Manually Installing an Oracle® Solaris 11.4 System

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Manually Installing an Oracle Solaris 11.4 System

Part No: E69250

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Using This Documentation

- **Overview** – Describes how to use the text installer to install the current Oracle Solaris 11.4 operating system.
- **Audience** – Technicians, system administrators, and authorized service providers
- **Required knowledge** – Advanced experience troubleshooting and replacing hardware

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♦ ♦ ♦ CHAPTER 1

Overview of Installation Options

The Oracle Solaris software can be installed in a number of different ways depending on your needs. The chapter covers the following topics:

- "What's New in Installation for Oracle Solaris 11.4"
- "Installation Methods and the Installation Documentation"
- "Additional Installation Options"
- "System Requirements for OS Installations"

What's New in Installation for Oracle Solaris 11.4

- First boot services and packages can now be created using the `svc-create-first-boot` command. Administrators can quickly create first boot SMF services that can be set up by Automated Installer (AI). See "Automatically Creating a First-boot Service and Package" in *Customizing Automated Installations With Manifests and Profiles*.
- For SPARC clients, the WAN Boot protocol can use the HMAC-SHA 256 algorithm to enhance network installation security. The `installadm` command becomes the administrative tool for HMAC key generations for both SPARC and x86 clients.

  On UEFI-enabled x86 systems, support for secure boot establishes a chain of trust from early boot through the entire installation process. The administrator can associate keys and certificates in the BIOS that can be used for securing the initial boot mechanism all the way to contacting the AI and IPS package repository.

  For more information about securing a network installation, see Chapter 5, "Securing Automated Installation" in *Automatically Installing Oracle Solaris 11.4 Systems*.
- With the migration of persistent network configuration to SMF, you can apply complex network settings to the installation process. This feature especially benefits automated installation operations. In a system configuration profile, you can assign values to SMF network properties to be implemented during AI. See Chapter 3, "Working With System Configuration Profiles" in *Customizing Automated Installations With Manifests and Profiles*.

Installation Methods and the Installation Documentation

To install Oracle Solaris, two general methods are available:

- Using the text installer
- Using Automated Installer (AI)

In turn, each method has options for further customizing how your chosen installation method would run in your specific environment.

Based on these available methods, the documentation for Oracle Solaris installation is organized as follows:

- To use the text installer, refer to *Manually Installing an Oracle Solaris 11.4 System*, which is the current guide. It describes procedures for installing Oracle Solaris manually.
- To use the automated installer (AI), refer to *Automatically Installing Oracle Solaris 11.4 Systems*. It describes procedures to set up the necessary components for a "hands-free" Oracle Solaris installation.
- To perform a customized automated installation, refer to *Customizing Automated Installations With Manifests and Profiles*. This guide discusses in further detail how to use AI manifests and system configuration files to customize an automated installation. It is an important companion guide especially to *Automatically Installing Oracle Solaris 11.4 Systems*.

Additional Installation Options

The following additional installation options are supported:

Creating custom installation images	Installations are based on default installation images. However, you can build a custom image based on any of the default images. The distribution constructor tool enables you to specify parameters for building a new image. See *Creating a Custom Oracle Solaris 11.4 Image*.
Cloning an Oracle Solaris system	Through the Unified Archives feature, you can clone an existing Oracle Solaris system and use that image as a basis for the installation. See *Using Unified Archives for System Recovery and Cloning in Oracle Solaris 11.4*.
Updating an installed Oracle Solaris system	You cannot use the installer tool to update existing Oracle Solaris systems. Instead, you use the `pkg` utility to access package repositories

and download new or updated software packages for your system. For further information, see *Updating Your Operating System to Oracle Solaris 11.4* and *Updating Systems and Adding Software in Oracle Solaris 11.4*.

System Requirements for OS Installations

To check the minimum memory, disk space, and other system requirements for installing the Oracle Solaris 11.4 release, see *Oracle Solaris 11.4 Release Notes*.

Make sure that your system's firmware is updated to the latest version before installing Oracle Solaris 11.4. See `https://www.oracle.com/servers/technologies/firmware.html`.

Note - Non Oracle x86 systems with Intel® Virtualization Technology for Directed I/O (VT-d) must have the `Intel VT-d` parameter set to `Enabled` before you install Oracle Solaris on those systems. Refer to their respective documentation for instructions to set this parameter.

About IP Addresses in This Guide

IP addresses that are used in Oracle Solaris 11 documentation conform to RFC 5737, IPv4 Address Blocks Reserved for Documentation (`https://tools.ietf.org/html/rfc5737`) and RFC 3849, IPv6 Address Prefix Reserved for Documentation (`https://tools.ietf.org/html/rfc3849`). IPv4 addresses used in this documentation are blocks 192.0.2.0/24, 198.51.100.0/24, and 203.0.113.0/24. IPv6 addresses have prefix 2001:DB8::/32.

