

Oracle® Virtual Directory

Installation Guide

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Oracle Virtual Directory Installation Guide, 10g (10.1.4.0.1)

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1. Introduction

This is a transitional release following Oracle's acquisition of OctetString. Some parts of the Oracle Virtual Directory (formerly known as the OctectString Virtual Directory Engine or VDE), Oracle Virtual Directory Manager (formerly known as the Directory Manager Environment or DME), and its documentation may still reference the original OctetString company and product names. These references will be rebranded in future releases.

This guide provides instructions and requirements for installing Oracle Virtual Directory and Oracle Virtual Directory Manager. Oracle Virtual Directory is a multi-function virtual directory server. The Oracle Virtual Directory Manager platform provides management support of Oracle Virtual Directory, as well as development tools to support development of mapping scripts and Java plug-ins to support advanced integration requirements.

Oracle Virtual Directory and Oracle Virtual Directory Manager are intended to operate together as server and management client, respectively; therefore the installation process has been kept separate for each product. You may install Oracle Virtual Directory on a desired server and then install Oracle Virtual Directory Manager on any number of client administration workstations.

The Oracle Virtual Directory application on Microsoft Windows is named OVIDServer.exe. On Unix and Linux platforms, the Oracle Virtual Directory application is named vde.sh.

Certified Operating Systems, Directories, and Databases

Oracle Virtual Directory 10g (10.1.4.0.1) is certified with the following components, however, you should always defer to the certification information at the Oracle Technology Network for the most recent information. You can access the Oracle Technology Network at:

<http://www.oracle.com/technology/index.html>

Note: A general guideline for custom deployments is that Oracle Virtual Directory is Java-based and should interoperate with anything Java can connect to.

Operating Systems

- Solaris 8 and 9
- Red Hat Enterprise Linux 3.0 and 4.0
- SUSE Linux 9
- Windows NT 4.0 with SP6, Windows 2000 with SP3, Windows XP Professional, and Windows 2003 Server
- HP-UX 11
- AIX 5.2

Directories

- Oracle Internet Directory

- Sun Java System (JS) Directory Server
- CA eTrust Directory
- IBM Tivoli Directory Server
- Novell eDirectory
- Siemens DirX
- Microsoft Active Directory (AD)
- Microsoft AD Application Mode

Databases

- Oracle 9.2.0.7, 10.1.0.5, 10.2.0.2 RAC, and standalone DB
- Microsoft SQL Server
- IBM DB2

Choosing the Default Namespace During Installation

When installing the Oracle Virtual Directory server, choose the lowest possible domain component when you are prompted to enter the default namespace. For example, if your namespace is dc=orion,dc=com you would enter dc=com as the default namespace. If your namespace is dc=orion,dc=com,dc=uk you would enter dc=uk. Entering the lowest possible domain component for the default namespace reduces the opportunity for future Access Control List (ACL) configuration problems.

2. Installing Oracle Virtual Directory on Windows

This chapter describes the steps required to install Oracle Virtual Directory on Microsoft Windows NT and Microsoft Windows 2000. It covers installation prerequisites, system tuning, and how to remove the Oracle Virtual Directory.

Operating System Requirements

Oracle Virtual Directory 10g (10.1.4.0.1) is certified on the following Windows platforms:

- Windows NT 4.0 SP6
- Windows 2000 SP3
- Windows XP Professional
- Windows 2003 Server

Disk Space Requirements

Ensure that sufficient disk space is available before installing the software. Oracle Virtual Directory requires approximately 70 MB of disk space when installed with no local entries using the Local Store Adapter.

If you will not be using the Local Store Adapter (LSA), disk space usage is limited to log file and configuration file storage only. Depending on log settings, this usage can be minimal (a few MB per day), or quite extensive if using "Debug" logging modes.

If you will be using the LSA Adapter, as a general rule, the amount of disk space required to operate LSA roughly equals 150% the size of the data set being loaded into the adapter. For example, a LDIF file with 500K entries & 10 attributes per user is roughly 200 MB in size. Oracle Virtual Directory will require 300 MB of disk space to store the imported data and its indexes.

Sample Disk Space Requirements

# of Entries / # of Attributes	Disk Space Required
50K entries, 10 attributes per	30 MB
100K entries, 10 attributes per	60 MB
250K entries, 10 attributes per	150 MB
500K entries, 10 attributes per	300 MB

Installing the Package

To install Oracle Virtual Directory:

1. Log in to Windows with administrator privileges.
2. If you have not already done so, download the product binaries file to the installation directory.
3. Double-click the self-extracting archive (ovid1014.exe). This automatically starts the setup program. Before proceeding, make sure you know the system host name where you are installing Oracle Virtual Directory and the location on the host system where you want to install.

4. Continue with the GUI-based installation instructions found in the *Installing Oracle Virtual Directory Using the GUI* chapter.

Modifying Runtime Memory Allocation

By default, Oracle Virtual Directory is configured to use 512MB. The 512MB setting is based on experience that proved to provide sufficient room for management of data when using Oracle Virtual Directory as a directory or database proxy.

If necessary, you can run Oracle Virtual Directory with less memory, as is done in some ISV environments where the overhead of Oracle Virtual Directory must be kept as low as possible. However, running Oracle Virtual Directory with less memory causes certain constraints, for example, the Cache plug-in may not be as effective with 128MB of configured memory.

If your organization wanted to maintain long-lived objects in the Cache plug-in or do significant data manipulation of large data-sets, it is possible that Oracle Virtual Directory could consume a gigabyte or more of memory. However, in the most deployments, the default 512MB has proven to be sufficient.

If you will be making extensive use of the Local Store Adapter, you will want to tune the amount of memory you want to dedicate to Oracle Virtual Directory's operations. Use the chart below as a guideline:

Sample Memory Allocation Requirements:

# of local Entries / # of local Attributes	Additional Memory Allocation Required
50K entries, 10 attributes per entry	45 MB
100K entries, 10 attributes per entry	90 MB
250K entries, 10 attributes per entry	225 MB
500K entries, 10 attributes per entry	450 MB

You can modify the memory value for Windows platforms by editing the server launch properties file, `OViDServer.lax`, found in the main installation directory. Use the following steps to adjust the memory value:

1. Start Notepad and open the `VDEServer.lax` file.
2. Locate the property `lax.nl.java.option.additional`. If it is missing, add it to the file. Change or add the value `-Xmx512m` to the desired maximum memory size in megabytes (it is set by default to 512). Note that you should leave the `"-server"` part of the value alone if present.

