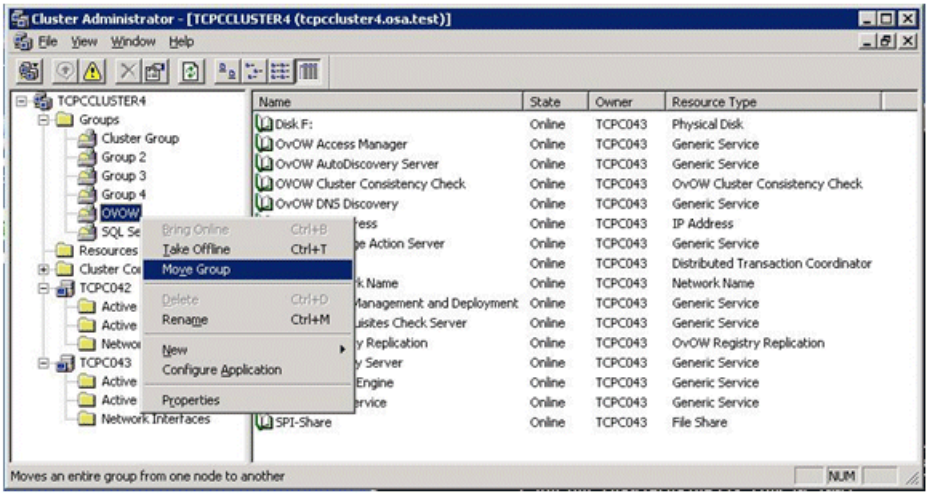
3 Start the tool **Cluster Check Report** from the OVO console.



4 After execution, the Status of the tool should state **Succeeded** and the Tool Output will report the OVO relevant cluster information as shown below.



5 Open the **Microsoft Cluster Administrator** and initiate a switch of the OVO resource group to another node.



Installing SPIs or Add-On Products

After having installed OVO and core SPIs on all cluster nodes designated to run OVO, SPIs or Add-On products can be installed. To keep a working OVO installation after the installation of SPIs or Add-On products, it is necessary to install them on all nodes. OVO checks the consistency of the installation during each startup and refuses to start if any inconsistencies are found. An entry in the Windows Event Log shows the missing SPIs or Add-On Products. The same report can be generated by the Cluster Check Report tool located in `Tools -> OpenView Tools -> Cluster Tools`.

For details about the installation of SPIs and Add-On products, review their installation guides. If not stated otherwise in the installation guide of Add-On products, always install them into the OVOW resource group.

6 Uninstalling & Reinstalling OVO

This chapter contains the following instructions:

- Uninstalling policies and packages from Windows managed nodes
- Uninstalling OVO from a standard installation and from a clustered node
- Removing a remote database
- Reinstalling OVO

Uninstalling Policies and Packages from a Windows Managed Node

Follow these steps to completely uninstall policies and packages from Microsoft Windows managed nodes. You may want to do this when you no longer want to manage a node or in preparation for completely removing OVO and all related products.

Do not remove policies and packages from a managed node if you are upgrading from one version of OVO to another.

1. Open the OVO console.
2. Open the Nodes view and select the managed node from which you want to remove all packages and policies. Right-click the node and select **All Tasks** → **Uninstall All** .

3 Repeat for other managed nodes as needed.

To uninstall a Windows managed node which has been manually installed, you need to access the node directly and use the Add/Remove Programs function and remove the OVO agent.

With OVOW 7.5 the server knows which agent is installed manually and which is done automatically. It will display a message if you attempt to deinstall (or upgrade) a manually installed agent.

After the uninstall, some directories and the shared registry key are left behind. If you have no other OpenView products that require these files, you may manually remove them.

Uninstalling OVO

The following OVO uninstallation procedures apply to both a non-clustered and a clustered environment.

Uninstallation Prerequisites

All SPIs and Add-On products installed after the installation of OVO need to be uninstalled prior to the uninstallation of OVO.

1 Remove all SPIs. For uninstallation procedures, refer to the SPI CD for OVO Installation/Upgrade Guide.

2 Remove all other Add-on products. See their documentation for details about how to uninstall them.

- Use the **Add/Remove Programs** to remove the NNM Adapter or any add-on products.
- If other products (such as OVPM, OV Reporter, or OVIS) are installed on the same server, they may share common components with OVO for Windows. These shared components will be deleted only when no longer used by other OV products.

3 Remove the agents on UNIX managed nodes. See the OVO online help topics “Remove agent from unix node”, and “Remove agent from Windows node” under Administering Your Environment → Policy Management and Deployment → Deployment Related Tasks. Note that when planning on reinstalling OVO, you do not need to remove any managed nodes.

