# Oracle® VM Server for SPARC 3.4 Installation Guide

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Oracle VM Server for SPARC 3.4 Installation Guide

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# Contents

**Using This Documentation** ..... 7

**1 System Requirements** ..... 9
- Supported Platforms ..... 9
- Firmware and OS Versions ..... 11
  - System Firmware Versions ..... 12
  - Oracle Solaris OS Versions ..... 13
- Related Software ..... 16
  - Compatible Software ..... 16
  - System Controller Software ..... 17

**2 Installing the Software** ..... 19
- Hardware, Firmware, and Software Components ..... 19
- Control Domain Installation and Upgrade Scenarios ..... 20
- Installing and Upgrading the Software ..... 20
  - Saving the Existing Configuration ..... 21
  - Installing the Oracle Solaris OS ..... 22
  - Upgrading the Oracle Solaris OS ..... 22
  - Restoring the Saved Configuration ..... 23
  - Upgrading the System Firmware ..... 24

# Using This Documentation

- **Overview** – Provides detailed information and procedures for installing the Oracle VM Server for SPARC 3.4 software on supported servers, blades, and server modules.
- **Audience** – System administrators who install Oracle VM Server for SPARC software on SPARC servers.
- **Required knowledge** – Working knowledge of UNIX systems and the Oracle Solaris operating system (Oracle Solaris OS).

## Product Documentation Library

Documentation and resources for this product and related products are available at http://www.oracle.com/technetwork/documentation/vm-sparc-194287.html.

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Provide feedback about this documentation at http://www.oracle.com/goto/docfeedback.

♦ ♦ ♦ CHAPTER 1

# System Requirements

This chapter contains system requirements for running the Oracle VM Server for SPARC software.

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**Note -** Oracle VM Server for SPARC features are added and maintained on the supported hardware platforms listed in "Supported Platforms" on page 9. However, new features will not be added and existing features will not be maintained on hardware platforms that have been removed from the list.

As a rule, new Oracle VM Server for SPARC features and functionality are made available for all price-listed, supported SPARC T-series servers and SPARC M-series servers from Oracle and Fujitsu M10 servers at the time that the Oracle VM Server for SPARC software is released and not for SPARC based systems that have already passed their last-order date.

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## Supported Platforms

When more than one version of the Oracle VM Server for SPARC software is supported on a hardware platform, bug fixes apply only to the latest version of the software. To receive Premier Support, you must use the latest Oracle VM Server for SPARC software. In addition, bug fixes for the Oracle VM Server for SPARC 3.2 software on the Oracle Solaris 10 operating system (OS) continue, consistent with the support life cycle of the Oracle Solaris 10 product. For more information, see Oracle Lifetime Support Policies.

You can find the platform documentation at `http://docs.oracle.com/en/hardware/`. You can also find information about the software stacks for the various platforms on the Sun System Software Stacks page (`http://www.oracle.com/technetwork/systems/software-stacks/stacks/index.html`).

The Oracle VM Server for SPARC 3.4 software is supported on the following platforms:

- **SPARC S7 series servers**
  - SPARC S7-2 server (refer to *SPARC S7-2 Server Product Notes*)

  - SPARC S7-2L server (refer to *SPARC S7-2L Server Product Notes*)
  - Netra SPARC S7-2 server (refer to *Netra SPARC S7-2 Server Product Notes*)
- **Fujitsu M-Series servers**
  - Fujitsu M10 server (refer to *Fujitsu M10 Server Product Notes*)