The default value is `-Xmx512m` (where memory allocation is 512 MB). Set the value to the amount of memory you wish to allocate to the Oracle Virtual Directory process.

3. Save the `VDEServer.lax` file and exit the file editor.

Starting & Stopping Oracle Virtual Directory

Once the Oracle Virtual Directory NT Services is installed on Windows, you can Start, Stop, and Restart Oracle Virtual Directory from the Administrative Tools in the Control Panel.

Oracle Virtual Directory may also be started from the command line (console mode) by going to the installation directory and running `VDEServer.exe`. When Oracle Virtual Directory is started in this fashion, it can be stopped using `CTRL/C` or closing the command line window it is running in.

Oracle Virtual Directory can also be started by executing the Start VDE (Console Mode) shortcut from the Start → Programs → Oracle → OViD folder. When Oracle Virtual Directory is started in this fashion, it can be stopped by closing the Window it is running in or by logging out.

Removing Oracle Virtual Directory

To remove Oracle Virtual Directory:

1. Verify Oracle Virtual Directory is not running. If it is running, stop it.
 - Use the uninstaller shortcut found in Start → Programs → Oracle → OViD → Uninstall OViD.
or
 - Use the Add / Remove Programs function in the Control Panel Applet and remove Oracle Virtual Directory.

NOTE: The folder that Oracle Virtual Directory was installed in will not be deleted by the Add / Remove Programs Control Panel Applet if any data files, log files, or customized configuration files exist. These files will need to be manually removed in order to remove Oracle Virtual Directory completely.

3. Installing Oracle Virtual Directory on Solaris

This chapter describes the steps required to install Oracle Virtual Directory on Sun Solaris 8 and 9. It covers installation prerequisites, system tuning, and how to remove Oracle Virtual Directory.

Operating System Requirements

Oracle Virtual Directory 10g (10.1.4.0.1) is certified on the following Sun Solaris platforms:

- Solaris 8 (Sparc)
- Solaris 9 (Sparc)

Disk Space Requirements

Ensure that sufficient disk space is available before installing the software. Oracle Virtual Directory requires approximately 70 MB of disk space when installed with no local entries using the Local Store Adapter.

If you will not be using the Local Store Adapter (LSA), disk space usage is limited to log file and configuration file storage only. Depending on log settings, this usage can be minimal (a few MB per day), or quite extensive if using “Debug” logging modes.

If you will be using the LSA Adapter, as a general rule, the amount of disk space required to operate LSA roughly equals 150% the size of the data set being loaded into the adapter. For example, a LDIF file with 500K entries & 10 attributes per user is roughly 200 MB in size. Oracle Virtual Directory will require 300 MB of disk space to store the imported data and its indexes.

Installing the Package

To install Oracle Virtual Directory on Solaris (Sparc)-based systems:

GUI Mode (X-Windows Based)

1. Log in to Solaris with administrator privileges.
2. Open a shell and `cd` to the directory containing the Oracle Virtual Directory installer.
3. At the prompt, type: `sh ./ovid1014.bin`
4. Continue with the GUI-based installation instructions found in the *Installing Oracle Virtual Directory Using the GUI* chapter.

Console-Based Installation

1. Log in to Solaris with administrator privileges.
2. Open a shell and `cd` to the directory containing the Oracle Virtual Directory installer.
3. At the prompt type: `sh ./ovid1014.bin -i console`

- Continue with the console based installation instructions in the *Installing Oracle Virtual Directory Using the Console* chapter.

Modifying Runtime Memory Allocation

By default, Oracle Virtual Directory is configured to use 512MB. The 512MB setting is based on experience that proved to provide sufficient room for management of data when using Oracle Virtual Directory as a directory or database proxy.

If necessary, you can run Oracle Virtual Directory with less memory, as is done in some ISV environments where the overhead of Oracle Virtual Directory must be kept as low as possible. However, running Oracle Virtual Directory with less memory causes certain constraints, for example, the Cache plug-in may not be as effective with 128MB of configured memory.

If your organization wanted to maintain long-lived objects in the Cache plug-in or do significant data manipulation of large data-sets, it is possible that Oracle Virtual Directory could consume a gigabyte or more of memory. However, in the most deployments, the default 512MB has proven to be sufficient.

If you will be making extensive use of the Local Store Adapter, you will want to tune the amount of memory you want to dedicate to Oracle Virtual Directory's operations. Use the chart below as a guideline:

Sample Memory Allocation Requirements:

# of local Entries / # of Attributes	Memory Allocation Required
50K entries, 10 attributes per entry	45 MB
100K entries, 10 attributes per entry	90 MB
250K entries, 10 attributes per entry	225 MB
500K entries, 10 attributes per entry	450 MB

You can modify the memory value for Solaris platforms by editing the `vde_start.sh` script in the main installation directory (typically `/opt/OViD`). Use the following steps to adjust the memory value:

- Open `vde_start.sh` using a text editor and go to the end of the file. The last lines will look similar to the following:

```
exec "$VDE_DIR"/jre/bin/java -server -Xmx512m
-Djava.net.preferIPv4Stack=true -Dvde.home="/opt/OViD"
-Dvde.lib="/opt/OViD/server/lib"
-Dvde.ldap.requireClientAuth="false" -Dvde.ldap.ciphers=" "
com.octetstring.vde.VDEServer >
"$VDE_DIR"/log/vde_startup.log 2>&1
```

The default value is `-Xmx512m` (where memory allocation is 512 MB). Change the value to the amount of memory you wish to allocate to the Oracle Virtual Directory process.

- Save `vde_start.sh`.

Automating Oracle Virtual Directory Start-Up At Boot-Time

Use the following steps to create a script to enable Oracle Virtual Directory to perform an automatic startup on a Solaris machine.