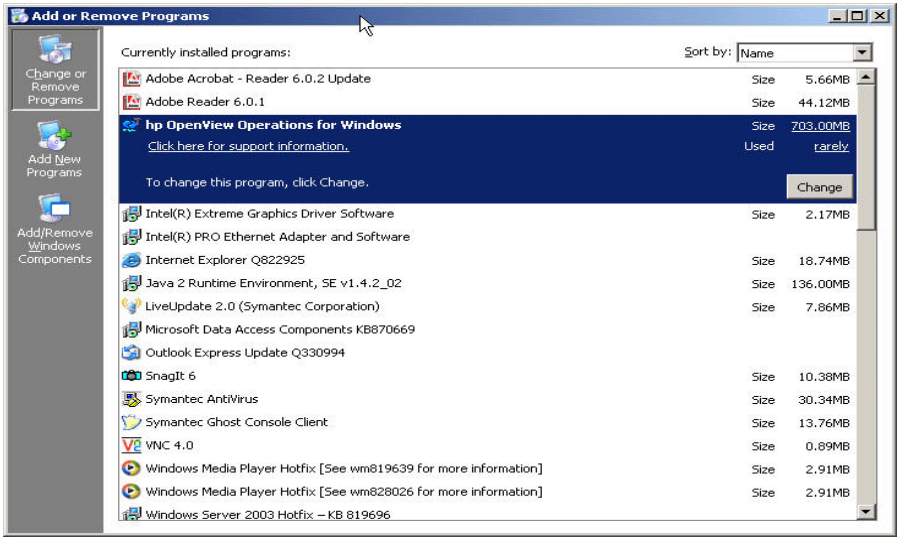
4 In addition, before uninstalling OVO from a cluster node, the following prerequisites have to be met:

- The cluster node which was installed first needs to be uninstalled last. All other nodes can be uninstalled in a random order.
- The node which is uninstalled needs to be the owner of the OVO cluster resource group. Use the **MS Cluster Administrator** to move the group if necessary.

OVO Uninstallation Procedure

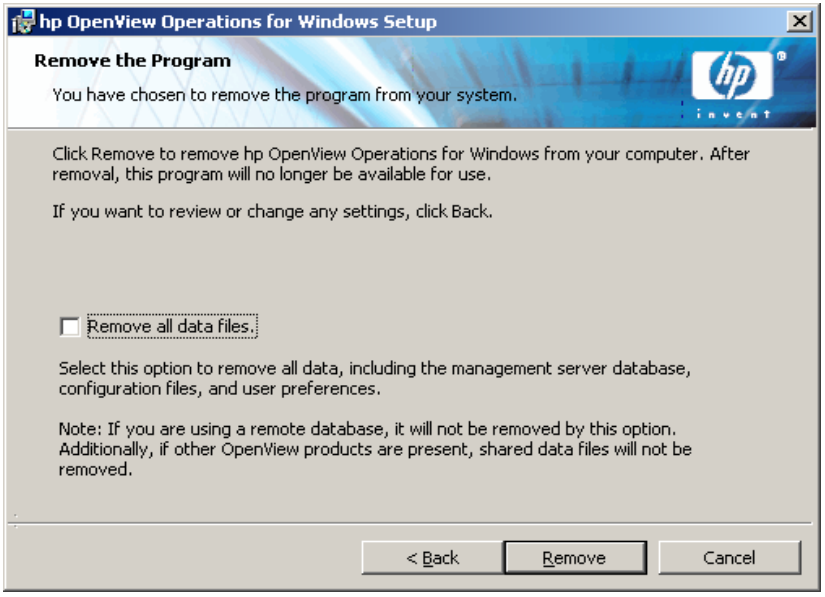
To uninstall OVO, follow these steps:

1. Exit any open management console sessions.
2. Open **Add or Remove Programs**. In the list of currently installed programs, select **HP OpenView Operations for Windows** and click **Change** to start the OVO installer. (You can also start the uninstallation by executing **autorun** from the installation CD again.)

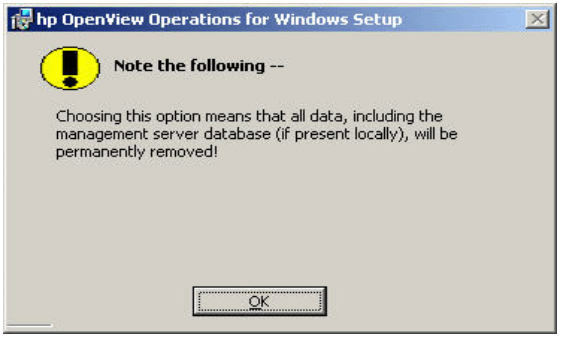


3 In the OVO **Welcome** dialog, press **Next** to go to the **Remove the Program** screen.

4 From the **Remove the Program** dialog box, click **Remove** to start the removal of OVO from the current node.



- Check the **Remove all data files** checkbox to remove all data associated with OVO including the management server database. You will be prompted to confirm your selection.

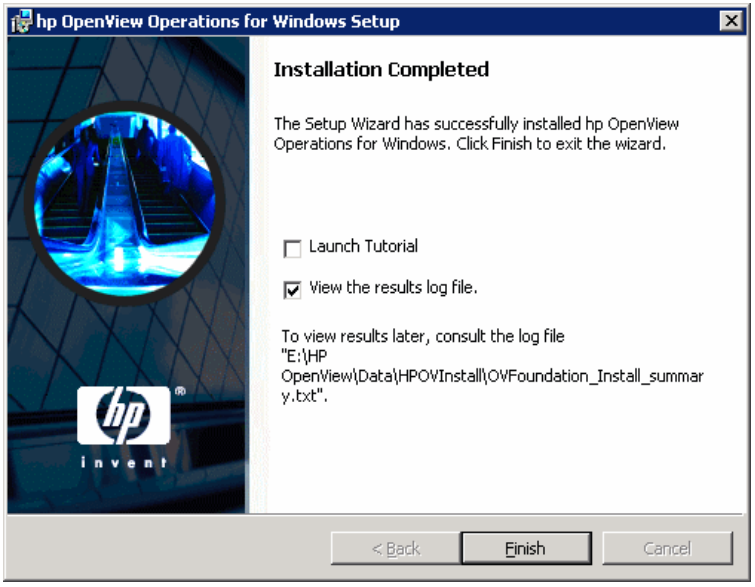


  — Checking the box does not remove the remote database, nor data shared with other OV products.