To show a subnet, the block is divided into multiple subnets by borrowing enough bits from the host to create the required subnet. For example, host address 192.0.2.0 might have subnets 192.0.2.32/27 and 192.0.2.64/27.

♦ ♦ ♦ CHAPTER 2

Preparing for the Installation

Before installing your system, review the information in this chapter including system requirements for installation and suggestions for partitioning your system.

The chapter covers the following topics:

- "Partitioning Your System"
- "About Device Drivers on the System"

Using Rights Profiles to Install Oracle Solaris

Oracle Solaris implements role-based access control (RBAC) to control system access. To perform specific tasks and run privileged commands on the system, you must have the profiles that provide you the authorization.

The following list shows some of the profiles that need to be assigned to you to install Oracle Solaris.

- Install Client Management enables you to install Oracle Solaris on client systems.
- Install Manifest Management enables you to create or configure manifests to customize the installation.
- Install Profile Management enables you to create and configure system configuration profiles to customize the installation.

Some profiles are supersets of a combination of profiles. For example, the Install Service Management profile contains the three profiles in the previous list.

The list of required profiles expands if you perform additional tasks that might be indirectly connected to your current one, such as network configuration or zone configuration.

An administrator that has the `solaris.delegate.*` authorization can assign the necessary profiles to users to enable them to perform administrative tasks in Oracle Solaris.

For example, an administrator assigns the Install Service Management rights profile to user `jdoe`. Before `jdoe` executes a privileged installation command, `jdoe` must be in a profile shell. The shell can be created by issuing the `pfbash` command. Or, `jdoe` can combine `pfexec` with every privileged command that is issued, such as `pfexec installadm`.

As an alternative, instead of assigning profiles directly to users, a system administrator can create a role that would contain a combination of required profiles to perform a range of tasks.

Suppose that a role `installadmin` is created with the profiles for installation as well as for zone creation and configuration. User `jdoe` can issue the `su` command to assume that role. All roles automatically get `pfbash` as the default shell.

For more information about rights profiles, see "Using Your Assigned Administrative Rights" in *Securing Users and Processes in Oracle Solaris 11.4*.

Partitioning Your System

The text installer can install Oracle Solaris on an entire disk or on a partition.

This section provides partitioning guidelines. You can perform the partition before installing, or during the installation process itself through the installer's interactive installation option.

About Partitioning for Installing Multiple Operating Systems

Partitioning used to be a solution to make a system accommodate multiple operating systems. Each partition would contain an operating system, and you can boot the system from the partition that runs your preferred OS.

Advances in virtualization technology offer alternatives to partitioning for this purpose. With virtualization, a single system acts as a host on which you configure guests or virtual machines. You can configure these guests to use different versions of Oracle Solaris or other supported operating systems. The software manages the resources, including disk space, that you allot for these guests, and you do not need to manually create partitions yourself.

For example, through Oracle Solaris zones, a system running Oracle Solaris 11 functions as the global zone on which you can create local zones and kernel zones. See the Oracle Solaris zones documentation in the library of your operating system's version at `https://docs.oracle.com/en/operating-systems/solaris.html`

Oracle's VirtualBox is another feature rich virtualization product applicable for use at home or in an enterprise environment. VirtualBox runs on Oracle Solaris, Linux, OS X, and Windows. Thus, VirtualBox can make your system accommodate multiple operating systems. See https://www.virtualbox.org.

For more information about Oracle's virtualization offerings, see https://docs.oracle.com/en/virtualization/.

Partitioning a System Prior To Installation

If you want to manually partition your system's disks, use the guidelines in this section. The text installer can perform partitions, but you can also use commercial products or open-source tools. Remember to back up your system prior to partitioning the hard drive.

When installing Oracle Solaris from the text installer image, you can use the entire disk or a partition for the operating system.

Note - If you create Linux-swap partitions, note that Linux-swap uses the same partition ID that Oracle Solaris uses. During the installation, in the disk partitioning step, you can change the Linux-swap partition to an Oracle Solaris partition.

Partitioning a System During an Interactive Installation

On an x86 based system, you can select, create, or modify partitions during a text installation. The installer uses GPT formatting when installing onto a whole disk or an unformatted disk.

Existing GPT partitions or DOS partitions are retained by default and displayed by the installer. Thus, you can select to use an existing partition instead of creating new ones. Logical partitions are displayed in the disk layout order within the extended partition on which they are created.

Note - See "SPARC: GPT Labeled Disk Support" in *Oracle Solaris 11.4 Release Notes* for more information about applying GPT-aware firmware on supported SPARC based systems.

You can install Oracle Solaris only on an Oracle Solaris partition. That installation partition can either be a physical partition or a logical partition within an extended partition.

Only one partition is used. If multiple Oracle Solaris GPT partitions are on the disk, then the installer by default chooses the first suitable Oracle Solaris GPT partition as the installation target.

