

Oracle Video Server™

Installation Guide

Release 3.0 for Sun SPARC Solaris 2.x

February 1998

Part No. A59554-01

Topics Including:

Requirements and Features

Pre-Installation

Installing Oracle Video Server

Post-Installation

Basic UNIX for Installing Oracle Products

ORACLE®

Enabling the Information Age™

Oracle Video Server Installation Guide for Sun SPARC Solaris 2.x

Release 3.0 for Sun SPARC Solaris 2.x

Part No. A59554-01

Copyright © 1997, 1998, Oracle Corporation. All rights reserved.

The programs are not intended for use in any nuclear, aviation, mass transit, medical, or other inherently dangerous applications. It shall be licensee's responsibility to take all appropriate fail-safe, back up, redundancy and other measures to ensure the safe use of such applications if the Programs are used for such purposes, and Oracle disclaims liability for any damages caused by such use of the Programs.

This Program contains proprietary information of Oracle Corporation; it is provided under a license agreement containing restrictions on use and disclosure and is also protected by copyright patent and other intellectual property law. Reverse engineering of the software is prohibited.

The information contained in this document is subject to change without notice. If you find any problems in the documentation, please report them to us in writing. Oracle Corporation does not warrant that this document is error free.

If this Program is delivered to a U.S. Government Agency of the Department of Defense, then it is delivered with Restricted Rights and the following legend is applicable:

Restricted Rights Legend Programs delivered subject to the DOD FAR Supplement are 'commercial computer software' and use, duplication and disclosure of the Programs shall be subject to the licensing restrictions set forth in the applicable Oracle license agreement. Otherwise, Programs delivered subject to the Federal Acquisition Regulations are 'restricted computer software' and use, duplication and disclosure of the Programs shall be subject to the restrictions in FAR 52.227-14, Rights in Data -- General, including Alternate III (June 1987). Oracle Corporation, 500 Oracle Parkway, Redwood City, CA 94065.

Registered Trademarks of Oracle Corporation: Oracle, the Oracle logo, Oracle Media Objects, SQL*Loader, SQL*Module, SQL*Net, and SQL*Plus are registered trademarks of Oracle Corporation.

Non-Registered Trademarks of Oracle Corporation: Oracle Video Server, Oracle Video Client, Oracle Video Server Manager, Enabling the Information Age, InterOffice, Network Computing Architecture, Oracle Applications, Oracle Enterprise Manager, Oracle Installer, Oracle Server Manager, Oracle Toolkit, Oracle WebServer, Oracle7, Oracle7 Server, and PL/SQL are trademarks of Oracle.

UNIX is a registered trademark in the United States and other countries, licensed exclusively through X/Open Company Limited. All other products or company names are used for identification purposes only, and may be trademarks of their respective owners.

All other company or product names mentioned are used for identification purposes only and may be trademarks of their respective owners.

For more information about Oracle's trademarks and intellectual property policies, contact the Oracle Legal Department at (650) 506-5100.

Contents

Send Us Your Comments	iii
Preface.....	v
Audience.....	vi
How this Guide is Organized.....	vi
Typographic Conventions.....	vii
Command Syntax.....	vii
Contacting Customer Support.....	viii
1 Requirements and Features	
System Requirements	1 - 2
Hardware Requirements	1 - 2
Software Requirements.....	1 - 3
Installation Options	1 - 4
Demonstration Version.....	1 - 4
Production Version or Uninstall.....	1 - 4
Upgrading From a Previous Release of Oracle Video Server	1 - 6
Upgrading from the 3.0 Demonstration Version	1 - 8
Operating System- and Installation-Specific Issues and Restrictions	1 - 9
2 Pre-Installation	
Collect Installation Information	2 - 2
Tasks to Perform as the root User	2 - 5
Tasks to Perform as the oracle User.....	2 - 11
3 Installing Oracle Video Server	
Mount the Product Distribution CD-ROM	3 - 2
Installing Oracle Video Server.....	3 - 3
Oracle Video Server Installation Tasks	3 - 3

Installed Directories.....	3 - 16
Configuration Files.....	3 - 17
Uninstalling Oracle Video Server.....	3 - 18
Oracle Video Server Uninstallation Tasks	3 - 18

4 Post-Installation

Run ovsenv.*sh	4 - 2
Post-Installation Tasks for Multi-Processor Servers	4 - 3
Online Documentation	4 - 5
Starting and Stopping Processes.....	4 - 6
Starting the Oracle Video Server	4 - 7
Using Oracle Media Net.....	4 - 8
Sample Content in the Oracle Media Data Store.....	4 - 10
Enabling Real-Time Video Delivery	4 - 14

A Basic UNIX for Installing Oracle Products

Miscellaneous UNIX Concepts	A - 2
Case Sensitivity	A - 2
Executable Scripts.....	A - 2
Wildcard Characters.....	A - 2
Symbols	A - 2
Overview of Basic UNIX Commands.....	A - 3
Basic UNIX Commands for Installing Oracle Products	A - 7
Basic UNIX Syntax and Descriptions.....	A - 8

Index

Send Us Your Comments

Oracle Video Server Installation Guide, Release 3.0 for Sun SPARC Solaris 2.x

Part No. A59554-01

Oracle Corporation welcomes your comments and suggestions on the quality and usefulness of this publication. Your input is an important part of the information used for revision.

- Did you find any errors?
- Is the information clearly presented?
- Do you need more information? If so, where?
- Are the examples correct? Do you need more examples?
- What features did you like most about this manual?

If you find any errors or have other suggestions for improvement, please indicate the chapter, section, and page number (if available). You can send comments to us in the following ways:

- osdwrite@us.oracle.com
- FAX - 1.650.506.7360 Attn: Lynn Robinson, Oracle Technology Network
- postal service:
Lynn Robinson
Oracle Technology Network
500 Oracle Parkway, Mailstop 1op3
Redwood Shores, CA 94065
USA

If you would like a reply, please give your name, address, and telephone number below.

Oracle Corporation welcomes your comments and suggestions on the quality and usefulness of this publication. Your input is an important part of the information used for revision.

You can send comments to us in the following ways

- electronic mail - osdwrite@us.oracle.com
- FAX - 1.650.506.7360 Attn: Publications Manager, Oracle Technology Network
- postal service
Publications Manager
Oracle Technology Network
500 Oracle Parkway, Mailstop 1op3
Redwood Shores, CA 94065
USA

Please provide the following information:

Name:

Title

Company:

Department:

Electronic Mail Address:

Postal Address:

Phone Number:

Book Title:

Version Number:

If you like, you can use the following questionnaire to give us feedback. Edit the online release notes file, extract a copy of this questionnaire, and send it to us.

- Did you find any errors?
- Is the information clearly presented?
- Do you need more information? If so, where?
- Are the examples correct? Do you need more examples?
- What features did you like most about this manual?

If you find any errors or have other suggestions for improvement, please indicate the chapter, section, and page number (if available).

Preface

This guide gives you the basic procedural information necessary to install the Oracle Video Server. Before you begin, read *Introducing Oracle Video Server* for a general overview of the Oracle Video Server, and the “Oracle Video Server System Planning” chapter in *Oracle Video Server Administrator’s Guide and Command Reference*.

Topics covered in the Preface:

- Audience
- How this Guide is Organized
- Typographic Conventions
- Command Syntax
- Contacting Customer Support

Audience

This document is for system administrators and others responsible for installing Oracle products on Sun SPARC Solaris systems.

How this Guide is Organized

Please read this guide in its entirety before beginning any installation activities. This guide is divided into the following chapters:

Chapter 1, “Requirements and Features” lists the minimum hardware and software requirements required to operate the Oracle Video Server.

Chapter 2, “Pre-Installation” describes the tasks which must be performed prior to installing the Oracle Video Server.

Chapter 3, “Installing Oracle Video Server” explains the process for installing the Demonstration Version and the Production Version of the Oracle Video Server software.

Chapter 4, “Post-Installation” describes tasks which you will need to perform after the Oracle Video Server is installed.

Appendix A, “Basic UNIX for Installing Oracle Products” explains essential UNIX concepts.

Typographic Conventions

<code>monospace</code>	Monospace type indicates UNIX commands, directory names, pathnames, and filenames.
brackets []	Words enclosed in brackets indicate key names (for example, Press [Return]). Note that brackets have a different meaning when used in command syntax.
<i>italics</i>	Italic type indicates a variable, including variable portions of filenames, or emphasis.
UPPERCASE	Uppercase letters indicate Structured Query Language (SQL) commands, initialization parameters, or environment variables.

Because UNIX is case-sensitive, conventions in this document may differ from those used in other Oracle product documentation.

Command Syntax

Command syntax appears in `monospace` font. The following conventions apply to command syntax:

backslash \	A backslash indicates a command that is too long to fit on a single line. Enter the line as printed (with a backslash) or enter it as a single line without a backslash: <pre>dd if=/dev/rdskc0t1d0s6 of=/dev/rst0 bs=10b \ count=10000</pre>
braces { }	Braces indicate required items: <code>.DEFINE {macro1}</code>
brackets []	Brackets indicate optional items: <code>cvtcrt termname [outfile]</code> Note that brackets have a different meaning when used in regular text.
ellipses ...	Ellipses indicate an arbitrary number of similar items: <code>CHKVAL fieldname value1 value2 ... valueN</code>
<i>italics</i>	Italic type indicates a variable. Substitute a value for the variable: <i>library_name</i>
vertical line	A vertical line indicates a choice within braces or brackets: <code>SIZE filesize [K M]</code>

Contacting Customer Support

Please copy this page and distribute it within your organization as necessary.

Oracle Worldwide Customer Support (WWCS) can be reached at the following numbers (the hours are specified in your support contract):

- In the United States, call: **1.650.506.1500**.
- In Europe, call: **+44.1344.860160**.
- In Asia, call: **+81.3.5717.1850**.

Please prepare the following information before you call:

- ❑ Your CSI number (if applicable) or complete contact details, including any special project information.
- ❑ The release levels of the Oracle Server and associated products (for example, Oracle7 Server release 7.3.3.1, or Oracle Video Server release 3.0).
- ❑ Operating system name and release level, including patches and packages.
- ❑ Details of error codes, numbers, and descriptions associated with the problem.
- ❑ A full description of the issue, including:
 - What happened? For example, the command used and result obtained.
 - When did it happen? For example, time of day, or after a particular command, or after an operating system or Oracle upgrade.
 - Where did it happen? For example, on a particular system, or within a particular procedure or table.
 - What is the extent of the problem? For example, is your production system unavailable, or is the impact less severe? Is the problem getting worse?