— This option is not provided, if uninstalling a remote console.

- Leave the box unchecked to keep files or registry settings (such as Policies, User Created Graphs, Instrumentation files, BBC Config settings for firewalls, Special server settings in the registry, and User roles) after the uninstallation is completed. This will allow you to reuse your data if you choose to reinstall OVO.

5 Status dialogs will be displayed until the uninstallation of OVO finishes with the following dialog box.



We recommend that you review the results log file to find out about uninstallation errors or files which could not be removed during the uninstallation.

Removing a Remote Database

If a remote database was used, a few manual steps are needed to completely remove the OVO data. (Checking the Remove all data files box from the Remove the Program screen, page 134, does not remove the remote database.) To remove a remote database, follow these steps:

1. Open the **Enterprise Manager** by selecting **Start** → **Programs** → **Microsoft SQL Server** → **Enterprise Manager**
2. Expand the **Microsoft SQL Servers** group in the left pane
3. Expand the **SQL Server Group**
4. Expand the group OVOW Instance (MSSQLSERVER\OVOPS)
5. Click on the folder **Databases**
6. Click on **openview** in the right pane and hit the Delete key. Confirm that you want to delete the database 'openview'.

   Be sure to appropriately check the "Delete backup and restore history database."

7. Click on **reporter** in the right pane and hit the Delete key. Confirm that you want to delete the database 'openview'.

   Be sure to appropriately check the "Delete backup and restore history database."

8. Expand the **Security** folder in the left pane and select **Logins**
   a. Click on **openview** in the right pane and hit the Delete key. Confirm that you want to remove the login and any associated database users.
   b. Click on **ovdb_user** in the right pane and hit the Delete key. Confirm that you want to remove the login and any associated database users.
   c. Click on **ovms_admin** in the right pane and hit the Delete key. Confirm that you want to remove the login and any associated database users.

Reinstalling OVO for Windows

Reinstallation of OVO for Windows management servers and remote consoles is essentially an uninstallation operation followed by a second installation. For management servers, you have the option of either reusing data or performing a fresh install, during which the server database, policies, and so forth are newly created.

Reinstalling the Management Server

OVO offers two options for reinstalling OVO for Windows 7.5 servers. Both options must be preceded by uninstalling the existing server, including SPIs (which happens automatically) and the NNM Adapter. Server uninstallation also automatically removes the server's agent and any collected performance data.

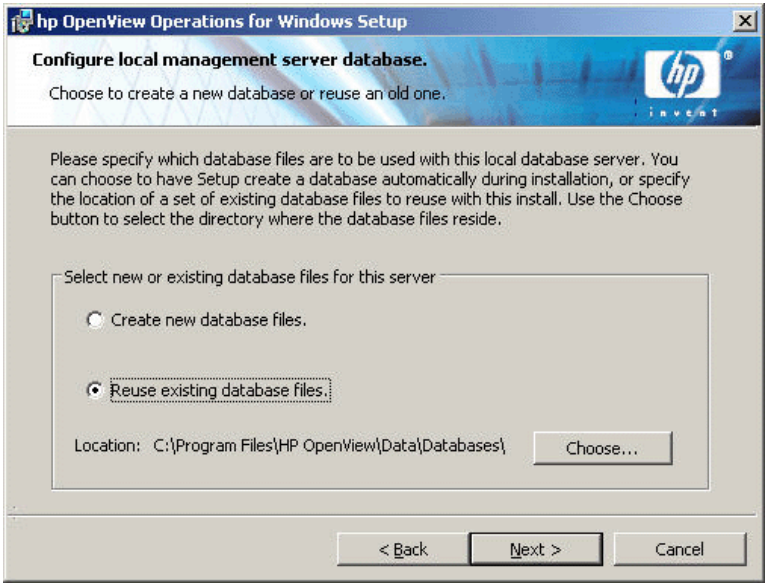
Refer to Installing OVO on page 69 for installation procedures, as needed. See Destination Directories on page 140 for procedures on reusing data, or not reusing data, when configuring your management server.

Database

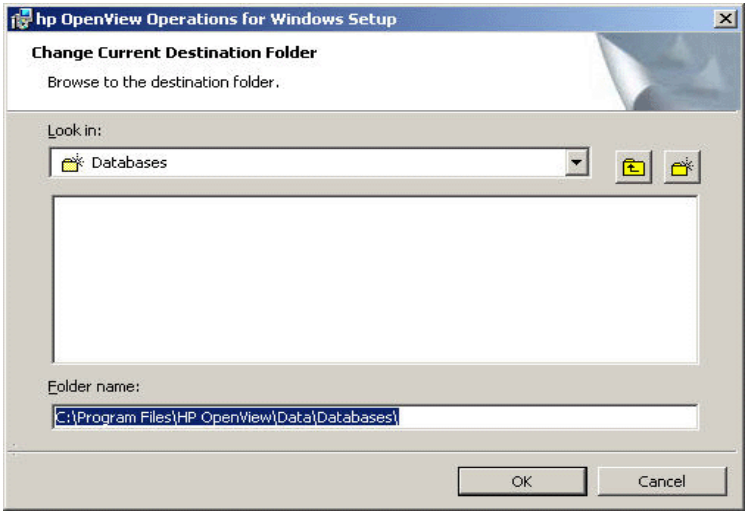
Local

If you want to reuse your database files on the local machine, ensure that your OVOPS instance is still installed and functioning.