- Log on with root access to the appropriate machine.
- Go to the `/etc/rc3.d` directory by typing: `cd /etc/rc3.d`

3. Create a symbolic link to the VDEServer.sh file in the root of the directory where you installed Oracle Virtual Directory (typically /opt/OViD): `ln -s /opt/OViD/vde.sh S22vde`
4. Change permissions to allow the script to run: `chmod 754 S22vde`
5. Go to the /etc/rc0.d directory: `cd /etc/rc0.d`
6. Create a symbolic link to the vde.sh file in the root of the directory where you installed Oracle Virtual Directory (typically /opt/OViD): `ln -s /opt/OViD/vde.sh K22vde`
7. Change permissions to allow the script to run: `chmod 754 K22vde`

Starting & Stopping Oracle Virtual Directory

Starting and stopping Oracle Virtual Directory on the Solaris platform is accomplished by using the following:

Note: Oracle Virtual Directory is typically installed in /opt/OViD/.

To start Oracle Virtual Directory, type:

- /etc/rc3.d/S22vde start
- or
- /opt/OViD/vde.sh start

To stop Oracle Virtual Directory type:

- /etc/rc0.d/K22vde stop
- or
- /opt/OViD/vde.sh stop

Removing Oracle Virtual Directory

To remove Oracle Virtual Directory, you must:

1. Verify Oracle Virtual Directory is not running. If it is, stop it.
2. Using root privileges, `cd` to the /Uninstaller directory of your Oracle Virtual Directory installation.
3. At the prompt type: `./Uninstall`

NOTE: The folder that Oracle Virtual Directory was installed in will not be deleted by running the `./Uninstall` command. If any data files, log files, or customized configuration files exist, these files will need to be manually removed in order to remove Oracle Virtual Directory completely.

4. Installing Oracle Virtual Directory on Linux

This chapter describes the steps required to install Oracle Virtual Directory on Linux platforms. It covers installation prerequisites, system tuning, and how to remove Oracle Virtual Directory.

Operating System Requirements

Oracle Virtual Directory is supported on Intel Pentium platforms running the Linux kernel v 2.2.12 and glibc v2.1.2-11 or later. A minimum of 64 megabytes RAM is required. Check your version of glibc using the following command: `ls /lib/libc-*`

Oracle Virtual Directory 10g (10.1.4.0.1) is certified on Red Hat Enterprise Linux 3.0 and 4.0, and SUSE Linux 9.

Disk Space Requirements

Ensure that sufficient disk space is available before installing the software. Oracle Virtual Directory requires approximately 70 MB of disk space when installed with no local entries using the Local Store Adapter (LSA).

If you will not be using the LSA, disk space usage is limited to log file and configuration file storage only. Depending on log settings, this usage can be minimal (a few MB per day), or quite extensive if using “Debug” logging modes.

If you will be using the LSA Adapter, as a general rule, the amount of disk space required to operate LSA roughly equals 150% the size of the data set being loaded into the adapter. For example, a LDIF file with 500K entries & 10 attributes per user is roughly 200 MB in size. Oracle Virtual Directory will require 300 MB of disk space to store the imported data and its indexes.

Installing the Package

To install Oracle Virtual Directory on Linux based systems:

GUI Mode (X-Windows Based)

1. Log in to Linux with administrator privileges.
2. Open a shell and `cd` to the directory containing the Oracle Virtual Directory installer.
3. At the prompt type: `sh ./ovid1014.bin`
4. Continue with the GUI-based installation instructions found in the *Installing Oracle Virtual Directory Using the GUI* chapter.

Console-Based

1. Log in to Linux with administrator privileges.
2. Open a shell and `cd` to the directory containing the Oracle Virtual Directory installer.
3. At the prompt type: `sh ./ovid1014.bin -i console`

- Continue with the console based installation instructions found in the *Installing Oracle Virtual Directory Using the Console* chapter.

Modifying Runtime Memory Allocation

By default, Oracle Virtual Directory is configured to use 512MB. The 512MB setting is based on experience that proved to provide sufficient room for management of data when using Oracle Virtual Directory as a directory or database proxy.

If necessary, you can run Oracle Virtual Directory with less memory, as is done in some ISV environments where the overhead of Oracle Virtual Directory must be kept as low as possible. However, running Oracle Virtual Directory with less memory causes certain constraints, for example, the Cache plug-in may not be as effective with 128MB of configured memory.

If your organization wanted to maintain long-lived objects in the Cache plug-in or do significant data manipulation of large data-sets, it is possible that Oracle Virtual Directory could consume a gigabyte or more of memory. However, in the most deployments, the default 512MB has proven to be sufficient.

If you will be making extensive use of the Local Store Adapter, you will want to tune the amount of memory you want to dedicate to Oracle Virtual Directory's operations. Use the chart below as a guideline:

Sample Memory Allocation Requirements:

# of local Entries / # of Attributes	Memory Allocation Required
50K entries, 10 attributes per entry	45 MB
100K entries, 10 attributes per entry	90 MB
250K entries, 10 attributes per entry	225 MB
500K entries, 10 attributes per entry	450 MB

You can modify the memory value for Linux platforms by editing the `vde_start.sh` script in the main installation directory (typically `/opt/OViD`). Use the following steps to adjust the memory value:

- Open `vde_start.sh` using a text editor and go to the end of the file. The last lines will look similar to the following:

```
exec "$VDE_DIR"/jre/bin/java -server -Xmx512m
-Djava.net.preferIPv4Stack=true -Dvde.home="/opt/OViD"
-Dvde.lib="/opt/OViD/server/lib"
-Dvde.ldap.requireClientAuth="false" -Dvde.ldap.ciphers=""
com.octetstring.vde.VDEServer >
"$VDE_DIR"/log/vde_startup.log 2>&1
```

The default value is `-Xmx512m` (where memory allocation is 512 MB). Change the value to the amount of memory you wish to allocate to the Oracle Virtual Directory process.

- Save `vde_start.sh`.

Automating Oracle Virtual Directory Start-Up At Boot-Time

The following steps explain how to create a script to enable Oracle Virtual Directory to perform an automatic startup on a Linux machine.