Keep in mind what did *not* happen, as well as what did happen.

- ❑ Copies of any trace files, core dumps, or log files recorded near the time of the incident.

For installation-related problems, please have the following information available:

- ❑ Listings of the contents of the ORACLE_HOME directory, and any staging area, if applicable.
- ❑ Contents of the installation log files in the \$ORACLE_HOME/orainst directory: `install.log`, `sql.log`, `make.log`, and `os.log`.

For more information, contact <http://www.oracle.com/support>

Requirements and Features

A successful installation depends on the local system satisfying the software dependencies and space requirements for the Oracle Video Server (OVS) Release 3.0. This chapter describes the hardware and software requirements for installing Oracle Video Server Release 3.0 on Solaris 2.x. It also discusses the requirements for upgrading from a previous release, or the 3.0 Demonstration Version, of the Oracle Video Server.

Topics covered in this chapter:

- System Requirements
- Installation Options
- Upgrading From a Previous Release of Oracle Video Server
- Upgrading from the 3.0 Demonstration Version

System Requirements

Verify that your system meets the requirements described in the following sections before you install the Oracle Video Server.

Hardware Requirements

Table 1–1 Hardware Requirements

Hardware Item	Requirement
CPU	A Sun SPARC or UltraSPARC processor is required. Multiple processors are required for optimal performance.
Memory	Minimum of 96 MB RAM
Disk Space	Demonstration install: approximately 650 MB (see note below) OVS with sample content: approximately 600 MB OVS without sample content: approximately 420 MB
Hard Disks	2 GB capacity disks, with at least a Fast-Wide SCSI interface to store video content, are required. These disks must be raw partitions, not logical volumes.
Network Interface Card	A network interface that supports TCP/IP is required. An S-bus FDDI network adapter-SAS is recommended.
CD-ROM Device	A device that reads High Sierra-RockRidge format

Note: The demonstration install creates a file-based MDS of approximately 50 MB, and it installs a portion of the sample content.

Software Requirements

Table 1–2 Software Requirements

Software Item	Requirement
Operating System	Solaris 2.4 or later
Operating System Patches	Sun Microsystems operating system patch 101945-34 for Solaris 2.4

To determine which operating system patches are installed, enter:

```
$ showrev -p
```

To print patch level, enter:

```
$ uname -a
```

Installation Options

Demonstration Version

The Demonstration Version provides a correct environment for experimentation before installing the Production Version. It is intended for first-time administrators or demonstration systems, and it is not appropriate for production systems with multiple streams.

The Demonstration Version differs from the Production Version in two aspects: It has a disk-based MDS volume that is unsuitable for production sites, and it has no logical content support.

The Demonstration Version installs automatically, with no customization prompts.

Production Version or Uninstall

This option can install Oracle Media Net, Oracle Video Server, Oracle Video Server Manager, the required OVS Release 3.0 version of the Oracle Application Server (OAS), Oracle Video Server Manager Console, SQL*Net, and the TCP/IP Protocol Adapter.

Note: The version of Oracle Application Server that is shipped with OVS Release 3.0 is unique. If you have Oracle Application Server currently installed, the Oracle Installer will require that you install OVS and this new version of OAS on a different machine.

Oracle Video Server Manager (VSM) simplifies the management of distributed multimedia servers and clients in heterogeneous environments. Compliant with Oracle's Network Computing Architecture (NCA), VSM is your best tool for monitoring and managing an Oracle Video Server system.

The VSM Console is an object-oriented, Java application with a graphical user interface for monitoring and managing the OVS.

The VSM Console requires the following, which are shipped with Oracle Video Server:

1. Java Runtime Environment (JRE) version 1.1.5.

This is in `$ORACLE_HOME/vsmc30/jre1.1.5`.

2. A Java archive (jar) file containing all the classes required to run VSM Console, called `vsm.jar`.

This is in `$ORACLE_HOME/jbin`.

3. A shell script called `vsmstart`.

This is in `$ORACLE_HOME/vsmc30/admin`.

Upgrading From a Previous Release of Oracle Video Server

You cannot use the Oracle Installer to upgrade from previous releases of Oracle Video Server. Follow these steps to remove the previous release of Oracle Video Server, and then proceed with a new installation of Oracle Video Server Release 3.0.

1. Back up the `voltab` file as a reference.
2. Uninstall the previous release of Oracle Video Server (OVS), using the release of the Oracle Installer that accompanied it.
3. Install OVS Release 3.0 according to this guide.

Next, you need to upgrade the Oracle Media Data Store (MDS) by following these steps:

1. Remove any existing versions of shared memory, owned by Oracle, on your system. Below is sample output from the `ipcs` command:

```
% ipcs
IPC status from <running system> as of Thu Jan 15 21:21:58 1998
Message Queue facility not in system.
Shared Memory:
m    100 0x00000007 --rw-rw-rw-  oracle  oracle
m    101 0x00000009 --rw-rw-rw-  oracle  oracle
Semaphores:
s   65536 0x00000006 --ra-ra-ra-  oracle  oracle
s   65537 0x00000008 --ra-ra-ra-  oracle  oracle
```

The second column of output (100, 101, 65536, 65537) indicates the identifiers of segments and semaphores that you must remove. Use the `ipcrm` command to remove these:

```
% ipcrm -m 100 -m 101 -s 65536 -s 65537
```

2. Initialize the Media Data Store volume information, without overwriting the table of contents.

This can be done by specifying only the '-s' switch on `mdsvolinit`, without specifying the '-t' option. Rewriting the table of contents will destroy the existing content in the MDS, and is not necessary for this upgrade.

To initialize the MDS volume information:

- Restore the original copy of the `voltab` file to `$ORACLE_HOME/vs30/admin`.
- Startup Media Net:


```
% $ORACLE_HOME/mn33/admin/mnstart
```
- Run `mdsvolinit`:


```
% mdsvolinit -s -f $ORACLE_HOME/vs30/admin/voltab video
```

Do you really want to change attributes of volume 'video'? (yes, no)
yes
Attributes of volume 'video' recorded.
- Shutdown Media Net:


```
% $ORACLE_HOME/mn33/admin/mnstop
```

For more information, see the "Initialize the Oracle Media Data Store" section in the following chapter on how to initialize the volume.

3. Start the Oracle Video Server:


```
% $ORACLE_HOME/vs30/admin/ovsstart -a
```
4. Finally, run the `vstag` utility to register all the MPEG-1 and MPEG-2 content, and use `vsmkosf` to register all the AVI and WAV files:

```
% vstag -E mpi -o /mds/video/video $ORACLE_HOME/vs30/demo/content/*.mpg
% vsmkosf -n $ORACLE_HOME/vs30/demo/content/*.avi /mds/video
```

See Also: *The Oracle Video Server Content Administrator's Guide* has more information.

Upgrading from the 3.0 Demonstration Version

You cannot use the Oracle Installer to upgrade from previous releases, including the 3.0 Beta release, of Oracle Video Server.

If you installed the Demonstration Version of the OVS, and you decide at a later date to install the Production Version, you will need to remove `root` privileges on the following binaries: `vspump`, `mdsftpsrv`, and `vsmlogin`:

1. Login as `root`:

```
% su
Password:
```

2. Rename or remove the following files:

```
# mv $ORACLE_HOME/bin/vspump $ORACLE_HOME/bin/vspump0
# mv $ORACLE_HOME/bin/mdsftpsrv $ORACLE_HOME/bin/mdsftpsrv0
# mv $ORACLE_HOME/ows/cartx/vsm/3.0/admin/abin/vsmlogin \
$ORACLE_HOME/ows/cartx/vsm/3.0/admin/abin/vsmlogin0
```

If you are upgrading in order to enable logical content features, re-install the OVS product on top of itself through the Production Version, and choose `Yes` to logical content.

Alternatively, you can manually edit `$ORACLE_HOME/admin/mnrc` with the new connect strings and user/password information as follows:

```
vscontsrv.connect=USER/PASS@CONNECT_STRING
vsbcastsrv.connect=USER/PASS@CONNECT_STRING
```

where:

<USER> is the Oracle database user name

<PASS> is the password for the Oracle database user name

<CONNECT_STRING> is the SQL*Net connect string for the remote instance

Then, manually run `vsdbbuild`.

If you only want to create a Production volume, you can go through the same process, or you can create the `voltab` manually and `mdsvolinit`, as described in the *Oracle Video Server Administrator's Guide and Command Reference*.

Operating System- and Installation-Specific Issues and Restrictions

Certain issues and restrictions may affect the installation or use of the Oracle Video Server Release 3.0 on Solaris 2.x. You should check the release notes that accompany this release.

Pre-Installation

Use this chapter to prepare your environment for installing the Oracle Video Server. Prepare the environment only after you have verified that the system meets the requirements described in Chapter 1, “Requirements and Features”. This chapter also lists information you must obtain before installing the Oracle Video Server software.

Topics covered in this chapter:

- Collect Installation Information
- Tasks to Perform as the root User
- Tasks to Perform as the oracle User

Collect Installation Information

IP Address of the Server

From your system or network administrator, obtain the IP address of the network interface card used by the Oracle Video Server, or refer to your server platform's documentation on obtaining the IP address.

UDP Port Number

Select an available UDP port number between 1024 and 65535. The Oracle Installer uses the default value of 5000.

Device Names of Disks Used by MDS

The Oracle Installer requires that you enter the name of the first disk device to be used by the Oracle Media Data Store (MDS) before beginning the installation. The notation for disk names is as follows:

```
/dev/rdisk/cntnd0sn
```

where:

- c specifies the SCSI controllers used by the MDS volume (numbering begins at 0)
- t specifies the disks to be used by the MDS volume (numbering begins at 0)
- d specifies the Logical Unit Number of the disk (normally d0)
- s specifies the partitions (slices) per disk to be used by the MDS volume
- n identifies the controller or disk number

For example, if you use SCSI bus 0 with four disks numbered 0–3, using partition 6, the disk names are:

```
/dev/rdisk/c0t0d0s6  
/dev/rdisk/c0t1d0s6  
/dev/rdisk/c0t2d0s6  
/dev/rdisk/c0t3d0s6
```

For more information on disk names, refer to your server platform's administration documentation.

Number of SCSI Controllers

You will need to know the number of SCSI controllers being used by the Oracle Media Data Store. Refer to your operating system documentation for this information.

Device Names of Spare Disks

The Oracle Video Server supports the use of a *spare* disk, which can be used if a disk fails within an MDS volume. One spare disk can be used per MDS volume.