- During reinstallation, be sure to select the path to the location of your database files.



- Click **Choose** to browse to the location of your database files.



Remote

- Clustered
  - Choose the same remote database as previously used to reconnect the installation with your previous data. You may also select another database server at this time.
  - Do not select a database server that is not running in a cluster as this exposes a potential for a single point failure.
- Single Sytem/Non-Clustered
  - You may also choose to use a remote database at this time.
  - For a remote database setup, make sure you do not have an MS SQL Server 2000 OVOPS instance on your local machine at reinstall time (MSDE is fine). The install will detect the OVOPS instance and assume you want to use it.

Destination Directories

Reuse Data

- If you want to reuse your data, use the same installation directory, data directory (and share directory if using a cluster) that were used in the previous installation. This will allow the installation to reconnect with your old data. However, if you had any changes to your instrumentation, these files will be overwritten by the new installation.
- Make sure the **Remove All Data Files** checkbox, page 134, is **not** checked during uninstallation.

Do Not Reuse Data

- If you do not want to reuse your data, check the box **Remove All Data Files** when uninstalling OVO.
- Alternatively, you can delete all contents of the data directory (data destination chosen during installation) and/or select new directories during the subsequent installation.

You will not be able to select directories if you have other OpenView products installed. The directory structure used to install these other OpenView products will be detected and used instead.

Reinstalling Remote Consoles

To reinstall an OVO for Windows 7.5 remote console, follow these steps:

1. Uninstall the existing console using **Add/Remove Programs**.
2. Undeploy an OVO for Windows agent, if present.
3. Perform a second installation.

7 After You Install

This chapter contains information about the following actions you can begin after you have installed HP OpenView Operations for Windows (OVO).

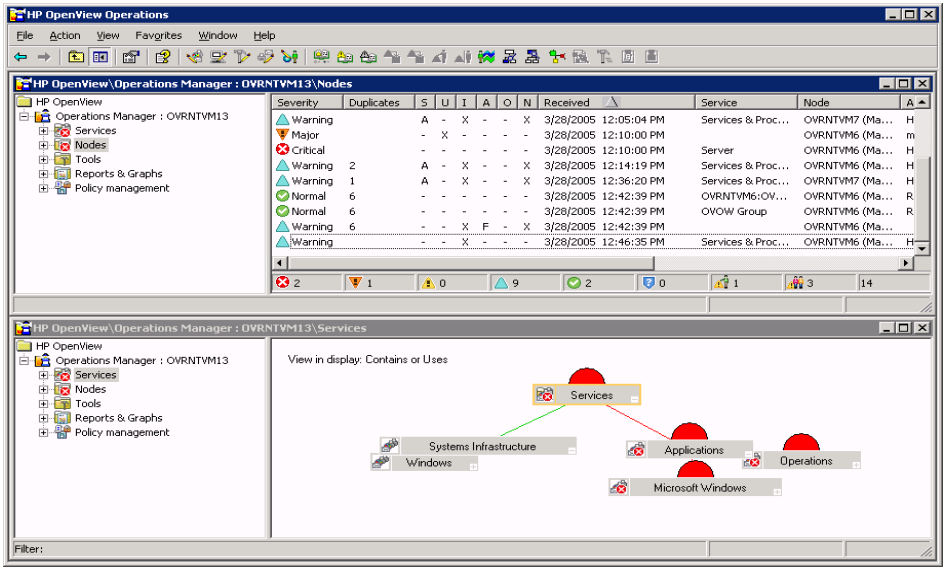
Learn How OVO Works

- For an interactive tutorial that combines an overview of essential tasks with hands-on procedures and examples, see the **basic training** information, available from within help and from the installation media. The option to view the basic training tutorial appears when installation is complete and the console is first opened. You can use the first page of the tutorial as a convenient checklist of administrative tasks to be performed.
- For information on administrator tasks such as node, tool, services, policy, and user roles configuration, policy deployment, and database maintenance, see the help system.

Overview of the Console

Open the OVO console. From the **Start** menu, select **Programs** → **HP OpenView** → **Console** to bring up the OVO management console**.** In the console tree, click on **Operations Manager**. Experiment by navigating within the console tree; expand and collapse the contents of the tree by clicking on the plus signs beside entries. Explore the options available by viewing messages and maps. A brief description follows; for more detailed information, see the online help.

The following illustration shows the default console view that opens when you launch the product. Two windows appear. One contains a map view of the systems infrastructure. The other displays the message browser. The console tree appears in the left side of each window and the details pane in the right, as shown.



Microsoft Management Console (MMC) and Menu

The Microsoft Management Console (MMC) menu bar is the topmost menu bar in the previous illustration. Menus include Console, Window, and Help. The MMC provides a software framework for administration tools such as OVO. From the MMC menu bar, you can perform a range of tasks, from manipulating the console windows to creating a new console. For more information on MMC, see the help topic OpenView Operations for Windows and the MMC or the Microsoft web site at **www.microsoft.com**.