- Log on with "root" access to the appropriate machine.
- Go to the `/etc/rc3.d` directory by typing: `cd /etc/rc3.d`

3. Create a symbolic link to the `vde.sh` file in the root of the directory you installed Oracle Virtual Directory into (typically `/opt/OViD`): `ln -s /opt/OViD/vde.sh S22vde`
4. Change permissions to allow the script to run: `chmod 754 S22vde`
5. In the `/etc/rc3.d` directory, create a second symbolic link to the `vde.sh` file in the root of the directory where you installed Oracle Virtual Directory (typically `/opt/OViD`):
`ln -s /opt/OViD/vde.sh K22vde`
6. Change permissions to allow the script to run: `chmod 754 K22vde`

Starting & Stopping Oracle Virtual Directory

Starting and stopping Oracle Virtual Directory on the Linux platform is accomplished by using the following.

Note: Oracle Virtual Directory is typically installed in `/opt/OViD/`.

1. To start Oracle Virtual Directory, use either of the following commands:
 - `/etc/rc3.d/S22vde start`
or
 - `/opt/OViD/vde.sh start`
2. To stop Oracle Virtual Directory type:
 - `/etc/rc3.d/K22vde stop`
or
 - `/opt/OViD/vde.sh stop`

Removing Oracle Virtual Directory

To remove Oracle Virtual Directory, you must:

1. Verify Oracle Virtual Directory is not running. If it is, stop it.
2. Using root privileges, `cd` to the `/Uninstaller` directory of your Oracle Virtual Directory installation.
3. At the prompt type: `./Uninstall`

NOTE: The folder that Oracle Virtual Directory was installed in will not be deleted by running the `./Uninstall` command. If any data files, log files, or customized configuration files exist, these files will need to be manually removed in order to remove Oracle Virtual Directory completely.

5. Installing Oracle Virtual Directory on HP-UX 11

This chapter describes the steps required to install Oracle Virtual Directory on HP-UX platforms. It covers installation prerequisites, system tuning and how to remove Oracle Virtual Directory.

Operating System Requirements

Oracle Virtual Directory 10g (10.1.4.0.1) is certified on the HP-UX 11 operating system. The patches described in the following HP document must be installed prior to the installation of Oracle Virtual Directory on HP-UX 11.

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

Disk Space Requirements

Ensure that sufficient disk space is available before installing the software. Oracle Virtual Directory requires approximately 70 MB of disk space when installed with no local entries using the Local Store Adapter.

If you will not be using the Local Store Adapter (LSA), disk space usage is limited to log file and configuration file storage only. Depending on log settings, this usage can be minimal (a few MB per day), or quite extensive if using “Debug” logging modes.

If you will be using the LSA Adapter, as a general rule, the amount of disk space required to operate LSA roughly equals 150% the size of the data set being loaded into the adapter. For example, a LDIF file with 500K entries & 10 attributes per user is roughly 200 MB in size. Oracle Virtual Directory will require 300 MB of disk space to store the imported data and its indexes.

Installing the Package

To install Oracle Virtual Directory on HP-UX based systems:

GUI Mode (X-Windows Based)

1. Log in to HP-UX with administrator privileges.
2. Open a shell and `cd` to the directory containing the Oracle Virtual Directory installer.
3. At the prompt type: `sh ./ovid1014.bin`
4. Continue with the GUI-based installation instructions found in the *Installing Oracle Virtual Directory Using the GUI* chapter.

Console-Based

1. Log in to HP-UX with administrator privileges.
2. Open a shell and `cd` to the directory containing the Oracle Virtual Directory installer.
3. At the prompt type: `sh ./ovid1014.bin -i console`
4. Continue with the console based installation instructions found in the *Installing Oracle Virtual Directory Using the Console* chapter.

Modifying Runtime Memory Allocation

By default, Oracle Virtual Directory is configured to use 512MB. The 512MB setting is based on experience that proved to provide sufficient room for management of data when using Oracle Virtual Directory as a directory or database proxy.

If necessary, you can run Oracle Virtual Directory with less memory, as is done in some ISV environments where the overhead of Oracle Virtual Directory must be kept as low as possible. However, running Oracle Virtual Directory with less memory causes certain constraints, for example, the Cache plug-in may not be as effective with 128MB of configured memory.

If your organization wanted to maintain long-lived objects in the Cache plug-in or do significant data manipulation of large data-sets, it is possible that Oracle Virtual Directory could consume a gigabyte or more of memory. However, in the most deployments, the default 512MB has proven to be sufficient.

If you will be making extensive use of the Local Store Adapter, you will want to tune the amount of memory you want to dedicate to Oracle Virtual Directory's operations. Use the chart below as a guideline:

Sample Memory Allocation Requirements:

# of local Entries / # of Attributes	Memory Allocation Required
50K entries, 10 attributes per entry	45 MB
100K entries, 10 attributes per entry	90 MB
250K entries, 10 attributes per entry	225 MB
500K entries, 10 attributes per entry	450 MB

You can modify the memory value for HP-UX platforms by editing the `vde_start.sh` script in the main installation directory (typically `/opt/OViD`). Use the following steps to adjust the memory value:

1. Open `vde_start.sh` using a text editor and go to the end of the file. The last lines will look similar to the following:

```
exec "$VDE_DIR"/jre/bin/java -server -Xmx512m
-Djava.net.preferIPv4Stack=true -Dvde.home="/opt/OViD"
-Dvde.lib="/opt/OViD/server/lib"
-Dvde.ldap.requireClientAuth=false -Dvde.ldap.ciphers=""
com.octetstring.vde.VDEServer >
"$VDE_DIR"/log/vde_startup.log 2>&1
```

The default value is `-Xmx512m` (where memory allocation is 512 MB). Change the value to the amount of memory you wish to allocate to the Oracle Virtual Directory process.

2. Save `vde_start.sh`.

Automating Oracle Virtual Directory Start-Up At Boot-Time

The following steps outline how to create a script that will enable Oracle Virtual Directory to perform an automatic startup on an HP/UX machine.