If the MDS volume is RAID protected, then the data from a failed disk can be reconstructed to the spare while the server continues to stream video. This ensures that your MDS volume can remain operational if another disk in the same RAID set fails before you can replace the failed disk.

Note: Spare disks are optional for the Oracle Video Server, but are recommended to maintain high availability of the server.

Number of Video Streams Required

The number of video streams that the video server can reliably provide is dependent upon a number of system configuration variables: Video stream bit rate, server processing power, available memory, disk I/O, network, and network interface bandwidth will all influence the performance of your system.

The Oracle Video Server installation will ask you to provide a value for the maximum number of video streams you want the video pump to support. Enter the highest concurrent number of video streams that you will require. The number you specify will influence the amount of server memory that is allocated for stream delivery. Choose this number carefully; a setting higher than needed may allocate system resources unnecessarily.

Note: To ensure support for this number of streams, you need to check the stream bit rate, server processing power, available memory, disk I/O, SCSI controller I/O, network, and network interface bandwidth.

At a later time, if additional video streams are required, you may increase the number of video streams per video pump. Alternatively, you can start one instance of the video pump for each processor your server contains (minus one to run the Oracle Video Server and the server operating system).

See Also: *Oracle Video Server Administrator's Guide and Command Reference*

Number of Processors

You must know if the server being used to run the Oracle Video Server is a uni-processor or a symmetric multi-processor (SMP) server. If you are using an SMP server, you will need to assign video pumps to one or more processors as a post-installation task.

Tasks to Perform as the root User

- Create an Administrative Group and User Account
- Ensure Host and Domain are Set Properly
- Install Patches for Solaris 2.4
- Create a Directory for the Oracle Video Server Installation
- Set Disk Permissions
- Partition the MDS Disk Drives

► Create an Administrative Group and User Account

The Oracle Video Server software must be run under an administrative user account and group. Log in as the `root` user and create a group and user account. This guide assumes that both group and user account names are *oracle*.

Administrative Group

On Solaris 2.x, use the `groupadd` utility to create the administrative group. Only primary members of the group account you create can log into VSM. Ensure that all users performing administrative tasks via VSM are primary members of the UNIX group which owns Oracle Video Server.

User Account

The Oracle Video Server must be run under a user account with read, write, and execute permissions to the directory selected for Oracle code install.

Use the `useradd` utility to create an *oracle* account with the following properties:

Login Name	The login name can be anything, but this document refers to it as the <i>oracle</i> account.
Default GID	This corresponds to the administrative group you created.
Home Directory	Choose a home directory consistent with other user home directories. The home directory of the <i>oracle</i> account does not have to be the same as the <code>ORACLE_HOME</code> directory.
Login Shell	The default shell can be <code>/bin/sh</code> , <code>/bin/csh</code> , or <code>/bin/ksh</code> , but the examples in this document assume the Bourne shell (<code>/bin/sh</code>).

Note: The *oracle* account should be used only for installing and maintaining Oracle software. *Never* use it for purposes unrelated to the Oracle Server. Do not log in as a database user when using the *oracle* (UNIX) account.

Sites with multiple Oracle RDBMS servers may install them under the same *oracle* account, or separate ones. If multiple installations share an *oracle* account, the DBAs for each installation have access to the other installations. If this presents security problems, install each Oracle system under a different *oracle* account.

►► Ensure Host and Domain are Set Properly

The Installer requires that your hostname and domainname are set properly. The host and domain are usually invoked as part of system startup.

To set or display the name of your current host system, enter:

```
% hostname
```

To set or display the name of your current domain, enter:

```
% domainname
```

Only the super-user can set the name of the host or the domain.

The domainname of the machine is usually set during boot-time through the `domainname` command in the `/etc/init.d/inetinit` file. If the new domainname is not saved in the `/etc/defaultdomain` file, then the machine will revert back to the old domain after rebooting.

►► Install Patches for Solaris 2.4

If you are running Solaris 2.4, then install the Sun Microsystems operating system patch 101945-34 or higher prior to installing the Oracle Video Server software.

► Create a Directory for the Oracle Video Server Installation

As the `root` user, create a directory to hold the OVS software distribution. Give ownership of the directory to the *oracle* software owner account created in the previous section. This guide assumes that the directory is named `/home/oracle`.

```
# mkdir /home/oracle
# chown oracle /home/oracle
# chgrp oracle /home/oracle
# chmod 755 /home/oracle
```

The `chmod 755` command gives the software account owner read, write, and execute privileges on the directory, while the group and world get read and execute privileges.

Make a note of this directory path, because the Oracle Installer will prompt you for it during the Oracle Video Server installation process.

► Set Disk Permissions

The Oracle Video Server on Solaris 2.x uses partitioned disks to store video content. You must designate the number of disks and their partitions to be used for the storage of video.

All disks used by the Oracle Media Data Store (MDS) should be of the same capacity and type. Oracle Video Server will use the smallest partition size of all drives, no matter how big the drive. You could experience problems with loads if one drive is slower than the others.

All disk devices used by the Oracle Video Server to store content must be both readable and writable by the group *oracle*. To do this, give ownership of the devices to the group *oracle*. For example, if your system contains three disks named `c0t0d0s6`, `c0t1d0s6`, and `c0t2d0s6`, execute the following commands as the `root` user.

```
# chgrp oracle /dev/rdisk/c0t0d0s6 /dev/rdisk/c0t1d0s6 /dev/rdisk/c0t2d0s6
# chmod 660 /dev/rdisk/c0t0d0s6 /dev/rdisk/c0t1d0s6 /dev/rdisk/c0t2d0s6
```

Ensure that you give permission to the actual devices, and not just the link to them.

►► Partition the MDS Disk Drives

Partition Solaris disks so that no single partition (also known as a slice) is greater than 2 GB in size.

WARNING: Never assign the first cylinder of a physical disk to any MDS partition. On Solaris 2.x, the first cylinder of every physical disk is assumed to contain the disk label and partitioning information. If the first cylinder is included in a raw partition that is then used with MDS, then the labelling information will be overwritten. Subsequently relabelling the disk will overwrite MDS information, destroying your volume contents.

The recommended flag setting for MDS partitions is `wu` (writeable and unmountable).

WARNING: Be careful when formatting disks, since *all* data on those disks is destroyed. See the sections on the `format`, `format.dat`, and `sd` utilities in your operating system documentation before proceeding.

To partition the MDS disk drives:

1. As the `root` user, run the `format` command on the server.
This command displays a list of available disks and prompts you for a disk number from the list.
2. Enter the number of the first disk device to be used by the MDS.
(Usually, you can view your currently mounted file systems by running the `mount` command. Any disks that are not mounted could be used for the MDS.)
The Format menu appears.
3. Choose the *Partition* option from the Format menu.
4. From the Partition menu, choose *Print* to display the partition table. There are 8 partitions. The first partition (partition #0) should include cylinder 0. The third partition (partition #2) normally includes the entire disk. (Note that the `format` command can create overlapping partitions, but you should avoid overlapping partitions on MDS disks to prevent MDS problems.)

5. In the partition table, note the number of available cylinders, so that you know the size of the disk.
6. Reset partitions 0 and 1 to unused, to protect the disk from being accidentally used as a file system, by following these steps:
 - Set the ID tag to `unassigned`.
 - Set the permission flags to `wm`.
 - Set the size of the partitions, using cylinders to reduce the chance of error caused by overlapping partitions. For partition 0, set the starting cylinder to 0 and the size to 1c. For partition 1, set the starting cylinder to 0 and the size to 0c.
7. Create valid MDS partitions, which are limited to 2 GB. For example, with a 4 GB disk, create 2 partitions of 2 GB each. This example uses the two unassigned partitions 6 and 7:
 - Set the ID tag to `swap`.
 - Set the permission flags to `wu`.

WARNING: In the following steps, as elsewhere, do not assign cylinder 0 to an MDS partition.

- For partition 6, set the starting cylinder to 1 and the size to 1586c.
- For partition 7, set the starting cylinder to 1587 and the size to 1587c.

The final partition table might look like this:

```
Current partition table (original):
Total disk cylinders available: 3174 + 2 (reserved cylinders)
Part  Tag  Flag  Cylinders  Size  Blocks
0  unassigned  wm  0 - 0  1.29MB  (1/0/0)  2641
1  unassigned  wm  0  0  (0/0/0)  0
2  backup  wu  0 - 3173  4.00GB  (3174/0/0)  8382534
3  unassigned  wm  0  0  (0/0/0)  0
4  unassigned  wm  0  0  (0/0/0)  0
5  unassigned  wm  0  0  (0/0/0)  0
6  swap  wu  1 - 1586  2.00GB  (1586/0/0)  4188626
7  swap  wu  1587 - 3173  2.00GB  (1587/0/0)  4191267
```

8. Verify the partition table and enter *Label* to name the disk.
9. Enter *Quit* to exit the Partition menu.

Now, the disk is ready for the MDS.

Instead of repeating this full procedure for every disk in your RAID set, you can select *Save* from the Format menu to write the partition table to a file.

To re-use your partition table:

- From the Partition menu, use *Select* to load the partition table.
- Remember to use *Label* after each Select operation.

See Also: For more information, or to automate the process further, refer to your operating system documentation for the *Format* command.

Tasks to Perform as the *oracle* User

- ❑ Set Environment Variables
- ❑ Prepare Environment for Logical Content

►► Set Environment Variables

Oracle Corporation recommends that you set environment variables in the startup file of the user who will own the Oracle Video Server installation. To set environment variables, log in either as *oracle* or as the user account that you previously created to administer the Oracle Video Server. The startup file, normally located in your UNIX login home directory, will vary depending upon the shell used. Typically, `.profile` is used for the Bourne and Korn shells, and `.cshrc` is used for the C shell.

Syntax of Environment Variables

The syntax for setting an environment variable for the Bourne shell is:

variable_name=value; export variable_name

The syntax for setting an environment variable for the C shell is:

setenv variable_name value

Set ORACLE_HOME

ORACLE_HOME defines the directory in which Oracle software is installed. The directory you assign to ORACLE_HOME must have sufficient space to hold the Oracle distribution, and it must have read, write, and execute privileges for the *oracle* software owner. The Installer will use the existing ORACLE_HOME as the default.

Sample: `/home/oracle`

►► Prepare Environment for Logical Content

If you want to enable logical content features, you must install SQL*Net and the TCP/IP protocol adapter before installing the OVS.

Note: You do not need to create database objects.