Web Console Interface

The HP OpenView Web Console provides a quick and convenient way to view and respond to messages that result from events that occur on your managed nodes. From any location, use your Internet Explorer or Netscape browser to instantly see the severity of a message and act to correct the problem that caused it. See Chapter 2, Requirements for supported browser versions.

See the help topic "Browse messages with the web console" under Managing Your Workspace for information on accessing the web console. A separate help system is provided with the web console that explains its features and functionality.

OVO Menu

Use the OVO menu bar, directly under the MMC menu bar, to perform OVO tasks. Shortcut menus, which appear after you select an item, and right-click practice, also are frequently used to perform tasks in OVO.

Details Pane

The details pane (the right side of the window) hosts the list, message browser, and map views. You can tile these views to see multiple windows.

Console Tree

The console tree (on the left side of the window) displays, in a list view, folders representing the key OVO components:

- **Services**: These are customer-based, user-oriented, or infrastructure capabilities provided by one or more hardware or software components within a computing environment (such as e-mail, network bandwidth, and application access). Policies help assure that appropriate service levels are provided to designated consumers of the service.
- **Nodes**: A node is a computer system or intelligent device that can be managed from the OVO management server. OVO can manage both Windows and UNIX nodes.
- **Tools**: In OVO, tools are software programs or commands used to perform tasks. For example, you can configure a URL, an executable, or a Visual Basic script to be run on a remote managed node.
- **Policies (shown in the console tree under Policy Management)**: Policies are specifications and/or rules that help automate network and service administration. OVO administrators deploy policies to managed nodes to provide consistent, automated administration across the enterprise. Policies can be thought of as templates that indicate which information is monitored and logged on managed nodes and which events and messages the management server passes to the console.
  - UNIX policies and tools are provided and can be deployed to UNIX nodes.
  - Self Manager, which manages the OVO server and agents and can be deployed to the management server and managed nodes.
- **SPIs**: SPIs are prepackaged software for managing specific types of business applications and databases, such as the Exchange application. SPIs install on the OVO server and contain the necessary data sources, policies, diagnostic rules, and corrective actions to enable operational management of a computer system. SPIs also contain help systems and can provide other types of documentation as well.

What You Can Configure

As an administrator, you configure certain specific elements of the software. The list below gives you a high-level view of configuration tasks.

For instructions on how to configure OVO, see the basic training tutorial and the extensive online help provided from the console. Most administrative tasks are reserved for administrators, but a few are available to all users, and any of them can be assigned to user roles that control the functions that operators perform.

- **Add users:** (OVO Administrators and Operators) to appropriate security groups.
- **Configure nodes:** You configure nodes (systems) so that you can manage them. Configuration includes selecting systems (nodes) to be managed and selecting which tools are available for nodes, services, and user roles. As soon as a node is configured, it becomes a managed node. The management server is automatically added as a managed node at installation.
- **Configure services:** To relate your business services to OVO features, you define how services in the service hierarchy are dependent on each other, and define rules that evaluate the severity based on the state of the contributing services. To start, you can use the default values for status propagation and status calculation rules.
- **Configure tools:** You specify the tools that operators can apply to managed nodes and services. By applying the available tools, operators resolve problems reported in the message browsers that have critical business impact, or use tools to report on information about their managed environment. These tools can be associated with services, managed nodes, and user roles. Tools can also be configured to run on a predefined list of nodes.
- **Configure user roles:** As an administrator, you can configure an operator's view of the environment to focus on specific assigned tasks and responsibilities. By defining roles for specified users, you control the operator's view of your enterprise and the range of activities which that user has permission to perform. By assigning users to well-defined, specific roles, you can distribute monitoring and maintenance tasks across a group of individuals with their own particular areas of expertise and experience and customize each operator's console view.

- **Configure service types:** You can specify properties for service types, used when an instance of a service is created. Service type is similar to a template; you associate a service type with specific reports, graphs, tools, and deployment packages. That service type is then used when an instance of the associated service is created. Any tools, reports, graphs, and deployment packages associated with the service type are associated with every instance of that service that has been or will be created. The service type assures that these properties are applied globally to all services of that type.
- **Create or edit policies:** In addition to using the preconfigured default policies, you can configure user-defined policies, either by copying and then modifying a version of one or more default policies, or by creating a new policy from one of the policy types. You can also create automatic and operator-initiated commands designed to solve problems associated with messages received in the message browsers.
- **Configure message filters:** (operator or administrator). Messages that appear in the message browser are received from the nodes managed by the management server, as configured by the administrator. By setting filters, operators can further customize the way messages display to show only messages that match specific criteria.
- **Collect performance data on managed nodes:** The HP OpenView Operations for Windows Agent is deployed to all Windows managed nodes on which data will be collected.
- **Draw performance graphs:** You can use collected performance data to draw graphs for use in diagnosing performance problems and detecting trends. You can customize default graphs and also create your own.
- **Manage Microsoft Windows services:** Use preconfigured default policies until, based on events that display in the message browsers, you decide how to modify them to suit your exact needs.
- **Manage UNIX nodes:** Agents for managing UNIX nodes are provided as part of OVO. You can install and activate these agents and deploy preconfigured default policies and tools for managing your UNIX systems.
- **Manage OVO services using the Self Manager:** The Self Manager manages OVO services and agents. It is automatically deployed to the management server. You deploy the Self Manager policies to managed nodes to manage the agents.