1. Log on with "root" access to the appropriate machine.
2. Change to the `/sbin/rc3.d` directory by typing: `cd /sbin/rc3.d`
3. Create a symbolic link to the `vde.sh` file in the root of the directory where you installed Oracle Virtual Directory (typically `/opt/OViD`): `ln -s /opt/OViD/vde.sh S22vde`

4. Change permissions to allow the script to run: `chmod 754 S22vde`
5. From inside of `/sbin/rc0.d`, create a second symbolic link to the `vde.sh` file in the root of the directory where you installed Oracle Virtual Directory (typically `/opt/OViD`):
`ln -s /opt/OViD/vde.sh K22vde`
6. Change permissions to allow the script to run: `chmod 754 K22vde`

Starting & Stopping Oracle Virtual Directory

Starting and stopping Oracle Virtual Directory on the HP-UX platform is accomplished using the following:

Note: Oracle Virtual Directory is typically installed in `/opt/OViD/`.

1. To start Oracle Virtual Directory, type:
 - `/sbin/rc3.d/S22vde start`or
 - `/opt/OViD/vde.sh start`
2. To stop Oracle Virtual Directory, type:
 - `/sbin/rc0.d/K22vde stop`or
 - `/opt/OViD/vde.sh stop`

Removing Oracle Virtual Directory

To remove Oracle Virtual Directory, you must:

1. Verify Oracle Virtual Directory is not running. If it is running, stop it.
2. Using root privileges, `cd` to the `/Uninstaller` directory of your Oracle Virtual Directory installation.
3. At the prompt type: `./Uninstall`

NOTE: The folder that Oracle Virtual Directory was installed in will not be deleted by running the `./Uninstall` command. If any data files, log files, or customized configuration files exist, these files will need to be manually removed in order to remove Oracle Virtual Directory completely.

6. Installing Oracle Virtual Directory on AIX

This chapter describes the steps required to install Oracle Virtual Directory on AIX platforms. It covers installation prerequisites, system tuning and how to remove Oracle Virtual Directory.

Operating System Requirements

Oracle Virtual Directory 10g (10.1.4.0.1) is certified on AIX 5.2. Refer to the following web site for the latest information regarding which patch sets should be installed to support JRE 1.4.2:

<http://www-106.ibm.com/developerworks/java/jdk/aix/?dwzone=java>

Disk Space Requirements

Ensure that sufficient disk space is available before installing the software. Oracle Virtual Directory requires approximately 70 MB of disk space when installed with no local entries using the Local Store Adapter.

If you will not be using the Local Store Adapter (LSA), disk space usage is limited to log file and configuration file storage only. Depending on log settings, this usage can be minimal (a few MB per day), or quite extensive if using “Debug” logging modes.

If you will be using the LSA Adapter, as a general rule, the amount of disk space required to operate LSA roughly equals 150% the size of the data set being loaded into the adapter. For example, a LDIF file with 500K entries & 10 attributes per user is roughly 200 MB in size. Oracle Virtual Directory will require 300 MB of disk space to store the imported data and its indexes.

Installing the Package

To install Oracle Virtual Directory on AIX based systems:

GUI Mode (X-Windows Based)

1. Log in to AIX with administrator privileges.
2. Open a shell and `cd` to the directory containing the Oracle Virtual Directory installer.
3. At the prompt type: `sh ./ovid1014.bin`
4. Continue with the GUI-based installation instructions found in the *Installing Oracle Virtual Directory Using the GUI* chapter.

Console-Based

1. Log in to AIX with administrator privileges.
2. Open a shell and `cd` to the directory containing the Oracle Virtual Directory installer.
3. At the prompt type: `sh ./ovid1014.bin -i console`
4. Continue with the console based installation instructions found in the *Installing Oracle Virtual Directory Using the Console* chapter.

Modifying Runtime Memory Allocation

By default, Oracle Virtual Directory is configured to use 512MB. The 512MB setting is based on experience that proved to provide sufficient room for management of data when using Oracle Virtual Directory as a directory or database proxy.

If necessary, you can run Oracle Virtual Directory with less memory, as is done in some ISV environments where the overhead of Oracle Virtual Directory must be kept as low as possible. However, running Oracle Virtual Directory with less memory causes certain constraints, for example, the Cache plug-in may not be as effective with 128MB of configured memory.

If your organization wanted to maintain long-lived objects in the Cache plug-in or do significant data manipulation of large data-sets, it is possible that Oracle Virtual Directory could consume a gigabyte or more of memory. However, in the most deployments, the default 512MB has proven to be sufficient.

If you will be making extensive use of the Local Store Adapter, you will want to tune the amount of memory you want to dedicate to Oracle Virtual Directory's operations. Use the chart below as a guideline:

Sample Memory Allocation Requirements:

# of local Entries / # of Attributes	Memory Allocation Required
50K entries, 10 attributes per entry	45 MB
100K entries, 10 attributes per entry	90 MB
250K entries, 10 attributes per entry	225 MB
500K entries, 10 attributes per entry	450 MB

You can modify the memory value for AIX platforms by editing the `vde_start.sh` script in the main installation directory (typically `/opt/OViD`). Use the following steps to adjust the memory value:

1. Open `vde_start.sh` using a text editor and go to the end of the file. The last lines will look similar to the following:

```
exec "$VDE_DIR"/jre/bin/java -server -Xmx512m
-Djava.net.preferIPv4Stack=true -Dvde.home="/opt/OViD"
-Dvde.lib="/opt/OViD/server/lib"
-Dvde.ldap.requireClientAuth="false" -Dvde.ldap.ciphers=""
com.octetstring.vde.VDEServer >
"$VDE_DIR"/log/vde_startup.log 2>&1
```

The default value is `-Xmx512m` (where memory allocation is 512 MB). Change the value to the amount of memory you wish to allocate to the Oracle Virtual Directory process.

2. Save `vde_start.sh`.

Automating Oracle Virtual Directory Start-Up At Boot-Time

The following steps explain how to create a script to enable Oracle Virtual Directory to perform an automatic startup on an AIX machine:

1. Log on with "root" access to the appropriate machine.
2. Change to the `/etc` directory by typing: `cd /etc`
3. Update the file `inittab` with the following line:

```
#Start Oracle Virtual Directory
osvde:2:wait:/opt/OViD/vde.sh start > /dev/null 2>&1
```

Note: Oracle Virtual Directory is typically installed in /opt/OViD/.