To install SQL*Net and TCP/IP:

1. Follow the instructions in the Oracle Video Server Installation Tasks section in Chapter 3 to run `orainst`.
2. Select *Install/Uninstall Production Version*.
3. At the “Software Asset Manager” screen, deselect the OVS products, and choose to install SQL*Net 2.3.3 and TCP/IP Protocol Adapter 2.3.3 from the *Products Available* window.
4. Exit the Installer.
5. Configure SQL*Net: Get SQL*Net configuration files (for example, `tnsnames.ora`, `sqlnet.ora`) from your RDBMS administrator, and place on disk in the appropriate place.
6. Verify your database connection: OVS requires an Oracle RDBMS version 7.3.3.1 or higher, for database features. Use `TNSPing`, included with the SQL*Net installation, to test your database connection. If you have problems, see your database administrator.

See Also: *Oracle7 Installation Guide*

If your Oracle database administrator has not already created a RDBMS user, you will need to collect the following information about the Oracle database:

- the SYSTEM account password
- the name of the tablespace that should contain the OVS data
- the name of the tablespace that should contain temporary segments

Attention: The Oracle Installer will prompt for this information during the installation.

Installing Oracle Video Server

This chapter explains how to install the Oracle Video Server (OVS) software on a Solaris 2.4 or later system.

Topics covered in this chapter:

- Mount the Product Distribution CD-ROM
- Installing Oracle Video Server
- Uninstalling Oracle Video Server

Mount the Product Distribution CD-ROM

Note: With Solaris 2.4 or later, the Solaris Volume Management software is installed by default. If you are using the Solaris Volume Management software, the CD-ROM is mounted automatically onto `/cdrom/ovs` when you insert it in the CD-ROM drive, and you can skip this section.

1. Place the CD in the CD-ROM drive.
2. Log in as the `root` user, and create a directory for mounting the CD-ROM drive. This is referred to as the *mount_point_directory*. This guide assumes the directory is named `cdrom`:

```
# cd /  
# mkdir cdrom
```

3. Mount the CD-ROM drive on the mount point directory using `-r` to mount it as read-only:

```
# mount options device_name mount_point_directory
```

4. Exit the `root` account.

The example below mounts the CD manually on `/cdrom`, without using Solaris Volume Management software:

```
# cd  
# mkdir /cdrom  
# mount -r -F hsfs device_name /cdrom  
# exit
```

Installing Oracle Video Server

The version of Oracle Application Server (OAS) that is shipped with OVS Release 3.0 is unique. If you have OAS currently installed, the Oracle Installer will require that you install OVS and this new version of OAS on a different machine.

Note: If you have the OVS Release 3.0 software installed, and you decide at a later date to additionally install the Video Server Manager, you do not need to reinstall Oracle Media Net or OVS.

Oracle Video Server Installation Tasks

Tasks required to install the Oracle Video Server software:

- Complete Pre-Installation Tasks
- Start the Oracle Installer
- Respond to the Oracle Installer Prompts
- Run root.sh

WARNING: Oracle Corporation recommends against installing the OVS and the RDBMS on the same server computer. To ensure consistent performance, the OVS should be on its own server.

►► Complete Pre-Installation Tasks

Complete all the necessary tasks, as described in Chapter 2, “Pre-Installation”.

▶▶ Start the Oracle Installer

WARNING: Ensure that you are *not* logged in as the `root` user when you start the Oracle Installer.

1. Log in as the user `oracle` and change to the `orainst` directory:

```
% cd mount_point_directory/ovs/solaris/orainst
```

2. Start the Oracle Installer with the `./orainst` command:

```
% ./orainst
```

To force a character mode install, enter:

```
% ./orainst -c
```

To force a GUI install, enter:

```
% ./orainst -m
```

Note: For a GUI install, you must have the `DISPLAY` environment variable set.

▶▶ Respond to the Oracle Installer Prompts

This section describes the Oracle Installer prompts you see when installing the Oracle Video Server. Each prompt is displayed in its own window, and most prompts have defaults which you can accept by pressing [Return].

README.FIRST File

The Oracle Installer displays a `README.FIRST` file with last-minute product updates and pre-install information. Read this file for any changes relevant to your installation.

Installation Options: Home Locator

The Oracle Installer displays the value of the `ORACLE_HOME` environment variable (for example, `/home/oracle`).

Ensure that you wish to install the Oracle Video Server software here, and select *OK*.

Note: The Oracle Installer used with the Oracle Video Server is a modified version of the standard Oracle Installer. Each Oracle product should be installed with the version of the Oracle Installer that comes with the product. Do not use the Oracle Video Server Installer to install other products.

NLS

For native language support, select the language you wish to be installed. The default is *American English*.

Installation Defaults

The following values appear on this screen:

- `ORACLE_HOME`
- Install Log
- SQL Log
- OS Log
- Make Log
- the install source
- the install language, as chosen in the previous screen

During a first installation, the Oracle Installer creates several installation log files; for example, `install.log` is a default log file of the Oracle Video Server installation process.

OVS Installation Options

This screen displays the installation options that are available:

- Install Demonstration Version
- Install/Uninstall Production Version

Note: Use the up or down arrow keys to tab between the two options.

The Demonstration Version provides a correct environment for experimentation before installing the Production Version. It is intended for first-time administrators or demonstration systems, and it is not appropriate for production systems with multiple streams.

Since the Demonstration Version installs automatically with no prompts, the following prompts listed below are for the Production Version only.

See Also: If you install the Demonstration Version, and then decide to upgrade to the Production Version, see the Upgrading from the 3.0 Demonstration Version section in Chapter 1 for instructions.

Software Asset Manager

The *Products Available* window on the Software Asset Manager screen lists the products distributed with the current release. They are:

- Oracle Installer for UNIX 4.0.1.0.0
- Oracle Media Net 3.3.5.2 (installs OMN only)
- Oracle Video Server 3.0.3.0 (installs both OMN and OVS)
- Oracle Video Server Manager 3.0.3.0 (installs OMN, OVS, and VSM)
- Oracle Video Server Manager Console (installs VSM Console only)
- SQL*Net (V2) 2.3.3.0.0
- TCP/IP Protocol Adapter (V2) 2.3.3.0.0

If you want to enable logical content features, you must install SQL*Net and TCP/IP before installing the other OVS products. If you have already installed SQL*Net and TCP/IP Protocol Adapter, or if you do not intend to enable logical content features, then select *Install*.

See Also: The Prepare Environment for Logical Content section in Chapter 2 has instructions on installing SQL*Net and TCP/IP.

Media Net Address Server IP Address

Specify the IP address, or DNS alias, of the Oracle Media Net address server in the following format:

xxx.xxx.xxx.xxx

Sample: 127.1.2.123

Media Net Address Server UDP Service Port

Specify an unused port number for the Oracle Media Net address server. You must select a port number between 1024 and 65535. For new installations, the default port number is *5000*. For existing installations, the current port number is shown.

Media Data Store Volume

The Oracle Media Data Store (MDS) parameters determine the characteristics of your MDS volume. These parameters are used to create a configuration file, called `voltab`, which defines the MDS volumes that the Oracle Video Server can access.

Before continuing in this section, ensure that you have a list of all disks with SCSI addresses used by the MDS.

See Also: The “System Planning for the Oracle Video Server” chapter of the *Oracle Video Server Administrator’s Guide and Command Reference* for your server platform has more information.

Enter a name for your first MDS volume. Volume names can be from 1 to 32 characters long. The default name is *video*.

WARNING: If you choose to change the default name, there *cannot* be any spaces before the volume name, or between the specifications or path names. Extra spaces will cause your `voltab` file to be set up incorrectly.

SCSI Disk Chains

Specify the number of SCSI disk chains to be used by the MDS volume. (A disk chain is a group of disks linked to a single SCSI controller; therefore, this number corresponds to the number of SCSI controllers handling the MDS volume’s disks.) For new installations, the default is *1*. For existing installations, the current number is shown.

Total Number of Disks

Specify the total number of disks used by the MDS volume to store video content. The default is *1*.

Note: The number of disks should not include disks being used as spare disks.

Media Data Store Disk Devices

List all disks to be used by the MDS volume in any one of the following ways:

- individual numbers:

```
/dev/rdisk/c0t0d0s6, /dev/rdisk/c1t0d0s6
```

- lists of numbers delimited by commas:

```
/dev/rdisk/c{0,1,2,3}t{2,3,4,5,6}d0s{6}
```

- ranges of numbers using hyphens to span from lowest to highest digits (shorthand notation):

```
/dev/rdisk/c{0-3}t{0-4}d0s{6}
```

- list of disk names contained by braces and delimited by commas:

```
{/dev/rdisk/c0t0d0s6, /dev/rdisk/c1t0d0s6,  
/dev/rdisk/c2t0d0s6, /dev/rdisk/c3t0d0s6,  
/dev/rdisk/c0t1d0s6}
```

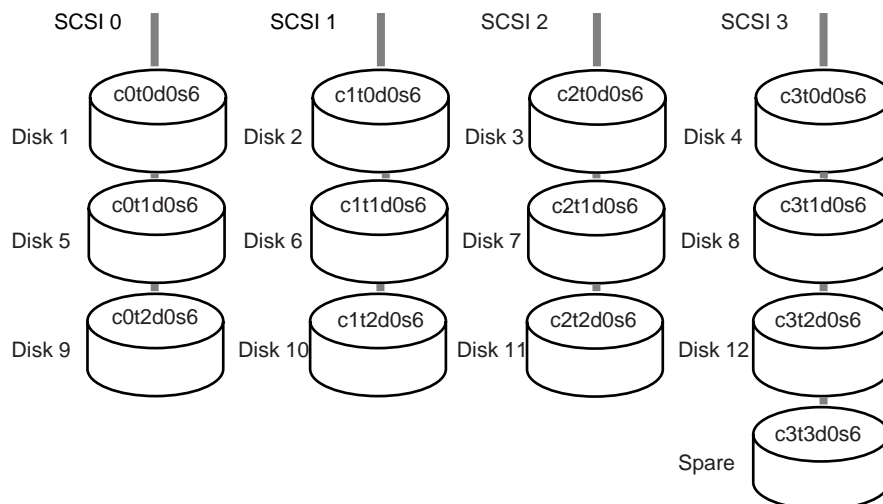
This sample notation specifies a volume containing twelve disks, with a RAID size of 4, using four SCSI controllers:

```
/dev/rdisk/c{0-3}t{0-2}d0s6
```

The `msdirsrv` process expands the shorthand to a list of twelve devices on four SCSI chains:

```
/dev/rdisk/c0t0d0s6  
/dev/rdisk/c1t0d0s6  
/dev/rdisk/c2t0d0s6  
/dev/rdisk/c3t0d0s6  
/dev/rdisk/c0t1d0s6  
/dev/rdisk/c1t1d0s6  
/dev/rdisk/c2t1d0s6  
/dev/rdisk/c3t1d0s6  
/dev/rdisk/c0t2d0s6  
/dev/rdisk/c1t2d0s6  
/dev/rdisk/c2t2d0s6  
/dev/rdisk/c3t2d0s6
```

Figure 3–1 shows the physical layout of this expansion. The disks are read in numerical order (i.e., Disk 1, Disk 2, Disk 3, Disk 4, Disk 5, and so on).