A Documentation

Information about OVO is available from several sources. The Help system, containing over 1900 topics, is the primary source of information on how to configure your environment, and perform day-to-day administrative tasks, monitor and resolve events using the messages and maps available in the console.

- Extensive product documentation is provided on the OVO installation media.
- Each OVO component also provides a Help system.
- Manuals are in Adobe Acrobat PDF format and are located in the \Documentation directory on the product CDs.
- PDF files relating to the OVO for Windows foundation are also installed on the management server in %OVInstallDir%\Nls\1033\Manuals\

This appendix lists the documentation that you can refer to for installation, upgrade, and most recent release information for the following:

- OVO for Windows
- SPI for Windows Operating System
- SPI for Unix Operating System
- SPI for WebServer
- Agents Installation
- Network Node Manager
- NNMA Installation
- NDAOM Installation
- OpenView Performance Agent
- OpenView Performance Manager
- Reporter

Document	File and Location	Purpose
Basic Training	• Appears automatically after installation • Help system Table of Contents: Basic Training	• Step-by-step tutorial on all basic configuration and setup tasks • You are strongly encouraged to walk through the tutorial.
OVO Help System (all procedures and tasks)	• OVO console Help dropdown menu • Product shortcut menus • Help buttons in dialog boxes • Standalone by opening the file: `%OVinstalldir%\Nls\1033\Help\console.chm` on the management server	• Configuration tasks — Configure Nodes — Configure Services — Configure Tools — Configure User Roles — Configure Service Types • Policy tasks — Create, edit, deploy, remove, save, enable, disable policies — Install and remove agents — Policies and policy groups • Configure policies — Configure sources — Command line programs — Policy Types • SPIs provided — Windows OS SPI — UNIX OS SPI — Webserver SPI • Any other SPIs purchased
HP OpenView Operations Installation Guide Version 7.5	• OVOInstall.pdf • OV Operations 7.5 for Windows disk	Provides installation requirements, instructions, and security information.

Document	File and Location	Purpose
HP OpenView Operations Upgrade Guide Version 7.5	• OVOWUpgrade.pdf • OV Operations 7.5 for Windows disk	Explains the upgrade process for moving from previous versions to the 7.5 version of HP OpenView Operations for Windows.
OVOReadMe	• OVOReadMe.html • OV Operations 7.5 for Windows disk	Includes last minutes changes and release notes.

Smart Plug-in for Windows Operating System

Document	File or Location	Purpose
Windows OS SPI Release Notes	Smart Plug-ins, New and Upgraded CD\Documentation\ReleaseNotes WindowsOS ReleaseNotes.html OVO Start-up CD \Documentation\ReleaseNotes	Includes information on the Smart Plug-In for Microsoft Windows Operating System.

Smart Plug-in for UNIX Operating System

Document	File or Location	Purpose
Unix OS SPI Release Notes	Smart Plug-ins, New and Upgraded CD\Documentation\ReleaseNotes UNIXOS ReleaseNotes.html OVO Start-up CD \Documentation\ReleaseNotes	Includes information on the Smart Plug-In for Unix Operating System.

Smart Plug-in for Web Servers

Document	File or Location	Purpose
Web Server Release Notes	Smart Plug-ins, New and Upgraded CD\Documentation\ReleaseNotes WebServer ReleaseNotes.html OVO Start-up CD \Documentation\ReleaseNotes	Includes information on the Smart Plug-in for Web Servers for OVO Windows release.

Document	File or Location	Purpose
Manual Windows Agent Installation	Online help: Administering your Environment → Policy Management and Deployment → Deployment-related tasks → Manual agent installation on Windows	Provides an introduction to installing agents on Windows.
README for OVO Agents	Online help: Administering your Environment → Policy Management and Deployment → Deployment-related tasks → Manual agent installation on Windows computers	Provides software and hardware requirements, and installation procedures.
Agent Installation on Unix Computers	Online help: Administering your Environment → Policy Management and Deployment → Deployment-related tasks → Agent installation on Unix computers	Provides an introduction to installing agents on Unix.
README for OVO Agents on Unix • Install agent on AIX • Install agent on HP-UX • Install agent on LINUX • Install agent on OpenVMS • Install agent on Solaris • Install agent on Tru64	Online help: Administering your Environment → Policy Management and Deployment → Deployment-related tasks → Agent installation on UNIX computers	Provides software and hardware requirements, and installation procedures.

Network Node Manager

Document	File or Location	Purpose
Windows NT/2000 Installation Guide	Installation_Guide.pdf Network Node Manager disk	Provides installation requirements and instructions.
Managing Your Network with HP OpenView Network Node Manager	Managing_Your_Network.pdf Network Node Manager disk	Describes using NNM 7.5 for network management.
A Guide to Scalability and Distribution for HP OpenView Network Node Manager	Scalability_and_Distribution.pdf Network Node Manager disk	Includes information on the HP OpenView Network Node Manager 7.5 release.

NNMA Installation

Document	File or Location	Purpose
HP OpenView NNM Adapter for OVO for Windows	Online help → NNM Adapter	Provides a description of the product, including update and message-service features, NNMA utilities and problem-solving capabilities.
Installation Overview & Prerequisites for NNM Adapter	Online help → NNM Adapter → Installing the NNM Adapter	Provides installation requirements and instructions.