Starting & Stopping Oracle Virtual Directory

Starting and stopping Oracle Virtual Directory on the AIX platform is accomplished by using the following:

Note: Oracle Virtual Directory is typically installed in /opt/OViD/.

1. To start Oracle Virtual Directory, type: `/opt/OViD/vde.sh start`
2. To stop Oracle Virtual Directory type: `/opt/OViD/vde.sh stop`

Removing Oracle Virtual Directory

To remove Oracle Virtual Directory, you must:

1. Verify Oracle Virtual Directory is not running. If it is, stop it.
2. Using root privileges, `cd` to the /UninstallerData directory of your Oracle Virtual Directory installation.
3. At the prompt type: `./Uninstall_VDE`

NOTE: The folder that Oracle Virtual Directory was installed in will not be deleted by running the `./Uninstall` command. If any data files, log files, or customized configuration files exist, these files will need to be manually removed in order to remove Oracle Virtual Directory completely.

7. Installing Oracle Virtual Directory Using the GUI

This chapter describes the basic steps in the graphical installation process and includes an introduction to the AddAdapter and DbMapConfig utilities.

Introduction

The Oracle Virtual Directory installer is able to run in two modes, graphical and console-based. The console-based installation tool is designed to enable installation on systems where no graphical environment is available. For more information on the console installation, refer to the “Installing Oracle Virtual Directory Using the Console” chapter.

The installation of Oracle Virtual Directory is divided into two steps. The first step, basic installation, performs the major activity of installing Oracle Virtual Directory into the host server and setting basic operational parameters. Once this is complete, Oracle Virtual Directory will be installed and ready for the management client to allow final configuration and management of the Oracle Virtual Directory.

Basic Installation

Once the Oracle Virtual Directory installer has been started, it goes through some preliminary steps to unpack the kit and prepare for installation. Once complete, an introduction page will be displayed.

NOTE: You can go backwards or forwards at any time during the installation to change options as necessary. If you decide to abort the installation, click the cancel button in the bottom-left corner of the screen.

The server installer performs the work of installing Oracle Virtual Directory and preparing it for remote administration by the Oracle Virtual Directory Manager client. If you have an existing 2.0 configuration, the installer will automatically upgrade the configuration to 10.1.4 XML based configuration files.

Use the following steps to install Oracle Virtual Directory with the GUI:

1. Start the installer, and follow the instructions provided. When you reach the “Server Administration” screen, enter a unique name for the server, and enter the port number on which Oracle Virtual Directory is to provide administrative services.
2. If your system contains more than one network interface card and you would like Oracle Virtual Directory administration to be available only on one of these cards, enter the IP address of the NIC in the “Admin NIC” field. In order to protect the confidentiality and security of Oracle Virtual Directory, Oracle recommends using secure mode (SSL) when connecting to the Oracle Virtual Directory. If you select secure mode, the installer will ask you some additional questions after the installation in order to configure Oracle Virtual Directory with a self-signed certificate. You may wish to change this certificate to a certificate signed by a certificate authority in compliance with your corporate security requirements.

3. The root user is the base user with full administration capabilities over the server. This account is also the default account that is allowed to access and perform remote administrative services. Note that an admin URL can also be defined later to enable more users as administrators.
4. Oracle Virtual Directory 10.1.4 offers three different types of client listeners. In addition to typical LDAP support, DSMLv2 provides SOAP/HTTP based support for access to directory information. Oracle Virtual Directory also provides an XSLT based web gateway that can be customized for web directory style applications.
5. Depending on the listeners selected in the previous step, you will be asked for port and network interface information for each protocol. Note that DSMLv2 and HTTP Web Gateway share the same HTTP listener.
6. The installer will ask you for an initial directory suffix. This should be the root DN you plan to use for your server. This information will be used to initialize Oracle Virtual Directory security to support access to data under this root. When you configure your adapters, remember to use this same root in your virtual directory tree, or you may find that access control will block your ability to see data in the new root. This can be corrected from within the administrative console's ACL editor.
7. If you are installing on Windows, you will be asked if you would like to install Oracle Virtual Directory as a Windows Service (or define an autostart directory in the case of OS X). If you plan to use the server frequently, answer yes to the question. This enables Oracle Virtual Directory to be auto-started at system startup.
8. When you reach the installation summary, click "Next" to proceed with the installation. At this stage the server will be installed. If you are upgrading a previous version, you may also receive several warnings and notices reminding you of information that is about to be over-written. During the upgrade process, the installer will attempt to convert your ".prop" configuration files to the new ".os_xml" xml configuration files. If an error occurs, you will receive a diagnostic screen informing you of the problem. Please contact Oracle support if this occurs.
9. If you elected to use secure communication for the administration gateway, you will now be asked some questions to enable the installer to create a temporary self-signed server certificate to secure management communications between the Oracle Virtual Directory Manager client and Oracle Virtual Directory.
 - For the server name, enter the IP address or the DNS name that will be used by the clients to connect to the server (for example ldap.vde.myorg.com, or 192.168.0.1).
 - After entering the Server Name information, enter the remaining certificate information such as organization, state, and country. Note that "State" is a required field and must be spelled out in long form. "Country" must also be included and must be in a two-letter format (for example US for United States).
 - After entering the remaining certificate information, you will be given a summary to help confirm that you have entered the information correctly. At this point, after clicking next, the installer will automatically generate a server key and confirm the success or failure. If a failure occurs, check your certificate values and try again. If the problem persists, check the logs in the log directory of your Oracle Virtual Directory installation and contact Oracle support for more information.
10. After successful installation of the server and optional configuration of the SSL server certificate, the Install Complete screen will be displayed. Proceed to the "Installing the Oracle Virtual Directory Manager Client" chapter to complete installation of the Oracle Virtual Directory Manager client. Refer to the *Oracle Virtual Directory Product Manual* for more information on how to configure Oracle Virtual Directory.

8. Installing Oracle Virtual Directory Using the Console

This chapter describes console mode installation of Oracle Virtual Directory. Console mode installation is not available on Windows platforms. However, you can contact your Oracle Support representative for information on packaging for automatic (silent) installers.