    For more information about features that are specific to the Fujitsu M10 servers, see *Fujitsu M10/SPARC M10 Systems System Operation and Administration Guide* in the Product Notes for your model at `http://www.fujitsu.com/global/services/computing/server/sparc/downloads/manual/`.
- **SPARC M7 Series servers**
  - SPARC M7-8 server (refer to *SPARC M7 Series Servers Product Notes*)
  - SPARC M7-16 server (refer to *SPARC M7 Series Servers Product Notes*)
- **SPARC M6 servers**
  - SPARC M6-32 server (refer to *SPARC M5-32 and SPARC M6-32 Servers Product Notes*)
- **SPARC M5 servers**
  - SPARC M5-32 server (refer to *SPARC M5-32 Server Product Notes*)
- **SPARC T7 Series servers**
  - SPARC T7-1 server (refer to *SPARC T7 Series Servers Product Notes*)
  - SPARC T7-2 server (refer to *SPARC T7 Series Servers Product Notes*)
  - SPARC T7-4 server (refer to *SPARC T7 Series Servers Product Notes*)
- **SPARC T5 servers**
  - SPARC T5-1B server (refer to *SPARC T5-1B Server Product Notes*)
  - SPARC T5-2 server (refer to *SPARC T5-2 Server Product Notes*)
  - SPARC T5-4 server (refer to *SPARC T5-4 Server Product Notes*)
  - SPARC T5-8 server (refer to *SPARC T5-8 Server Product Notes*)
- **SPARC T4 servers**
  - SPARC T4-1 server (refer to *SPARC T4-1 Server Product Notes*)
  - SPARC T4-2 server (refer to *SPARC T4-2 Server Product Notes*)
  - SPARC T4-4 server (refer to *SPARC T4-4 Server Product Notes*)
  - SPARC T4-1B server (refer to *SPARC T4-1B Server Product Notes*)
  - Netra SPARC T4-1 server (refer to *Netra SPARC T4-1 Server Product Notes*)
  - Netra SPARC T4-2 server (refer to *Netra SPARC T4-2 Server Product Notes*)
  - Netra SPARC T4-1B server (refer to *Netra SPARC T4-1B Server Product Notes*)
- **SPARC T3 servers**
  - SPARC T3-1 server (refer to *SPARC T3-1 Server Product Notes*)
  - SPARC T3-2 server (refer to *SPARC T3-2 Server Product Notes*)

- SPARC T3-4 server (refer to *SPARC T3-4 Server Product Notes*)
- SPARC T3-1B server (refer to *SPARC T3-1B Server Module Product Notes*)
- Netra SPARC T3-1 server (refer to *Netra SPARC T3-1 Server Product Notes*)
- Netra SPARC T3-1B server (refer to *Netra SPARC T3-1B Server Product Notes*)
- Netra SPARC T3-1BA server (refer to *Netra SPARC T3-1BA Server Product Notes*)

- **UltraSPARC T2 Plus servers**
  - Oracle's Sun SPARC Enterprise T5140 and T5240 servers (refer to *Sun SPARC Enterprise T5140 and T5240 Servers Administration Guide*)
  - Oracle's Sun SPARC Enterprise T5440 server (refer to *Sun SPARC Enterprise T5440 Server Administration Guide*)
  - Oracle's Sun Blade T6340 server module (refer to *Sun Blade T6340 Server Module Product Notes*)
  - Oracle's Netra T5440 server (refer to *Sun Netra T5440 Server Product Notes*)
  - Oracle's Sun Netra T6340 Server Module (refer to *Sun Netra T6340 Server Module Product Notes*)
- **UltraSPARC T2 servers**
  - Oracle's Sun SPARC Enterprise T5120 and T5220 servers (refer to *Sun SPARC Enterprise T5120 and T5220 Servers Administration Guide*)
  - Oracle's Sun Blade T6320 server module (refer to *Sun Blade T6320 Server Module Product Notes*)
  - Oracle's Netra T5220 server (refer to *Sun Netra T5220 Server Product Notes*)
  - Oracle's Netra CP3260 Blade (refer to *Netra CP3260 Blade Server Product Notes*)

# Firmware and OS Versions

This section describes the system firmware versions and Oracle Solaris OS versions to use with the current Oracle VM Server for SPARC software.

You can run the Oracle VM Server for SPARC 3.4 software with at least the minimum versions of the system firmware and Oracle Solaris OS. In such a configuration, you might not have access to all the features of the latest Oracle VM Server for SPARC software. For the best results in production environments, run with the fully qualified system firmware version described in “Fully Qualified System Firmware Versions” on page 12 and with the Oracle Solaris OS version described in “Fully Qualified Oracle Solaris OS Versions” on page 14.

**Caution -** Do *not* downgrade to older versions of individual system firmware, Oracle Solaris OS or software components. Such downgrades might lead to unexpected behavior and failures.

# System Firmware Versions

This section includes information about the system firmware versions that you need to run the Oracle VM Server for SPARC 3.4 OS, and covers the following topics:


- "Minimum System Firmware Versions" on page 12
- "Fully Qualified System Firmware Versions" on page 12


## Minimum System Firmware Versions

You can apply the latest Oracle VM Server for SPARC package to a system that runs at least the following versions of the system firmware, which are platform specific and depend on the requirements of the CPU in the machine.