NDAOM Installation

Document	File or Location	Purpose
HP OpenView Network Diagnosis Add-on Module	Online help → Network Diagnosis Add-on module	Provides a description of the product, including installation procedures, and integration capabilities.

Performance Agent

Document	File or Location	Purpose
Performance Agent Installation and Configuration Guide	mwainst.pdf Performance Agent disk	Installation and configuration procedures
Performance Agent User's Guide	mwausers.pdf Performance Agent disk	Includes an overview and information about using the HP OpenView Performance Agent for UNIX product.
Performance Agent DSI Guide	mwadsi.pdf Performance Agent disk	Includes overview, information, and examples on using Data Source Integration (DSI) with the HP OpenView Performance Agent.
Performance Agent Dictionary of OS Performance Metrics	MWA-metrics.pdf Performance Agent disk	Reference manual for available operating system metrics
Release Notes	mwa Performance Agent disk	Includes information on the HP OpenView Performance Agent release.

Document	File or Location	Purpose
Read Before Installing	ReadMeFirst.htm HP OpenView Performance Manager disk	Lists items to consider before installing HP OpenView Performance Manager.
What's New	WhatsNewWithOVPM.pdf HP OpenView Performance Manager disk	Includes an overview of new features with the HP OpenView Performance Manager 5.0 release.
OVPM ReleaseNotes	OVPMReleaseNotes.htm HP OpenView Performance Manager disk	Provides information on the HP OpenView Performance Manager 5.0 release.
User's Guide and Tutorial	OVPMUserGuide.pdf HP OpenView Performance Manager disk	Includes product overview and information about using HP OpenView Performance Manager.
Administrator's Guide	OVPM_admin_guide.pdf HP OpenView Performance Manager disk	Describes administrative task such as configuration, security, and troubleshooting.
PerfView to OVPM Migration	PVMigrate.pdf and PVtoOVPM.pdf HP OpenView Performance Manager disk	Includes migration information for HP PerfView customers.

Reporter

Document	File or Location	Purpose
Concepts Guide	ConceptsGuide.pdf Reporter disk	Product overview and features
Installation and Special Configurations Guide	Install_Config.pdf Reporter disk	Installation instructions
ReadMeFirst	ReadMeFirst.htm	Guide to first steps
Reporter Release Notes	reporterreleasenotes.htm Reporter disk	Includes information on the HP OpenView Reporter 3.6 release.
Reporter Release Notes	OVO Start-up CD \Documentation\Release Notes\ Reporter3.6ReadMe	Contains integration and configuration information relating to OVO.
Note: These documents will be installed on the hard disk if the Reporter FULL version is installed.		

B System Requirements Checking

Improved System Requirements Checking

FDR25430 - Pre-requisite pre-checks (Server and Console portions only).

All prerequisite checks for OVOW 7.5 server and remote console installs are listed in Table 1. For all items under the column "Condition", if the answer to the statement is "Yes", the check passes. Otherwise, the corresponding error or warning message is generated.

Table 1 - Requirements Checks

Condition	Errror #	Error (E) Warning (W)	Message text/Corrective Action
A requirement check fails if the answer to the question in column 1 is No.			
Checked at installation start:			
User has Admin privileges?	5001	E	You must have at least Local Administrator privileges to install this product.
The MSI engine version present is v2.0 or greater?	5002	E	The installation must be launched using setup.exe.
Install mode is not 'silent'?	5003	E	The installation cannot be run using Windows Installer silent mode.
Internet Explorer version is 5.0 or greater?	5004	E	Internet Explorer 5 or greater needs to be installed for this installation to continue.
O/S type is in legal list?	5005	E	The installation requires that your computer is running Windows 2000, Windows XP or Windows 2003 Server.

VantagePoint for Windows is not present?	5006	E	VantagePoint for Windows must be removed before this installation can continue.
No VantagePoint for Windows files are present in system32?	5007	E	VantagePoint for Windows files that might interfere with the operation of this product exist in the system32 folder. *Note: User is presented with a "Yes/No" dialog to remove the offending files. If "No", installation is terminated.*
If OVOW is present, its version is 7.10 or greater?	5008	E	OpenView Operations for Windows version A.7.0x detected. Only versions A.07.10 and higher can be automatically upgraded. Consult the Upgrade Guide for more information.
An OVOU agent is not present?	5009	E	OpenView Operations for UNIX is managing this system. In order to install OpenView Operations for Windows, the system must first be unmanaged.
If an OVOW agent is present, its version is 7.50 or greater?	5010	E	The OpenView Operations for Windows agent (version <DETECTED VALUE>) detected on your system is incompatible with this product. It must be either upgraded or removed before running setup.
Only compatible OV products are present?	5011	E	See Action Item 1
Checked for both Server and Remote Console			
Target O/S is 32-bit?	5012	E	OpenView Operations for Windows can only be installed on a 32-bit architecture system.
Windows Scripting Host version is 5.0 or greater?	5013	E	Windows Scripting Host version X.X detected, and the minimum version required is 5.0. Upgrade your Windows Scripting Host software and then rerun Setup.