The console installer will install a base Oracle Virtual Directory. The administrator may then edit the configuration files to add adapters (adapters.prop) and set more advanced options.

Starting the Installation

Activate the console installer by running the following command from the directory containing the installation kit: `sh ./ovid1014.bin -i console`

The system will respond with:

```
Preparing to install...
Extracting the JRE from the installer archive...
Unpacking the JRE...
Extracting the installation resources from the installer archive...
Configuring the installer for this system's environment...

Launching installer...
Preparing CONSOLE Mode Installation...

=====
                        (created with InstallAnywhere by Zero G)
=====
```

Next, the introduction is displayed:

```
=====
Introduction to VDE
-----

Welcome to Oracle Virtual Directory. The Oracle Virtual Directory
is a multi-function LDAPv3 server that provides combined directory server, LDAP
proxy, database proxy, and data joiner that forms today's most comprehensive
directory service product.

InstallAnywhere will guide you through the installation of VDE.

This console installation will perform a "Minimal" installation to get basic
VDE installed and running. If a GUI environment is available, Oracle
recommends using the GUI mode installer for more installer options.

NOTE: If you wish to go back a step enter BACK or Back at any prompt. If you
wish to abort the install enter QUIT.

PRESS <ENTER> TO CONTINUE:
```

Choosing The Installation Directory

Next, you will be asked to choose an installation folder. If the folder is not present, the installer will create it for you. At any step in the installation where input is required, you may enter QUIT to abort the installation, or enter BACK to go to a previous step.

```
=====
Choose Install Folder
-----
Note: It is preferable not to have spaces in your directory names.

Where would you like to install?
Default Install Folder: /root/Oracle/OViD

ENTER AN ABSOLUTE PATH, OR PRESS <ENTER> TO ACCEPT THE DEFAULT
```

Initial Configuration

The installer will now ask for information to minimally configure the server so that it can be managed by the Oracle Virtual Directory Manager administrative client.

```
=====
Initial Configuration Steps
-----
The install script will now take you through some initial configuration steps.
After the initial installation, you may configure the directory adapters (data
sources) using the Oracle Virtual Directory Manager administrative client.

PRESS <ENTER> TO CONTINUE:
```

Administrative Gateway Configuration

The administrative gateway provides administrative access to the Oracle Virtual Directory.

```
=====
VDE Administrative Gateway Configuration
-----
Enter a uniquely descriptive name for the server.

Server Name (DEFAULT: Oracle Virtual Directory): Chicago 1 VDE
```

The name entered above should be any unique name that is useful for administration purposes. It can be, but is not required to be, the same as the server host name (DNS name).

The following questions relate to the actual gateway itself. For Network Interface Card Address, leave this field blank unless your server has multiple network cards and Oracle Virtual Directory should only listen for administrative requests on one network interface (instead of all interfaces).

```
=====
Network Interface
-----
Enter the NIC IP if the server is to offer administrative service on only one network
card (when multiple network cards are present).

Leave blank (default) to listen on all network interfaces.

Network Interface Card Address (DEFAULT: ):
```

```

=====
Administrative Gateway Port
-----
Enter the port number on which to provide administrative services.

Port Number (DEFAULT: 8888):

=====
Enable SSL
-----
Enable SSL/TLS on the administrative gateway for VDE?

->1- Enabled
    2- Disabled

ENTER THE NUMBER FOR YOUR CHOICE, OR PRESS <ENTER> TO ACCEPT THE DEFAULT:
    
```

It is highly recommended that SSL/TLS be enabled for the administrative gateway. This helps to ensure that administrative configuration information is kept confidential and not communicated in the clear. If you elect to enable SSL, you will be asked some additional questions at the end of the installation in order to configure Oracle Virtual Directory with a temporary self-signed server certificate. Depending on your organizations security requirements, you may wish to replace this certificate at a later time with one signed by a designated Certificate Authority.

Root User Account

The Root User account is the primary account used for administrating Oracle Virtual Directory. This account is configured within Oracle Virtual Directory and does not exist in any other system.

```

=====
Root User Account
-----
VDE uses an internal account called the root user account for administration and
management. Enter the distinguished name desired for the root user.

Root User DN (DEFAULT: cn=Admin):

=====
Root User Password
-----

Enter a password for the root user account. Note: the value will be echoed in clear
text to your screen.

You should change the password using administrative client after the installation is
complete.

Password: (DEFAULT: changeit): manager
    
```

During the console installation, the password will be shown in the clear. You may wish to change the password confidentially later on using the Oracle Virtual Directory Manager client.

Listener Configuration

The installer will now configure an LDAP listener. You can revise its configuration later on using Oracle Virtual Directory Manager, including removing or adding other listeners.

```
=====
Listener Configuration
-----

During this minimal installation, the installer will automatically configure a
single LDAP listener. You will now be asked for configuration options for the
LDAP listener.

After the installation is complete, you may re-configure this listener and add
other listeners (such as DSMLv2) using the DME administrative client.

PRESS <ENTER> TO CONTINUE:

=====
LDAP Listener Network Interface
-----

Enter the Network Interface IP Address for VDE to provide services on. Or, leave blank
to listen on all available network interfaces.

NIC Host Address (DEFAULT: ):

=====
LDAP Port
-----

Enter a port number to provide LDAP services on (e.g. 389, 636).

Port (DEFAULT: 389):

=====
LDAP SSL Mode
-----

Enable SSL/TLS?

    1- Enabled
    ->2- Disabled

ENTER THE NUMBER FOR YOUR CHOICE, OR PRESS <ENTER> TO ACCEPT THE DEFAULT:
```

Directory Base Suffix

The installer will now ask for the directory base suffix. This base is to be the main root of your directory. This base will be used to set the default access controls for the entire directory.

```
=====
Directory Base
-----

Define the base entry of your directory (e.g. o=mycorp,c=us). This will be used to
configure an initial set of access control lists and will be used to allow you to
configure VDE adapters if selected.

Please enter the base entry of your directory (e.g. o=YourCompany,c=US)

Directory Base Suffix[dc=YourCompany,dc=com]:
```

Ready To Install

At this point, the installer is ready to complete the installation of the server. As a final confirmation, the installer will remind you of the target installation directory. Next, the installer will inform you of the default configuration that will be set for this installation (this is equivalent to a minimum mode install in the GUI installer). Once the installation is complete, you may edit the properties files in the /conf directory. For more information on configurable properties and options, consult the *Oracle Virtual Directory Product Manual*.