Figure 3–1 MDS Volume showing disk layout

This figure also depicts a spare disk, which is used in the event of a disk failure in the MDS volume. If the volume is RAID protected, the data from a failed disk can be rebuilt from the remaining disks to the spare disk. The spare disk then takes the place of the failed disk until the failed unit can be replaced.

Media Data Store Stripe Width

Specify the stripe width to be used by the MDS volume. The default is 32K.

Note: Unless you are experienced in configuring striped volumes, and you are sure that your server has the required memory to make use of a greater stripe width, use the default value of 32K.

Parity Settings

Select either parity (RAID) protection or non-parity for the MDS volume. Parity protection is the default setting and is strongly recommended.

If you do not use parity protection and a disk or SCSI controller fails, the server will fail to deliver video. If a disk fails, the data would also be lost.

Note: If you are only using one disk for your volume, you cannot use parity protection.

RAID Size

Select the RAID size of the MDS volume, the number of disks in each RAID set. For 1 disk in MDS, the RAID size is 1.

Spare Disk

Disk sparing is an optional feature that allows data from a failed disk to be rebuilt to a spare without interrupting video delivery from the Oracle Video Server. If applicable, specify a spare disk for the MDS volume.

This sample specifies the fourth disk located on SCSI controller 3 as the spare disk (see Figure 3-1, “MDS Volume showing disk layout”):

Sample: `spares=/dev/rdisk/c3t3d0s6`

Volume Configuration Information

Once you have entered your volume specification, the Oracle Installer confirms your configuration information. Later, you will need to use the `mdsvolstat` utility to obtain the proper bandwidth (`maxbw` parameter):

This is your volume configuration:

```
video striped,width=32k,raidsize=4 spares=/dev/rdisk/c3t3d0s6 \  
/dev/rdisk/c{0-2}t{0-3}d0s6
```

You need to run `mdsvolstat` to obtain the proper volume bandwidth, `maxbw` parameter, in order to use the volume as a real-time volume.

The `maxbw` parameter is the sustained bandwidth of the MDS volume in Mbps; without a `maxbw` value, your volume cannot provide real-time delivery of video. To obtain the `maxbw` value for your volume, follow the steps in the Create a Real-Time Oracle Media Data Store section in Chapter 4.

If the volume specification is correct, so that the RAID stripe goes across controllers first before going down the controller, continue with the installation. If the volume specification is incorrect, select *Cancel* to terminate the installation, and start the Oracle Installer again.

Number of Streams

The Oracle Installer asks for the number of video streams provided by the first video pump, which depends on both the I/O capabilities of your MDS volume and the processing power of your server. Carefully read in before specifying the number of video streams.

Specify the number of video streams for the first video pump. Ensure that your hardware configuration can support the number of video streams specified. The default is 5.

Note: If more video streams are required, you can start one instance of the video pump for each processor your server contains (minus one to run the OVS and the server operating system).

See Also: *The Oracle Video Server Administrator's Guide and Command Reference* has more information on `vspump`.

Sample Content

The Oracle Installer enables you to install sample video content files. Oracle Corporation recommends that you use these files to test your system once installation is complete. The encoded files, available in MPEG-1, MPEG-2, WAV, OSF, and AVI format, require approximately 192 MB disk space.

Content Database

Oracle Video Server allows you to create an abstract, or logical, view of the video and audio files contained in the MDS filesystem and store this information in a database separate from the OVS.

Note: SQL*Net is required for these features. The Prepare Environment for Logical Content section in Chapter 2 explains how to set up your system for logical content.

See Also: If you choose not to enable logical content, or if you prefer to do this later, refer the Configuring Logical Content and Scheduling Services chapter in the *Oracle Video Server Administrator's Guide and Command Reference*.

The logical content features of OVS require access to an Oracle database, release 7.3.3.1 or higher, running on another host. If you choose *Yes* to the logical content features, the Oracle Installer will prompt you to enter the following information:

- the content database username
- the password for the specified user
- the connect string to connect to your database

Note: Contact your system database administrator for user name, password, and connect string.

If you then choose *Yes* to creating content database schemas, the Installer will prompt you to enter the following additional information:

- the Oracle SYSTEM password
- the default tablespace for the specified user
- the temporary tablespace for the specified user

This information should be available from the database administrator of the database you are creating the schema for.

Note: Creating database schemas for logical content will overwrite any existing logical content database schemas.

With this information, the Oracle Installer will create this user in the database and automatically build the schemas in the database.

Note: Database connectivity should have been established as a pre-installation task for logical content. If the Installer fails to create the schema for logical content, the Oracle Installer refers the user to the `oraInst/dbbuild.log`.

Host for the Video Server Manager Console

Enter the hostname and domainname of the Oracle Video Server that you want to manage from Video Server Manager. The value shown represents the machine you are currently using:

Sample: `ovs1.us.oracle.com`

Installing

The Oracle Installer installs and registers the software.

MDS Volume Creation

The installer asks if you want to create your MDS volume now. The default is *No*. If you choose *Yes*, it will show a CAUTION box saying:

All data will be lost on the disks you have specified as Media Data Store disks. Do you wish to continue?

Again, the default is *No*.

Complete the Installation

Acknowledge this screen by selecting *OK*, and the Oracle Installer returns you to the Software Asset Manger screen. Exit the Oracle Installer by selecting *Exit* and pressing [Return], or by pressing [Ctrl-X].

» Run `root.sh`

To function properly on a Solaris 2.x platform, some binaries must be executed with `root` privileges. This allows, for example, the video pump to control its own processor and operate in real-time mode, and it allows a `non-root` user to start the Oracle Web Listener.

The Installer creates a `root.sh` script with the necessary commands. At the end of the install, it asks if you want to run the `root.sh` script, and it prompts you for your `root` password.

If you do not run `root.sh`, you will have to run `root.sh` manually later:

1. Log in as the `root` user.
2. `# cd $ORACLE_HOME/orainst`
3. `# ./root.sh`
4. Exit from the `root` account:
`# exit`

Installed Directories

The following directories are installed as part of OVS and Media Net.

```
$ORACLE_HOME/  
  orainst  
  bin  
  jbin  
  ows  
  mn33  
    mn33/log  
    mn33/mesg  
    mn33/admin  
    mn33/idl  
    mn33/include  
  lib  
  vsmc30  
    vsmc30/admin  
    vsmc30/jre1.1.5  
  vs30  
    vs30/log  
    vs30/mesg  
    vs30/admin  
    vs30/include  
    vs30/idl  
    vs30/doc  
    vs30/demo  
      vs30/demo/bin  
      vs30/demo/content  
      vs30/demo/include  
      vs30/demo/ovsdemo  
      vs30/demo/ctntdemo  
      vs30/demo/clipdemo  
      vs30/demo/feeddemo  
      vs30/demo/eventdemo
```

Note: The directories for Application Server and Video Server Manager are not shown.

Configuration Files

The Oracle Video Server installation creates the following shell scripts and configuration files:

Table 3–1 Oracle Video Server Configuration Files

Configuration File	Location and Purpose
ovsenv.sh	\$ORACLE_HOME/bin Bourne shell script for configuring the OVS administrator's environment
ovsenv.csh	\$ORACLE_HOME/bin C shell script for configuring the OVS administrator's environment
ovsstart	\$ORACLE_HOME/vs30/admin Shell script that starts the OVS processes
ovsstop	\$ORACLE_HOME/vs30/admin Shell script that stops the OVS processes
mnlog	\$ORACLE_HOME/bin Shell script that can be used to view the Oracle Media Net log file using mnlogreader
mnrc	\$ORACLE_HOME/vs30/admin Resource file used by OMN processes \$ORACLE_HOME/vs30/admin Resource file used by all OVS and OMN processes
mnstart	\$ORACLE_HOME/mn33/admin Shell script that starts the OMN processes
mnstop	\$ORACLE_HOME/mn33/admin Shell script that stops the OMN processes
voltab	\$ORACLE_HOME/vs30/admin A description of each disk drive in the Oracle Media Data Store (MDS)
vsmstart	\$ORACLE_HOME/vsmc30/admin Shell script that starts the VSM Console

Uninstalling Oracle Video Server

Oracle Video Server Uninstallation Tasks

Tasks required to uninstall the Oracle Video Server software:

- Start the Oracle Installer
- Respond to the Oracle Installer Prompts

Start the Oracle Installer

To start the Oracle Installer:

```
% cd $ORACLE_HOME/orainst
% ./orainst
```

Respond to the Oracle Installer Prompts

When you come to the "Oracle Video Server Installation Options" screen, choose *Install/Uninstall Production Version*.

At the next screen, "Software Asset Manager", highlight the products in the *Products Installed* box that you wish to uninstall. If Oracle Video Server was installed correctly, you should see the following in this box:

- Oracle Installer for UNIX 4.0.1.0.0
- Oracle Media Net 3.3.5.2
- Oracle Video Server 3.0.3.0
- Oracle Video Server Manager 3.0.3.0
- Oracle Video Server Manager Console 3.0.3.0

If you chose to enable logical content features, you should also have the following products in the *Products Installed* box:

- SQL*Net (V2) 2.3.3.0.0
- TCP/IP Protocol Adapter (V2) 2.3.3.0.0

The Installer will prompt you for confirmation that you want to uninstall the product(s). To uninstall Oracle Video Server, you must uninstall each of the products. Since Oracle Video Server should not have been installed in the same ORACLE_HOME as any other Oracle software, uninstalling OVS will not affect any non-OVS Oracle software you may have.

Attention: Do not use the Oracle Video Server Installer for non-OVS products.

Post-Installation

There are several post-installation tasks required for running the Oracle Video Server.