- SPARC S7 Series servers: 9.7.2
- Fujitsu M10 servers: XCP2012
- SPARC M7 Series servers: 9.4.3.d (SPARC M7-8 server), 9.5.2.g (SPARC M7-16 server)
- SPARC M6 servers: 9.5.4
- SPARC M5 servers: 9.5.4
- SPARC T7 Series servers: 9.4.3.d (SPARC T7-1 server and SPARC T7-2 server), 9.5.2.c (SPARC T7-4 server)
- SPARC T5 servers: 9.5.1
- SPARC T4 servers: 8.8.1
- SPARC T3 servers: 8.3.10
- UltraSPARC T2 Plus servers: 7.4.8.a
- UltraSPARC T2 servers: 7.4.8.a

## Fully Qualified System Firmware Versions

To enable all the Oracle VM Server for SPARC 3.4 features, you must run the fully qualified system firmware versions on the following platforms:

- SPARC S7 Series servers: 9.7.2
- Fujitsu M10 servers: XCP2280
- SPARC M7 Series servers: 9.7.1
- SPARC M6 servers: 9.5.4.b

- SPARC M5 servers: 9.5.4.b
- SPARC T7 Series servers: 9.7.1
- SPARC T5 servers: 9.5.4.a
- SPARC T4 servers: 8.8.4
- SPARC T3 servers: 8.3.20
- SPARC T2 Plus servers: 7.4.10.a
- SPARC T2 servers: 7.4.10.a

### Fully Qualified System Firmware Patches

To take advantage of all features of Oracle VM Server for SPARC 3.4, ensure that your SPARC T-series server or M-series server from Oracle runs at least the system firmware versions listed in “Fully Qualified System Firmware Versions” on page 12. You can access these patches from Firmware Downloads and Release History for Oracle Systems (`http://www.oracle.com/technetwork/systems/patches/firmware/release-history-jsp-138416.html`).

## Oracle Solaris OS Versions

This section includes information about the Oracle Solaris OS versions that you need to run the Oracle VM Server for SPARC 3.4 OS, and covers the following topics:


- “Minimum Oracle Solaris OS Versions” on page 13
- “Fully Qualified Oracle Solaris OS Versions” on page 14
- “Location of the Oracle VM Server for SPARC Software” on page 15
- “Location of Documentation” on page 15


### Minimum Oracle Solaris OS Versions

The minimum Oracle Solaris OS version for the Oracle VM Server for SPARC 3.4 control domain is Oracle Solaris 11.3 SRU 8. The minimum Oracle Solaris OS version applies to all domain types that access physical I/O (control, service, root, and I/O). For information about the minimum versions of the Oracle Solaris OS for supported server platforms, see the data sheet for your server platform at `http://www.oracle.com/technetwork/server-storage/sun-sparc-enterprise/overview/index.html`.

**Note -** On a guest domain with only virtualized I/O, you can run any OS version that is supported by the platform.

For information about the minimum versions of the Oracle Solaris OS for supported server platforms, see the http://www.oracle.com/technetwork/server-storage/sun-sparc-enterprise/overview/index.html.

## Fully Qualified Oracle Solaris OS Versions

The Oracle VM Server for SPARC 3.4 control domain cannot run the Oracle Solaris 10 OS. However, you can continue to run the Oracle Solaris 10 OS in guest domains.

To use all features of the Oracle VM Server for SPARC 3.4 software, install or upgrade to at least the following OS:

- **Control domain, I/O domains, root domains, and service domains.** Oracle Solaris 11.3 SRU 8 OS
- **Guest domains only.** At least the Oracle Solaris 11.3 SRU 8 OS or the Oracle Solaris 10 1/13 OS plus the following patches

You must apply the following patches to any Oracle Solaris 10 1/13 guest domain to have the Oracle VM Server for SPARC 3.4 functionality. For information about the minimum Oracle Solaris OS versions for supported server platforms, see the data sheet for your server platform at http://www.oracle.com/technetwork/server-storage/sun-sparc-enterprise/overview/index.html.