During the installation process, a text progress bar will be displayed on the screen.

```
=====
Installing...
-----

[===== | ===== | ===== | =====]
[-----]
```

On completion of the installation, the installer will inform you of the successful installation of the Oracle Virtual Directory software.

Post Installation Procedures – SSL Configuration

After installation is complete, you will be asked questions in order to configure Oracle Virtual Directory with a self-signed server certificate. If you did not ask for SSL mode on the administrative gateway, this step is skipped.

Note that some fields are optional, and other fields have certain formatting requirements (for example country must be expressed as two letters). For the server host name, be sure to use the IP address or DNS names that administrators will use to address this server in their host connection information.

```

=====
Initial SSL Configuration
-----

In order to configure your server for secure administrative communication, the
installer will initially configure the server with a self-generated (self-signed)
certificate.

If you wish to install a certificate to be signed by another certificate authority,
you may do so using the DME management tool after installation is complete.

PRESS <ENTER> TO CONTINUE:

=====
Server Host Name
-----

Enter the server IP address or DNS name that you will use to connect to the
administration port of this server. Note that you must use this name to connect to
this server. For example, if you enter a DNS name (myVDE.myorg.com), you must use the
same address (myVDE.myorg.com) in the server connection dialog within the management
client.

Server Name: (DEFAULT: ): 192.168.0.20

=====
Organizational Unit
-----

Enter your organizational unit (optional)

OU= (DEFAULT: ):

=====
Organization
-----

Organization Legal Name(e.g. as defined by Dun & Bradstreet)

O= (DEFAULT: ): MyCompany.

=====
Locality
-----

Locality (e.g. City, Principality) (optional)

L= (DEFAULT: ): Chicago

=====
State
-----

State (spelled out. e.g. Lower Saxony)
ST= (DEFAULT: ): Illinois

```

```
=====  
Country  
-----  
  
Country (two letter format only, e.g. US, UK)  
C= (DEFAULT: ): US  
=====  
Self-signed Certificate Summary  
-----  
The following information will be used to generate your self-signed server  
certificate:  
  
Key File: conf/keys.db  
  
Server Alias: serverSelfSigned  
  
Subject Name: CN=192.168.0.20,O=MyCompany (Self-Signed Server Key - No  
warranty or assurances),L=Chicago,S=Illinois,C=US  
  
Key Expires: 730 days (2 years)  
  
Key Alg: RSA  
  
Key Size: 1024  
  
PRESS <ENTER> TO CONTINUE:
```

If the SSL key generation is successful, you will receive the following message:

```
=====  
SUCCESS  
-----  
  
Server certificate successfully generated!  
  
PRESS <ENTER> TO ACCEPT THE FOLLOWING (OK):
```

Installation Complete

After the installation is complete, confirmation will be shown as below:

```
=====  
Installation Complete  
-----  
  
Congratulations. VDE has been successfully installed to:  
  
/root/Oracle/OViD  
  
You must complete the following steps:  
  
1. Start the newly installed/upgraded server. This will enable remote management  
access.  
  
2. Install the management client (DME) on this machine or another client  
system.  
  
3. Use DME to connect to this server and complete the configuration and  
management.  
  
PRESS <ENTER> TO EXIT THE INSTALLER: THE INSTALLER:
```

Proceed to the “Installing the Oracle Virtual Directory Manager Client” chapter. You will use Oracle Virtual Directory Manager to configure and manage Oracle Virtual Directory.

9. Installing the Oracle Virtual Directory Manager Client

The Oracle Virtual Directory Manager Client is provided to allow administrators and developers operate and manage one or more directories. Typically the management client is installed on an administrator's desktop or workstation, as such, Oracle Virtual Directory Manager is distributed as a separate installation.

Oracle Virtual Directory Manager is a standalone package based on the Eclipse open source platform (<http://www.eclipse.org>). The Eclipse platform offers an extensible architecture enabling products such as Oracle Virtual Directory Manager to run either as standalone products or as “pluggable” components in other administration systems such as IBM WebSphere Studio Application Developer. For this installation guide, we will cover installation of Oracle Virtual Directory Manager as a standalone product only. For more information on Oracle Virtual Directory Manager consult the *Oracle Virtual Directory Product Manual*.

Operating System Requirements

- Windows 2000, 2000 Professional, Windows XP, XP Professional, Windows 2003 [Approximately 140MB disk space required]
- Red Hat or SuSE Linux [Approximately 90MB disk space required] with GTK graphical environment (Motif not supported)

For other platform support, refer to: <http://www.eclipse.org>.

Installing Oracle Virtual Directory Manager

The Oracle Virtual Directory Manager installer program installs Oracle Virtual Directory Manager so you can begin the process of administering your directories. Since this is a new product, no upgrade process is provided or required. Oracle Virtual Directory Manager can be installed on the same or different system than the Oracle Virtual Directory.

1. Start the installer and follow the instructions provided. Start ovidm1014.exe for Windows installations and start ovidm1014.bin for UNIX and Linux installations.
2. When choosing an installation directory, make sure you choose a directory different than the Oracle Virtual Directory.
3. As with Oracle Virtual Directory, choose a shortcuts folder if desired.
4. Workspace selection. Oracle Virtual Directory Manager uses a **workspace** to hold local copies of server configuration data as well as management and state information about various projects you are managing within Oracle Virtual Directory Manager. By default, the workspace is set to be in the installation directory of Oracle Virtual Directory Manager. You can choose to place this workspace somewhere else on your file system.
5. Installation Summary. The installer provides you with a summary and the estimate of disk space required. Click “Next” to proceed with the installation.
6. After your installation is complete, proceed to the Oracle Virtual Directory Manager chapter in the *Oracle Virtual Directory Product Manual* for an introduction to Oracle Virtual Directory Manager.