Topics covered in this chapter:

- Run `ovsenv.*sh`
- Post-Installation Tasks for Multi-Processor Servers
- Online Documentation
- Starting and Stopping Processes
- Starting the Oracle Video Server
- Using Oracle Media Net
- Sample Content in the Oracle Media Data Store
- Enabling Real-Time Video Delivery

Run ovsenv.*sh

The Oracle Installer creates a sourceable/exportable file during the installation which sets the environment variables necessary for OVS and VSM to run.

For the C and the TC shell, the file is `ovsenv.csh`. For the Bourne and the Korn shell, the file is `ovsenv.sh`.

It is important to run this script first, each time you log in, in order to set your environment for the proper operation of OVS.

To run this script:

For the C and the TC shell, enter:

```
% source $ORACLE_HOME/bin/ovsenv.csh
```

For the Bourne and the Korn shell, enter:

```
# . ORACLE_HOME/bin/ovsenv.sh
```

Post-Installation Tasks for Multi-Processor Servers

Perform the following tasks when running the Oracle Video Server on a Sun Microsystems Solaris 2.x platform:

- Assign a Processor to a Video Pump
- Assign Root Privileges to the MDS FTP Service
- Configure Real-Time Feed Server

►► Assign a Processor to a Video Pump

To have optimal functionality on a multi-processor server platform, each video pump (`vspump`) must be allowed to control its own processor. Do this only on multi-processor servers.

Edit the shell script `ovsstart`, located in the `$ORACLE_HOME/vs30/admin` directory, to include the `-y` command line option of the video pump. This option accepts an argument for a processor to be dedicated to video pump usage. Processors are numbered by the system. You can find this out by running `dmesg`, or contact your system administrator.

This sample dedicates processor 1 of the server to a video pump. Assign each instance of a video pump to its own processor.

```
$ORACLE_HOME/bin/vspump -a -o dUDP:127.0.0.1:5001 \  
-m 10 -n 8192 -b 3100000 -y 1 -t
```

At least one processor must *not* be dedicated to a video pump, to allow other parts of the system, such as the server's operating system and other Oracle Video Server processes, to run. You can use only one instance of the video pump per dedicated processor.

See Also: The *Oracle Video Server Administrator's Guide and Command Reference* has more information on the video pump and its options.

▀▀ Assign Root Privileges to the MDS FTP Service

If you did not run `root.sh`, the Media Data Store FTP service (`mdftpsrv`) must be given `root` privileges in order to function properly on a multi-processor Solaris 2.x platform. This allows the FTP server to access the local password information stored in the `/etc/shadow` file.

See Also: This is included in the `root.sh` script. See the `Run root.sh` section in Chapter 3.

▀▀ Configure Real-Time Feed Server

If you want real-time feed, you must manually edit `ovsstart`. Un-comment the line that starts `vsfeedsrv`:

```
# echo -n "starting Real-Time Feed service ....."  
# $ORACLE_HOME/bin/vsfeedsrv &  
# sleep 5
```

```
echo -n "starting Real-Time Feed service ....."  
$ORACLE_HOME/bin/vsfeedsrv &  
sleep 5
```

Note: You do not need to do this if you're planning to use Video Server Manager to startup/shutdown OVS processes.

See Also: *Oracle Video Server Administrator's Guide and Command Reference*

Online Documentation

To make Oracle Video Server documentation more easily accessible, it is available online. In this release, online documentation is available only in Adobe Acrobat format (PDF files), which are readable with the Adobe Acrobat Reader, and, when printed, they appear exactly like the printed version of the documentation.

The PDF documentation is on the CD at `mount_point_directory/ovs/solaris/vs30/doc`. It also gets copied to `$ORACLE_HOME/vs30/doc/*.pdf` as part of the OVS installation.

This release includes the Adobe Acrobat Reader for UNIX to view the PDF documentation.

Adobe Acrobat for UNIX

The installation file for the Adobe Acrobat Reader for UNIX is on the product distribution CD under `mount_point_directory/ovs/acroread`. The file is named `INSTALL`. To install the Acrobat Reader:

```
# cd /cdrom/ovs/acroread
# ./INSTALL
```

See Also: *Oracle Video Server Documentation Road Map* has more information on the online documentation.

Starting and Stopping Processes

To start only Oracle Media Net and OAS, or to start the OAS processes after the OVS processes have already been started, enter:

```
ovsstart -w
```

If you plan to use VSM to start the OVS processes, start VSM by entering:

```
ovsstart -w
```

Then start up OVS through VSM.

Note: If you plan to use VSM to start/stop OVS, you must use `ovsstart -w` first. Do *not* start OVS through `ovsstart`: If you start up OVS processes with `ovsstart`, you will not be able to stop them with VSM. See VSM online help for more information.

If you are not using VSM to start/stop OVS processes, start OVS and VSM with:

```
ovsstart -a
```

This starts the OVS, Oracle Media Net, and OAS processes.

You can also start Video Server Manager Console with the script:

```
$_ORACLE_HOME/vsmc30/admin/vsmstart
```

This script connects you to the default Video Server prompted during installation, and you will be provided with a default value, which can be changed. You can connect to a different server by specifying the hostname on the command line:

```
$_ORACLE_HOME/vsmc30/admin/vsmstart ovs.us.oracle.com
```

To stop these processes, enter:

```
ovsstop -a
```

For help on `ovsstart` and `ovsstop`, enter:

```
ovsstart -h / ovsstop -h
```

For help on the VSM Console, enter:

```
vsmstart -h
```

Starting the Oracle Video Server

To start the Oracle Video Server, use the script `ovsstart` located in `$ORACLE_HOME/vs30/admin`:

```
% $ORACLE_HOME/vs30/admin/ovsstart
```

Note: Unless you are using Oracle Video Server Manager, use the `ovsstart` script to start OVS.

If you are using VSM, first start Media Net and VSM with `ovsstart -w`. Then go into VSM, and choose startup to start OVS.

This starts the following Oracle Video Server and Oracle Media Net components:

<code>mnsdirsrv</code>	Media Data Store directory server
<code>mnsftpsrv</code>	Media Data Store FTP server
<code>mnsrmtsrv</code>	Media Data Store remote file server
<code>mnaddrsrv</code>	Oracle Media Net address server
<code>mnlogsrv</code>	Oracle Media Net logger process
<code>mnnmsrv</code>	Oracle Media Net name server
<code>mnorbsrv</code>	Object Request Broker server
<code>mnrpcnmsrv</code>	Oracle Media Net RPC name server
<code>vscontsrv</code>	Video content server
<code>vscsmsrv</code>	Session manager
<code>vspump</code>	Video pump
<code>vssrtmsrv</code>	Stream server
<code>yeced</code>	Event server

Additionally, if you are using logical content, this starts `vsbcastsrv`, `vsnvodsrv`, and `vsschdsrv`. If you are using real-time feed service, this starts `vsfeedsrv`.

Using Oracle Media Net

Start Oracle Media Net

To initialize the MDS volume, you must first start Oracle Media Net. Oracle Media Net allows communication to take place among the Oracle Video Server components, so that the `mdsvolinit` utility can write to the MDS volume.

To start Oracle Media Net, execute the script `mnstart`:

```
% $ORACLE_HOME/mn33/admin/mnstart
```

The following Oracle Media Net components are started:

<code>mnaddrsrv</code>	Oracle Media Net address server
<code>mnlogsrv</code>	Oracle Media Net logger process
<code>mnmsrv</code>	Object Request Broker name server
<code>mnorbsrv</code>	Object Request Broker server
<code>mnrpcnmsrv</code>	Oracle Media Net name server
<code>yeced</code>	Event server

Initialize the Oracle Media Data Store

Before you can operate the Oracle Video Server, the Oracle Media Data Store (MDS) must be initialized. This process creates a Table of Contents for the MDS volume.

Note: The Oracle Installer gave you the option to perform this step during the install. If you chose to perform it during the install, then you do not need to repeat this step.

Note: The following procedures are necessary if you are performing a first-time installation of the OVS.

If you are upgrading from a previous version of the OVS, refer to the *Upgrading From a Previous Release of Oracle Video Server* section in Chapter 1.

To create additional MDS volumes, edit the `voltab` file to include additional entries for each volume you wish to add. You will need to initialize these volumes as well.

Initialize the MDS with the `mdsvolinit` utility, using the `-s`, `-t`, and `-f` command line options:

```
% $ORACLE_HOME/bin/mdsvolinit -s -t -f $ORACLE_HOME/vs30/admin/voltab video
```

This command writes information from the `voltab` file to the MDS disks. This allows the media data store process (`mdsdirsrv`) to access the disks as an MDS volume set.

WARNING: Only use `mdsvolinit` with the following command line options if you are creating a new MDS volume. Doing so will erase all data contained in the MDS volume.

The following is sample output from the `mdsvolinit` utility, with user input indicated with bold font:

```
% $ORACLE_HOME/bin/mdsvolinit -s -t -f\  
$ORACLE_HOME/vs30/admin/voltab video  
Do you really want to change attributes of volume 'video'? (yes, no)  
yes  
Attributes of volume 'video' recorded.  
Do you really want to initialize TOC of volume 'video'? (yes, no)  
yes  
TOC of volume 'video' initialized
```

See Also: *The Oracle Video Server Administrator's Guide and Command Reference* has more information on `mdsvolinit` and the `voltab` file

Stop Oracle Media Net

To stop all Media Net components, you must execute the `mnstop` script:

```
% $ORACLE_HOME/mn33/admin/mnstop
```

The MDS volume is now initialized and is ready to store video content.

Sample Content in the Oracle Media Data Store

Oracle provides sample video files for you to use when setting up the Oracle Video Server. The encoded files, available in MPEG-1, MPEG-2 (m2t), WAV, OSF, and AVI format, require approximately 190 MB disk space.

Note: You must encode your own video content before loading it into the Oracle Media Data Store (MDS); the OVS does not encode video content.

The files listed below are provided with Oracle Video Server. They use this syntax:

ovs_<codec encoder/decoder>_bitrate.extension

Note: The extension part of the syntax must not change.

```
oracle.osf
ovs_ftbx_samp1.mpg
ovs_mpg2_4096k.m2t
ovs_adpcm_96k.wav
ovs_ftbx_samp2.mpg
ovs_mpg2_4096k_pal.m2t
ovs_cmng_samp1.mpg
ovs_ftbx_samp3.mpg
ovs_mwv_samp1.mpg
ovs_cmng_samp2.mpg
ovs_indeo_1440k.avi
ovs_mwv_samp2.mpg
ovs_fravox_128k.avi
ovs_indeo_800k.avi
ovs_mwv_samp3.mpg
ovs_fravox_150k.avi
ovs_mpg1_1536k.mpg
ovs_samp_intro.mpg
ovs_fravox_256k.avi
ovs_mpg1_2048k.mpg
ovs_voxw_16k.wav
ovs_fravox_28k.avi
ovs_mpg1_2048k_pal.mpg
```

The Oracle Installer provides the option to install the samples. It does not load them into your MDS volume.