- 125555-16
- 146582-05 (`fmd`)
- 148322-12 (`ixgbe`)
- 148888-05 (kernel update)
- 149167-06
- 149173-07
- 149175-10
- 149638-05
- 150025-01
- 150031-15
- 150107-03 (`ds`)
- 150400-34 (kernel update for dynamic I/O virtualization)
- 150435-04

- 150510-03

**Note -** This patch list includes the minimum patch revisions. The patches you install might be later revisions of the same patch. To find the "Recommended OS Patchset" for the SPARC Oracle Solaris 10 OS, see `https://support.oracle.com/rs?type=doc&id=1283728.1`.

## Location of the Oracle VM Server for SPARC Software

The Oracle VM Server for SPARC 3.4 software is installed by default when you install or upgrade to at least the Oracle Solaris 11.3 SRU 8 OS.

You can also obtain the `ldomsmanager` package from the Oracle Solaris 11.3 Support Repository or from My Oracle Support.

Also see "How to Update Oracle Solaris 11 Systems Using Support Repository Updates" (`http://www.oracle.com/technetwork/articles/servers-storage-admin/o11-018-howto-update-s11-1572261.html`) and "Updating a System to Oracle Solaris 11.3" in *Updating to Oracle Solaris 11.3*.

## Location of Documentation

Late-breaking information and known issues for this product are included in the documentation library at `http://www.oracle.com/technetwork/documentation/vm-sparc-194287.html`.

The Oracle VM Server for SPARC 3.4 man pages and the Japanese translations are installed on your system as part of the `ldomsmanager` package.

The following table shows the documentation that is available for the Oracle VM Server for SPARC 3.4 release. These documents are available in HTML and PDF formats unless indicated.

**TABLE 1** Related Documentation

| Application | Title |
|---|---|
| Oracle VM Server for SPARC 3.4 Software | *Oracle VM Server for SPARC 3.4 Release Notes* |
| | *Oracle VM Server for SPARC 3.4 Installation Guide* (this book) |
| | *Oracle VM Server for SPARC 3.4 Administration Guide* |
| | *Oracle VM Server for SPARC 3.4 Security Guide* |

| Application | Title |
| --- | --- |
| | *Oracle VM Server for SPARC 3.4 Reference Manual* (HTML only)<br><br>*Oracle VM Server for SPARC 3.4 Management Information Base User's Guide*<br><br>*Oracle VM Server for SPARC 3.4 Developer's Guide* |
| Oracle VM Server for SPARC 3.4 `drd`(1M), `ldmad`(1M), and `vntsd`(1M) man pages | Oracle Solaris 11.3 Reference Manual (HTML only):<br>■ `drd`(1M) man page<br>■ `ldmad`(1M) man page<br>■ `vntsd`(1M) man page |
| Oracle Solaris OS: Installation and Configuration | Oracle Solaris OS Installation and Configuration Guides:<br>■ Oracle Solaris 11.3 Documentation (`http://docs.oracle.com/cd/E53394_01`)<br>■ Oracle Solaris 10 Documentation (`http://www.oracle.com/technetwork/documentation/solaris-10-192992.html`) |
| Oracle VM Server for SPARC and Oracle Solaris OS Security | Oracle VM Server for SPARC White Paper and Oracle Solaris OS Security Guides:<br>■ *Secure Deployment of Oracle VM Server for SPARC* (`http://www.oracle.com/technetwork/articles/systems-hardware-architecture/secure-ovm-sparc-deployment-294062.pdf`)<br>■ *Oracle Solaris 11 Security Guidelines*<br>■ *Oracle Solaris 10 Security Guidelines* |

You can find documentation that relates to your server, software, or the Oracle Solaris OS at `http://www.oracle.com/technetwork/indexes/documentation/index.html`. Use the Search box to find the documents and the information that you need.

# Related Software

## Compatible Software

This section describes the software that is compatible with and can be used with the Oracle VM Server for SPARC software. Be sure to check the software documentation or your platform documentation to find the version number of the software that is available for your version of the Oracle VM Server for SPARC software and your platform.

- **Oracle VM Manager** is a web-based user interface that you can use to manage the Oracle VM environment. For more information about Oracle VM Manager, see the Oracle VM

Documentation (http://www.oracle.com/technetwork/documentation/vm-096300.html).