Is %TMP% or %TEMP% pointing to a valid directory?	5014	E	The environment variable %TEMP% (or %TMP%) is either unset or does not refer to an existing directory location. Set one of these in your system's environment settings, and then rerun Setup.
The Wbem directory is already present in system %Path%?	7001	W	The directory '%windir%\system32\Wbem' is not present in %Path%. Add it to your system's Path environment variable and then rerun Setup.
Checked only for Server			
O/S detected is lower than Windows 2000 Server, SP2.	5015	E	The operating system version detected is <DETECTED VALUE>. The management server operates only on Windows 2000 Server (SP2 or later), or Windows 2003.
O/S detected is higher than Windows 2000 Server SP4 or higher than Windows 2003 SP0.	7012	W	The operating system version detected is <DETECTED VALUE>. The management server is certified to operate correctly on Windows 2000 Server (SP2 through SP4), and Windows 2003 SP0.
Virtual memory >= minimum amount of 512MB?	5016	E	The amount of virtual memory on this system (<DETECTED VALUE>) is insufficient for the product or option selected. It must be at least 512MB, and 1024MB is recommended.
Physical memory >= minimum amount of 512MB?	5017	E	The amount of physical memory on this system (<DETECTED VALUE>) is insufficient for the product or option selected. It must be at least 512MB, and 768MB is recommended.
Registry free space is sufficient?	5019	E	The amount of available system registry space on this system (<DETECTED VALUE>) is insufficient for the product or option selected. It must be at least (Action Item 2).

SNMP is installed?	5020	E	SNMP must be installed in order for the management server to function correctly. Enable SNMP and then rerun Setup.
DHCP is disabled?	5021	E	DHCP must be disabled in order for the management server to function correctly. Disable DHCP and then rerun Setup.
TCP/IP is enabled?	5022	E	TCP/IP must be enabled in order for the management server to function correctly. Enable TCP/IP and then rerun Setup.
IIS is enabled?	5024	E	IIS must be enabled in order for the management server to function correctly. Enable IIS and then rerun Setup.
Virtual memory >= suggested amount of 1024MB?	7002	W	The amount of virtual memory on this system (<DETECTED VALUE>) is below the recommended value of 1024MB .
The primary DNS suffix is set?	7003	W	The DNS suffix for this system is not set. This can cause agent communication problems between agents and the management server if the client system cannot resolve the server's hostname.
Internet Explorer is v5.5 or greater?	7004	W	The version of Internet Explorer version detected on this system is <DETECTED VALUE>. Version 5.5 or greater must be installed before you can use the Web Console.
IIS server service is started?	7005	W	The IIS World Wide Web Publishing service on this system is not running. Setup will start it automatically during installation.
Physical memory >= suggested amount of 768MB?	7010	W	The amount of physical memory on this system (<DETECTED VALUE>) is below the recommended value of 768MB .

Is MDAC the minimum version needed to enable remote database server selection?	7011	W	Detected Microsoft Data Access Components (MDAC) version <DETECTED VALUE>. You will not be able to select the "remote database server" option later in the setup wizard unless your MDAC version is %s or greater. Ignore this warning if you are installing using the "local database server" option.
Checked only for Remote Console			
O/S detected is less Windows XP SP0 or Windows 2000 SP0 or Windows 2003 SP0?	5025	E	The operating system version detected is <DETECTED VALUE>. The remote console operates only on Windows XP (SP0 or later), Windows 2000 Server (SP2 or later), or Windows 2003.
O/S detected is higher than Windows XP SP1 or Windows 2000 Server SP4 or Windows 2003 SP0.	7013	W	The operating system version detected is <DETECTED VALUE>. The remote console is certified to operate correctly on Windows XP (SP0 and SP1), Windows 2000 (SP0 through SP4), and Windows 2003 SP0.
Virtual memory >= minimum amount of 512MB?	5026	E	The amount of virtual memory on this system (<DETECTED VALUE>) is insufficient for the product or option selected. It must be at least 512MB, and 768MB is recommended.
Physical memory >= minimum amount of 256MB?	5027	E	The amount of physical memory on this system (<DETECTED VALUE>) is insufficient for the product or option selected. It must be at least 256MB, and 512MB is recommended.
Registry free space is sufficient?	5028	E	The amount of available system registry space on this system (<DETECTED VALUE>) is insufficient for the product or option selected. It must be at least (Action Item 2).

Virtual memory >= suggested amount of 768MB?	7008	W	The amount of virtual memory on this system (<DETECTED VALUE>) is below the recommended value of 768MB .
Physical memory >= suggested amount of 512MB?	7009	W	The amount of physical memory on this system (<DETECTED VALUE>) is below the recommended value of 512MB .
Checked for any product after a destination directory is selected			
Target drive is a local fixed disk?	5029	E	The program destination directory you have chosen resides on a non-local drive. You must select a location on a local drive.
Target directory is not NTFS encrypted?	5030	E	The program destination directory you have chosen is NTFS encrypted. It must either be unencrypted or you can select a different location.
Disk space is at least NNN for Server or NN for Remote Console?	5031	E	The program destination directory you have chosen resides on a drive with insufficient free space to install the product or options selected. You must select a different location.

Prerequisite Checks Dialog

The results of a system prerequisites check for the feature selected (Server or Remote Console) is displayed in a text window organized into three sections – Errors, Warnings, and Information.

- Errors are any detected conditions that would cause the installation to fail. If errors are reported, the Next button is disabled so that the install cannot proceed. All error conditions must be resolved before the user can continue installation past this dialog.
- Warnings are detected conditions that will not cause the installation to fail, but might either affect product functionality or reconfigure the system in a way that the user should evaluate before proceeding.
- The Information section contains items that are neither warnings nor errors.

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