To load the sample content into the MDS:

1. Start the Oracle Video Server:

```
% $ORACLE_HOME/vs30/admin/ovsstart
```

2. Change to the `$ORACLE_HOME/vs30/demo/content` directory created during the installation:

```
% cd $ORACLE_HOME/vs30/demo/content
```

This directory contains the sample video content provided by Oracle, assuming the sample content was installed during the OVS installation.

3. Use the `mdsdir` utility with the `-f` option to verify that you can contact the MDS volume. The `-f` flag lists the free space available in the MDS volume.

```
% $ORACLE_HOME/bin/mdsdir -f /mds/video
Volume /mds/video/ (rw): 0 matches
25 MB's of free space in 1 fragment(s)
largest free block is 25 MB's
```

4. Register and copy the sample content files to the MDS volume. Copy the sample content files into your MDS volume using the MDS copy command. From the `$ORACLE_HOME/vs30/demo/content` directory, enter:

For example, enter:

```
% vstag -E mpi -o /mds/video ./*.mpg
```

In this example, the `-E` flag causes the `vstag` utility to put an `.mpi` extension in the register file. The `-o` *outputcontentfile* flag sends the file being registered to the specified `/mds/video` volume. In the case of AVI, `vsmkosf` converts the AVI file to Oracle Streaming Format (`osf`) and registers the content. This copies the `.osf` and `.mpi` files into MDS.

Note: The volume name used in this example is *video*, the default MDS volume name supplied by the Oracle Installer. Use the volume name which you specified during installation.

See Also: VSM offers a graphical interface to copy and register content. See the VSM online help for more information.

For more information on `vstag`, see the *Oracle Video Server Administrator's Guide and Command Reference*.

If you wish to create a null register file, either for a video clip with nonstandard compression or to disable seek/scan, see `vsgentag`.

5. Use `mdsdir` with the `-b` option to list the files in the MDS volume:

```
% $ORACLE_HOME/bin/mdsdir -b /mds/video
Volume /mds/video (rw): 54 matches
    3398 Jan 27 13:51:58 rw bettina.mpi
    8594152 Jan 28 16:00:46 rw cbs3mbs.mpg
    2382 Jan 28 16:00:35 rw cbs3mbs.mpi
...
    7438 Jan 27 10:07:11 rw ovs_voxw_16k.mpi
    172443 Jan 27 10:07:09 rw ovs_voxw_16k.osf
    3398 Jan 27 12:19:35 rw prak.mpi
```

6. Use the `vstagprint` utility with the `-s` option to see the header of the register files. The register file provides information such as the bit rate at which the video is encoded, file size, and the playback length of the file in milliseconds.

Sample output:

```
% $ORACLE_HOME/bin/vstagprint -s /mds/video/bettina.mpi
Tag file version: 6.2
Current code is version 6.2, back-compatible to version 6.2
magic=aabccdd (should be aabccdd)
file describes content for: <Unavailable>
1 member files:
All rate control operations are allowed on this file
# 1. format=MPEG 1      transport=None      flags=1
file="/mds/video/bettina.mpg" Size = 5998816
creation time of content: 27-Jan-1998 13:48:46.000 PST
bitrate=1536000 bits/second
elapsed length=31243 milliseconds
presentation rate=1000
frames/sec(* 1000)=29970
71 tags in tag file.
width: 352, height: 240, pel aspect ratio (* 10000): 10950
MPEG1 Tagfile version: 2.0
Current MPEG1 code is version 2.0, back-compatible to 2.0
system header is 18 bytes starting at offset 0 of compression data
sequence header is 12 bytes starting at offset 18 of compression data
```

The MDS volume now has the sample video content loaded and registered for use.

If you intend to operate your Oracle Video Server as a *non-real-time* system (that is, a system which does not guarantee the delivery of video to several clients at once with a certain quality of service), you can skip the section “Enabling Real-Time Video Delivery” and either shut down the Oracle Video Server (see the Starting and Stopping Processes section), or stream video to a client to see if the system performs properly. However, operating OVS as a non-real-time system is not recommended by Oracle Corporation, nor is it supported for production systems.

Enabling Real-Time Video Delivery

The installation process creates a *non-real-time* Oracle Media Data Store (MDS) volume. A non-real-time MDS volume does not deny client requests, regardless of the load placed on the MDS volume. While this mode is useful for loading video content into an MDS volume, it does not allow for consistent quality of service when delivering video to client devices.

See Also: The *Oracle Video Server Administrator's Guide and Command Reference* has more information on the `voltab` file.

To create a real-time MDS volume, where access to the volume is limited to a predefined maximum to ensure quality of service, you must obtain the `maxbw` value. The `maxbw` value specifies the maximum rate at which all Oracle Video Server components can together read and/or write to an MDS volume.

Create a Real-Time Oracle Media Data Store

Follow these steps to obtain the correct `maxbw` value for your MDS volume and mount the MDS volume in real-time mode.

1. Start the Oracle Video Server:

```
% $ORACLE_HOME/bin/vs30/admin/ovsstart
```

2. Use the `mdsvolstat` utility with the `-a` command line option to determine the `maxbw` of the MDS volume. Use the `-f` command line option to locate the `voltab` file used to define MDS volume being queried, followed by the name of the MDS volume you used during software installation. This example queries the volume `video` for its `maxbw` value:

```
% mdsvolstat -a -f $ORACLE_HOME/vs30/admin/voltab video
Recommended maxbw setting for volume video is: 55 Mbps
```

See Also: The *Oracle Video Server Administrator's Guide and Command Reference* has more information on `mdsvolstat`.

3. Execute the script `ovsstop` located in the `ORACLE_HOME/vs30/admin` directory:

```
% $ORACLE_HOME/bin/vs30/admin/ovsstop
```

4. Edit the `voltab` file to include the `maxbw` value you obtained in 2. For example, if the `maxbw` value is 55, enter:

```
video maxbw=55,striped,width=32k,raidsize=4 \
spares=/dev/rdisk/c3t3d0s6 /dev/rdisk/c{0-3}t{0-3}d0s6
```

WARNING: Do not place a hard return in a `voltab` entry. This example shows the `voltab` file entry divided across two lines: The actual `voltab` entry should all be on one line. Division of lines should occur when your text editor wraps from one line to the next.

5. Restart the Oracle Video Server with the start-up script `ovsstart`. The script now points to the modified `voltab` file. The MDS volume will be mounted in real-time mode.
6. Verify that the MDS volume is mounted in real-time mode using the `mdsdir` utility with the `-v` command line option. This will display the total available bandwidth of the volume.

```
% $ORACLE_HOME/bin/mdsdir -v
Volume name:                video
Creation time:              Nov 16 16:28:05
Free TOC entries:          1006
Total bandwidth in Mops:    55
  available                  55
  allocated:                 0
  RT denials:                0
  Non-RT denials:           0
```

Your installation of the Oracle Video Server is now complete. If you have not yet done so, install the Oracle Video Client, and test your Oracle Video Server system.

See Also: Refer to the *Oracle Video Client Software Guide* for information on installing and operating the Oracle Video Client.

Oracle Video Server Administrator's Guide and Command Reference has information on operating the Oracle Video Server.

If you will not use the Oracle Video Server immediately, you may stop it.

Basic UNIX for Installing Oracle Products

Topics covered in the Appendix:

- Essential UNIX concepts
- An overview of basic UNIX commands you will need to install Oracle products, in the order you are likely to encounter them during your installation
- An alphabetical list of basic UNIX commands and definitions used with the Installer
- Usage notes and examples for each of the UNIX commands

Miscellaneous UNIX Concepts

Case Sensitivity

UNIX is case-sensitive and most UNIX commands are in lower case. This means, for example, `Email.Log` and `email.log` are two different files in UNIX. Therefore, you need to be careful when you name and retrieve files and directories.

Executable Scripts

To run any executable script, enter:

```
./script_name
```

For example, to run the `root.sh` script, the command is:

```
./root.sh
```

Wildcard Characters

UNIX provides several special characters, called wildcards, to make it easier to specify multiple filenames and filetypes. The `'*'` wildcard character is especially useful as it stands for any number of any characters. For example, to list all files that have a `.ora` file extension, enter:

```
$ ls *.ora
```

This might display, for example, `init.ora`, `oapref.ora` and `tnsnames.ora`.

To delete all files from your current directory, enter:

```
$ rm *
```

Symbols

Slash

The `'/'` slash character in UNIX has two meanings. A `'/'` slash by itself, or at the beginning of a pathname, means the `root` directory. Slashes are also used to separate directory names and file names in long pathnames.

Dollar Sign

The ‘\$’ dollar sign has two uses in UNIX.

The dollar sign is used with environment variables to indicate ‘the value of’ the variable. For instance, if your `ORACLE_SID` is set to ‘test’ and you enter `echo $ORACLE_SID`, the operating system returns the value (‘test’).

For example:

```
$ echo $ORACLE_SID
test
```

If you enter `echo ORACLE_SID`, without the dollar sign, the operating system returns `ORACLE_SID`.

For example:

```
$ echo ORACLE_SID
ORACLE_SID
```

The dollar sign is also commonly used as the ready prompt for the Bourne and Korn shells, as in the preceding examples.

Overview of Basic UNIX Commands

Operating System Patches and Packages

To find out which patches and packages are installed, enter:

For patches:

```
$ showrev -p
```

For packages:

```
$ pkginfo -i [package_name]
```

The ‘-i’ selects only fully-installed packages; if you omit the optional *package_name*, all installed packages are listed.

Server Manager

Server Manager is used to execute Standard Query Language (SQL) commands.

To start the Server Manager in line mode, enter:

```
$ srvmgr1
```

Logging in as the Root User

Root user privileges enable you to perform system functions denied to other users, such as creating user names or changing permissions on files belonging to other users. The `root` user is also called the superuser account.

Because `root` access gives special (and potentially dangerous) privileges, it is often restricted to system administrators. Contact your system administrator for `root` access.

dba and oper groups

To restrict database administration functions to certain users, you should use the operating system administration utility (`sysadm` or `groupadd`) to create `dba` and `oper` groups in the `/etc/group` file. Because these groups assign Oracle DBA and OPER privileges based on operating system groups, Oracle documentation refers to these groups as OSDBA and OSOPER.

groupadd

To use the `groupadd` command to create a `dba` group with a group ID (GID) of 101, enter:

```
$ groupadd -g 101 dba
```

umask

The `umask` command sets the default access permissions on created files. Use the value `022` to give read (and directory search), but not write permission, to members of your group and to other users.