- **SunVTS** functionality is available in the control domain and guest domains on certain Oracle VM Server for SPARC releases and certain platforms. SunVTS is a validation test suite that provides a comprehensive diagnostic tool that tests and validates Oracle's Sun hardware by verifying the connectivity and proper functioning of most hardware controllers and devices on Oracle's Sun servers. For more information about SunVTS, refer to *SunVTS 7.0 Software*.
- **Explorer Data Collector** can be used with the Oracle VM Server for SPARC software enabled on the control domain. Explorer is a diagnostic data collection tool. The tool comprises shell scripts and a few binary executables. For more information, see *Oracle Explorer User's Guide* (http://docs.oracle.com/cd/E19957-01/819-6613/819-6613.pdf).
- **Oracle Solaris Cluster** software can be used in a guest domain with some restrictions. See the Oracle Solaris Cluster documentation for more information about any restrictions and about the Oracle Solaris Cluster software in general.
- **Oracle Enterprise Manager Ops Center** enables you to manage physical and virtual system resources. This solution simplifies resource discovery and monitoring, provides operating system and firmware provisioning, performs comprehensive update and patch management, manages virtual environments such as Oracle Solaris Zones and Oracle VM Server for SPARC, and supports hardware management from power up to production. For more information, see http://www.oracle.com/us/products/enterprise-manager/index.html.

# System Controller Software

The following system controller (SC) software interacts with the Oracle VM Server for SPARC 3.4 software:

- **Sun Integrated Lights Out Manager (ILOM) 3.2** is the system management firmware that you can use to monitor, manage, and configure SPARC T-series servers and SPARC M-series servers. Oracle ILOM is preinstalled on these platforms and can be used on supported servers with the Oracle VM Server for SPARC 3.4 software enabled. Refer to *Sun Integrated Lights Out Manager 3.2 User's Guide* for features and tasks that are common to Oracle's Sun rack-mounted servers or blade servers that support Oracle ILOM. Other user documents present Oracle ILOM features and tasks that are specific to the server platform that you are using. You can find the Oracle ILOM platform-specific information within the documentation set that accompanies your system.
- **Fujitsu M10 Servers eXtended System Control Facility (XSCF)** is the system management firmware that you can use to monitor, manage, and configure Fujitsu M10 servers. XSCF is preinstalled on these systems and can be used with the Oracle VM Server

for SPARC 3.4 software enabled. For more information about this software, see *Fujitsu M10/SPARC M10 Systems System Operation and Administration Guide* and *Fujitsu M10/SPARC M10 Systems XSCF Reference Manual* in the Product Notes for your model at http://www.fujitsu.com/global/services/computing/server/sparc/downloads/manual/.

♦ ♦ ♦ CHAPTER 2

# Installing the Software

This chapter describes how to install or upgrade the different software components required to use the Oracle VM Server for SPARC 3.4 software.

This chapter covers the following topics:


- "Hardware, Firmware, and Software Components" on page 19
- "Control Domain Installation and Upgrade Scenarios" on page 20
- "Installing and Upgrading the Software" on page 20


## Hardware, Firmware, and Software Components

Using the Oracle VM Server for SPARC software requires the following components:

- A supported platform. Refer to "Supported Platforms" on page 9 for a list of supported platforms. For information about the minimum and fully qualified system firmware versions, see "Fully Qualified System Firmware Versions" on page 12 and "Upgrading the System Firmware" on page 24.
- A control domain running an operating system equivalent to at least the Oracle Solaris 11 OS and the appropriate Support Repository Update (SRU), if applicable. See "Upgrading the Oracle Solaris OS" on page 22.

  For information about the minimum versions of the Oracle Solaris OS for supported server platforms, see the data sheet for your server platform at `http://www.oracle.com/technetwork/server-storage/sun-sparc-enterprise/overview/index.html`.
- Oracle VM Server for SPARC 3.4 software installed and enabled on the control domain.
- (Optional) The Oracle VM Server for SPARC Management Information Base (MIB) software package. See *Oracle VM Server for SPARC 3.4 Management Information Base User's Guide*.

  Note that you must manually install the Oracle VM Server for SPARC MIB software package after you install the Oracle VM Server for SPARC packages. It is not automatically installed with the other packages.

- (Optional) The Oracle VM Template Utilities software package. See Chapter 2, "Using Oracle VM Server for SPARC Templates" in *Oracle VM Server for SPARC 3.4 Developer's Guide*.

  Note that you must manually install the Oracle VM Template Utilities software package after you install the Oracle VM Server for SPARC packages. It is not automatically installed with the other packages.

# Control Domain Installation and Upgrade Scenarios

The following table describes the four installation scenarios for the Oracle VM Server for SPARC 3.4 software.

**TABLE 2** Control Domain Installation and Upgrade Scenarios

| Current Oracle Solaris OS Version | Domains Configured | No Domains Configured |
|---|---|---|
| Oracle Solaris 10 OS | Save your configuration, perform a fresh installation of the Oracle Solaris 11.3 SRU 8 OS, and restore the saved configuration | Perform a fresh installation of the Oracle Solaris 11.3 SRU 8 OS |
| Oracle Solaris 11 OS | Save your configuration as a precaution and upgrade the control domain to the Oracle Solaris 11.3 SRU 8 OS | Upgrade the control domain to the Oracle Solaris 11.3 SRU 8 OS |

The following list describes the actions listed in the previous table:

- **Save the existing configuration.** See "Saving the Existing Configuration" on page 21.
- **Perform a fresh installation of the Oracle Solaris 11.3 SRU 8 OS.** See "Installing the Oracle Solaris OS" on page 22.
- **Upgrade the control domain to the Oracle Solaris 11.3 SRU 8 OS.** See "How to Remove the `threading` Property" on page 22 and "Upgrading the Oracle Solaris OS" on page 22 .
- **Restore the saved configuration.** See "Restoring the Saved Configuration" on page 23.

# Installing and Upgrading the Software

SPARC platforms that support the Oracle VM Server for SPARC software are preinstalled with the Oracle Solaris 11 OS. Initially, the platform appears as a single system hosting only

one operating system. After the Oracle Solaris OS, system firmware, and Logical Domains Manager have been installed, the original system and instance of the Oracle Solaris OS become the control domain. That first domain of the platform is named `primary`, and you cannot change that name or destroy that domain. From there, the platform can be reconfigured with multiple domains hosting different instances of the Oracle Solaris OS.

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**Note -** The version of the Oracle Solaris OS software that runs on a guest domain is *independent* of the Oracle Solaris OS version that runs on the `primary` domain. So, if you run the Oracle Solaris 11 OS in the `primary` domain, you can still run the Oracle Solaris 10 OS in any of the guest domains.

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The Oracle VM Server for SPARC 3.4 software is installed and enabled by default when you install the Oracle Solaris 11.3 SRU 8 OS.

If your system is already installed with the Oracle VM Server for SPARC software, save the configuration for your current system. Perform this step before you install or upgrade to the Oracle VM Server for SPARC 3.4 software.

- If the control domain is installed with the Oracle Solaris 10 OS, you must install the Oracle Solaris 11.3 SRU 8 OS. See "Installing the Oracle Solaris OS" on page 22.
- If the control domain is installed with an older version of the Oracle Solaris 11 OS, you must upgrade to the Oracle Solaris 11.3 SRU 8 OS. See "Upgrading the Oracle Solaris OS" on page 22.

# Saving the Existing Configuration

If you have domains configured on your system, first save the configuration so that you can restore it after installing the Oracle Solaris OS.

## ▼ How to Save the Existing Configuration

1. **Save your configuration to the SP.**

   ```
   primary# ldm add-config config-name
   ```

2. **Save your domain constraints.**

   ```
   primary# ldm list-constraints -x >/var/opt/SUNWldm/filename.xml
   ```

3. **Save the contents of the `/var/opt/SUNWldm` directory.**

   ```
   primary# cd /var/opt/SUNWldm
   ```

```
primary# tar cvf filename.tar .
```

4. **Copy *filename*`.tar` to external storage.**

# Installing the Oracle Solaris OS

If your system is installed with the Oracle Solaris 10 OS, you must install the Oracle Solaris 11.3 SRU 8 OS, which includes the Oracle VM Server for SPARC 3.4 software. See "Fully Qualified Oracle Solaris OS Versions" on page 14. For complete Oracle Solaris OS installation instructions, see the Oracle Solaris 11.3 Information Library (http://docs.oracle.com/cd/E53394_01/). You can tailor the installation to the requirements of your system.

The Oracle VM Server for SPARC 3.4 software is installed and enabled by default when you install the Oracle Solaris 11.3 SRU 8 OS.