To set the `umask` value to `022`, enter the following in the `.profile` or `.login` file of the *oracle* account.

For the Bourne or Korn shells, add the following to `.profile`:

```
umask 022
```

For the C shell, add the following to `.login`:

```
umask 022
```

Environment Variables

Every UNIX shell has what are known as shell, or environment variables, which are values defined for your current session. These variables establish facilities you need; for example, the printer you use, your file permission settings, and the colors displayed on your monitor.

Environment variables for the Oracle Server are usually set in the `.profile` or `.login` file of the `oracle` account. The appropriate file is read automatically when you log in.

To set an environment variable in the Bourne shell, use the following syntax:

```
variable_name=value; export variable_name
```

For example:

```
ORACLE_HOME=/u01/app/oracle/product/732; export ORACLE_HOME
ORACLE_SID=test; export ORACLE_SID
LD_LIBRARY_PATH=$ORACLE_HOME/lib:$LD_LIBRARY_PATH; export LD_LIBRARY_PATH
```

To set an environment variable in the C shell, use the following syntax:

```
setenv variable_name value
```

For example:

```
setenv ORACLE_HOME /u01/app/oracle/product/732
setenv ORACLE_SID test
setenv LD_LIBRARY_PATH $ORACLE_HOME/lib:$LD_LIBRARY_PATH
```

chmod

The `chmod` command changes read, write, and execute (r for read, w for write, and x for execute) permissions for files and directories. Only the owner of a file (or the `root` user) can change its mode. Permissions can be changed for the user (the file's owner), members of your UNIX group, and other users (u for user, g for group, o for other).

For example, to give the user, group members and others (world), read, write and execute permissions to a file, enter:

```
$ chmod ugo+rwx filename
```

Updating the Environment

After you change the values of environment variables in `.profile` or `.login`, make sure they take effect for the current session by executing the `.profile` or `.login` file.

For the Bourne or Korn Shell, enter:

```
$ . .profile
```

For the C shell, enter:

```
% source .cshrc
```

Basic UNIX Commands for Installing Oracle Products

Table A-1 Basic UNIX Commands

User Commands	Description
cat	concatenate and display
cd	change working directory
chgrp	change the group ownership of a file
chmod	change the permissions mode of a file
chown	change owner
cp	copy files
echo	echo arguments to the standard options
env	obtain or alter environment variables for command execution
find	find files by name, or by other characteristics
grep	search a file for a string or regular expression
groupadd	create a user group
kill	send a signal to a process, or terminate a process
ls	list the contents of a directory
man	display UNIX reference manual pages; find reference pages by keyword
mkdir	make a directory
more	browse or page through a text file
mv	move or rename files
page	browse or page through a text file
passwd	change local or Network Information System password information
ps	display the status of current processes
pwd	display the pathname of the current working directory
rlogin	start a login to a different machine
rm	remove (unlink) files or directories
rmdir	remove (unlink) files or directories
set	set the values of all shell variables

Table A-1 Basic UNIX Commands

User Commands	Description
setenv	set environment variables
umask	show the permissions that are given to view files by default
uname	display name of the current system

Basic UNIX Syntax and Descriptions

cat filename

Displays contents of *filename* to screen. Use the `cat` command to concatenate and display files containing text that UNIX can display on your screen.

Examples:

Use `cat filename` to display contents of *filename* to the screen.

Use `cat filename1 > filename2` to overwrite contents of *filename2* with *filename1*.

Use `cat filename1 >> filename2` to append contents of *filename1* to *filename2*.

cd

Changes the current working directory.

Examples:

To change to your own home directory, enter:

```
cd
```

To change to the previous higher directory, enter:

```
cd ..
```

To change to the specified directory, enter:

```
cd /usr
```

chgrp *group_name filename*

Changes the group that has access to a file or directory.

Example:

Use `chgrp dba tools.dbf` to make the `dba` group the owner of the file `tools.dbf`.

chmod *code_name + code_name filename*

Changes read, write, execute permissions on *filename* for user/owner, group, and others.

Examples:

Use the `chmod ugo+rwx filename` syntax to give **user** (file owner), **group** members, and **others**, **read**, **write** and **execute** permissions to a file.

Use the `chmod go-r filename` syntax to prevent group members and others from reading the file.

chown *username filename*

Changes the owner of *filename* to the given user.

Example:

```
chown /var/tmp/foo
```

cp *filename1 filename2*

Copy *filename1* to *filename2*. This creates *filename2*, if it does not already exist.

Example:

```
cp filename1 filename2
```

cp -i * *directory_name*

Copies all files in current directory to the given *directory_name*. If `-i` is used, you are prompted to verify whether or not any files of the same name should really be overwritten in the target directory.

echo *\$variable_name*

Displays the value you have set for a given variable. For example, to see what your current search path is, enter:

Example:

```
$ echo $LD_LIBRARY_PATH
```

find . -name *string** -print

Searches the current directory and all subdirectories for any files starting with the value *string*. If found, the full file names are printed to the screen.

grep *string filename*

Searches the specified file for a particular *string*.

Example:

To find out if `jwilson` is a valid username listed in the password file, enter:

```
grep jwilson /etc/passwd
```

kill *process_number*

Terminates a selected process, identified by the *process_number*. First use the `ps` command to list the numbers of running processes.

Example:

```
kill 1351
```

If the normal `kill` command does not work, use:

```
kill -9 process_number
```

Note: Be sure you have the correct process, as this is a forced termination.

ls

Displays the names of the files in the current directory. When `ls` is used with the `-a` option, 'dot' files, `.login` for example, are listed. When `ls` is used with the `-l` option, a long list consisting of userID, file size, date the file was created, and the name of the file is shown.

ls -al *directory*

Displays the files in the specified directory.

man *command_name*

Displays online manual pages for *command_name*.

Example:

`man who` lists how to use the UNIX 'who' command.

mkdir *directory*

Creates a new directory under the current directory.

Example:

`mkdir letters`

mv *filename directory*

Use this command to move a file from one location to another, or to rename a file and erase the original file.

Example:

Use `mv filename /usr/opt/` to delete *filename* from the current directory and make a new *filename* in the `/user/opt/` directory.

passwd

Enables you to change your login password.

ps

Lists the current processes that are executing.

pwd

Displays the current directory in which you are working.

rlogin *host_name*

Enables you to connect and work on a different machine on your network.

Example:

`rlogin hostb`

rm *filename*

Deletes *filename* from the disk without verifying whether or not this is something you really want to do.

Example:

```
rm oldletter
```

rm -i *filename*

Deletes *filename* after verifying that you want to erase the file.

Example:

```
rm -i oldletter
```

rmdir *directory*

Deletes a directory only if it is empty.

Example:

```
rm directory
rmdir: Directory not empty
```

rmdir -r *directory*

Warning: This deletes a directory and all the files it contains without asking for verification.

Example:

```
rmdir -r directory
```

su

Switches you to `root` user after a password prompt.

Index

A

account
 creating oracle account, 2 - 5

B

basic UNIX commands
 descriptions, A - 7
 syntax, A - 8

C

CD-ROM
 mounting, 3 - 2
 running Oracle Installer from, 3 - 4
chmod, A - 5
commands
 basic UNIX, A - 7
 chmod, A - 5
 groupadd, A - 4
 umask, A - 4
 UNIX syntax, A - 8
configuration files
 mnstart, 3 - 17
 mnstop, 3 - 17
 ovsstart, 3 - 17
 ovsstop, 3 - 17
 voltab, 3 - 17

D

de-installing OVS, 3 - 18

E

environment variables
 basic UNIX commands, A - 5

G

groupadd command, A - 4

H

home directory, 2 - 5

I

installation
 CD-ROM
 mounting, 3 - 2
 de-installation, 3 - 18
 initializing the Oracle Media Data Store, 4 - 8
 installed directories, 3 - 16
 log file of installation, 3 - 5
 pre-installation tasks, 2 - 1
 products to be installed, 3 - 7
 restrictions, 1 - 9
 starting the Oracle Installer, 3 - 4
installation information
 disk drives being used, 2 - 2
 IP address, 2 - 2
 SCSI controllers, 2 - 3
 UDP port number, 2 - 2
 user ID, 2 - 5
issues and restrictions, 1 - 9

M

- multi-processor servers
 - post-installation tasks, 4 - 3

O

- operating system
 - patches, A - 3
- oracle account
 - home directory, 2 - 5
 - how to create, 2 - 5
 - requirements, 2 - 5
 - security, 2 - 6
- Oracle Installer
 - log file of installation, 3 - 5
 - ORACLE_HOME Locator, 3 - 5
 - products to be installed, 3 - 7
 - README.FIRST, 3 - 4
 - responding to prompts, 3 - 4
- Oracle Media Data Store
 - disk drive names, 2 - 2
 - initializing, 4 - 8
 - maxbw,defined, 4 - 14
 - real-time video delivery, enabling, 4 - 14
 - spare disk, 2 - 3
 - specifying disk drives, 3 - 9
- Oracle Media Net
 - address, 2 - 2
 - starting, 4 - 8
 - stopping, 4 - 9
- Oracle Video Server
 - starting, 4 - 7
- ORACLE_HOME
 - and oracle account home directory, 2 - 5

P

- patches
 - operating system, A - 3
- post installation tasks
 - online documentation
 - installing, 4 - 5
 - viewing, 4 - 5
- post-installation tasks
 - enabling real-time video delivery, 4 - 14

- loading sample content, 4 - 10
 - multi-processor servers, 4 - 3
- preface
- Send Us Your Comments, iii

R

- requirements
 - oracle account, 2 - 5
- root
 - basic UNIX commands, A - 4

S

- Send Us Your Comments
 - boilerplate, iii
- Server Manager
 - basic UNIX commands, A - 3
- server type
 - symmetric multi-processor (SMP), 2 - 4
 - uni-processor, 2 - 4
- sourcing
 - files, A - 6

T

- tag files
 - viewing with vstagprint, 4 - 13

U

- umask command, A - 4
- UNIX accounts
 - how to create, 2 - 5
- utilities
 - vstag, 4 - 13
 - vstagprint, 4 - 13

V

- video
 - loading and tagging sample content, 4 - 10
- video pump
 - assigning a processor, 4 - 3
- video streams
 - number of concurrent streams, 2 - 3