Install the required Oracle Solaris 11 OS or SRU OS. For information about updating to a new SRU, see How to Update Oracle Solaris 11 Systems From Oracle Support Repositories (http://www.oracle.com/technetwork/articles/servers-storage-admin/o11-018-howto-update-s11-1572261.html).

# Upgrading the Oracle Solaris OS

If your system is already installed with the Oracle Solaris 11 OS, you must upgrade it to the OS version that is associated with the Oracle VM Server for SPARC 3.4 software. See "Oracle Solaris OS Versions" on page 13. For complete Oracle Solaris OS upgrade instructions, see the Oracle Solaris 11.3 Information Library (http://docs.oracle.com/cd/E53394_01/).

The Oracle VM Server for SPARC 3.4 software is installed and enabled by default when you install the Oracle Solaris 11.3 SRU 8 OS.

If your control domain runs a version of Oracle VM Server for SPARC software prior to 3.3, you must first remove the `threading` property setting from all domains. See "How to Remove the threading Property" on page 22.

## ▼ How to Remove the `threading` Property

The `threading` property was removed from the Oracle VM Server for SPARC 3.3 release. Therefore, before you upgrade from an Oracle VM Server for SPARC version prior to 3.3 to

Oracle VM Server for SPARC 3.4, remove the `threading=max-ipc` property setting from all domains.

If you do not remove this property setting, only one virtual CPU per core remains after the `ldmd` daemon is restarted and the whole-core constraint is lost.

1. **Remove the `threading=max-ipc` property setting from all domains.**

```
primary# ldm set-dom threading=max-throughput domain-name
```

2. **Restore the whole-core constraint by using the `ldm set-core` command.**

```
primary# ldm set-core n domain-name
```

# Restoring the Saved Configuration

Saving and restoring the configuration is required when a control domain that runs the Oracle Solaris 10 OS is re-installed with the Oracle Solaris 11.3 SRU 8 OS.

After the Oracle Solaris 11.3 SRU 8 installation completes, restore the configuration from the tar file that you saved in "Saving the Existing Configuration" on page 21.

## ▼ How to Restore the Saved Configuration

Restoring this configuration re-creates any unbound domains, autosave information, and bootsets from your previous configuration.

1. **Disable the `ldmd` daemon.**

```
primary# svcadm disable ldmd
```

2. **Restore the tar file to the `/var/share/ldomsmanager` directory.**

```
primary# cp filename.tar /var/tmp
primary# cd /var/share/ldomsmanager
primary# tar xvf /var/tmp/filename.tar
```

3. **Enable the `ldmd` daemon.**

```
primary# svcadm enable ldmd
```

# Upgrading the System Firmware

**Note -** Before you upgrade the system firmware, stop all domains, or migrate the domains to another system, if possible.

Use the following resources when upgrading the system firmware on SPARC T-series servers and SPARC M-series servers:

- For information about upgrading the system firmware by using the ILOM software, see "Update the Firmware" and "Updating ILOM Firmware" in *Oracle Integrated Lights Out Manager (ILOM) 3.2 CLI Procedures Guide*. For more information about using the ILOM software, see the documents for your specific platform at `http://www.oracle.com/technetwork/documentation/sparc-tseries-servers-252697.html`.
- System firmware for your platform is available at `http://www.oracle.com/technetwork/systems/patches/firmware/index.html`.
- For information about the required system firmware for the supported servers, see "Fully Qualified System Firmware Patches" on page 13.
- To upgrade the system firmware from the control domain, refer to your system firmware product notes, which are available at SPARC T-Series Servers Documentation (`http://www.oracle.com/technetwork/documentation/sparc-tseries-servers-252697.html`).
- Refer to the administration guides or product notes for the supported servers for more information about installing and upgrading the system firmware for these servers.
- To find out how to use the ILOM web interface to upgrade system firmware, see "Updating ILOM Firmware" in the *Oracle Integrated Lights Out Manager (ILOM) 3.2 Web Interface Procedures Guide*.

To upgrade Fujitsu M10 server firmware by using the eXtended System Control Facility (XSCF), see the following resources:

- *Fujitsu M10/SPARC M10 Systems System Operation and Administration Guide*
- *Fujitsu M10/SPARC M10 Systems XSCF Reference Manual*