You can specify partitions to be performed during installation. During that process, the entire disk layout is overwritten if any of the following is true:

- The disk table cannot be read.

  In this case, proposed partitioning information is displayed.
- The disk was not previously partitioned.
- You select the entire disk for the installation.

By default, the installation process overwrites only the target Oracle Solaris partition. Other existing partitions remain unchanged provided that you did not specify them to be modified.

x86: Setting Up Partitions During an Interactive Installation

On x86 platforms, screen entries enable you to specify partition instructions. The screens might also provide the minimum and recommended minimum sizes for installing the software.

The following partition-related options are available:

Option	Description	Action to Perform
Use the existing Oracle Solaris partition.	Installs Oracle Solaris on the existing partition using its current size.	Select the Partition a Disk option. No other changes are required.
Create an Oracle Solaris partition.	Creates a partition if it does not exist. This modification erases the existing partition contents.	Select a primary partition or a logical partition and then change its type to Oracle Solaris.
Increase the space that is allocated to an Oracle Solaris partition and install on that partition.	Increases the size alloted to a partition before installing the software, provided that enough disk space exists. The available space contains any contiguous unused space before or after the selected partition. If you enlarge the partition, unused space after the partition is used first. Then, unused space before the partition is used, which changes the starting cylinder of the selected partition.	Select a new size for the target installation partition.
Install the operating system on a different Oracle Solaris partition.	Installs the OS on a different partition. The contents of this partition are erased during the installation process.	Select a partition and change its type to Oracle Solaris.

Option	Description	Action to Perform
	If the system has existing DOS partitions, only one Oracle Solaris partition is allowed. You must first change the existing Oracle Solaris partition type to Unused before you create its Oracle Solaris replacement.	
Create a new Oracle Solaris partition within an extended partition.	Creates a new partition within an extended partition. You can resize the extended partition and then change one of the logical partitions in the extended partition to an Solaris partition. Also, you can enlarge the logical partition up to the size of the extended partition that contains that logical partition. If the system has existing DOS partitions, only one Oracle Solaris partition is allowed. You must first change the existing Oracle Solaris partition type to Unused before you create a new one within an extended partition.	Select the Partition a Disk option. Change the partition type to Extended.
Delete an existing partition.	Deletes an existing partition. During an installation, the partition is destroyed and its space is made available to resize adjacent partitions.	Select the partition and change its type to Unused.

Setting Up VTOC Slices During a Text Installation

For text installations on the SPARC platform, you can modify VTOC slices during the installation. For text installations on the x86 platform, you can modify a slice within a partition if that partition has not already been modified during the installation.

When setting up VTOC slices, keep the following in mind:

- The installer displays the existing slices. The slices are displayed in the order in which they are laid out. The current size and maximum available size for each slice are also displayed.
- Oracle Solaris must be installed in a ZFS root pool. By default, the slice that contains the root pool is labeled `rpool` by the installer. If you want to install the operating system on a slice that does *not* contain the root pool, change the type for that slice to `rpool` in the installer. During the installation, a ZFS root pool will be created on that slice.

Note - Because only one ZFS pool can be named `rpool`, if a pool named `rpool` is already on the device, the installer will name any new pool using the format `rpool#`.

- The size of a slice can be increased up to the maximum available size. To make more space available, you can change the type of an adjoining slice to Unused, thereby making its space available to adjacent slices.
- If the slice is not explicitly altered, the content of the slice is preserved during the installation.

The following table describes the options for modifying slices during a text installation.

TABLE 1 Options for Modifying VTOC Slices During a Text Installation

Option	Description and User Action (if required)
Use an existing slice	This option installs the Oracle Solaris operating system on an existing VTOC slice using its current size. Select the target slice, then change its type to `rpool`.
Resize a slice	You can change the size only of a newly created `rpool` slice. Type the new size in the field.
Create a new slice	Select an unused slice and change its type. For example, change Unused to `rpool`.
Delete an existing slice	Change the slice type to Unused. During the installation, the slice is destroyed and its space is made available for resizing adjacent slices.

Installing on a SCSI Target

You can use the text installer to install the Oracle Solaris operating system onto an iSCSI target if the iSCSI target can act as a boot disk and if the system has the necessary support for iSCSI booting. If your system supports autodiscovery of iSCSI disks, the installer provides that option. Alternately, you can manually enter values to specify the iSCSI target in the installation screens. To use iSCSI, the network interface for the system must be configured with a static IP address before starting the installation process. Note the following considerations when performing an iSCSI installation:

- An iSCSI boot on SPARC platforms is supported with OpenBoot level 4.31 or later, and does not require a specific NIC. The `boot` command in OpenBoot takes a series of keywords to identify the destination iSCSI target or uses the parameters stored in the network-boot-parameters NVRAM variable. The command uses the format `boot net:keyword=`*value*.
- On x86 platforms, the host that is being booted must use NICs that are iSCSI Boot Firmware Table (iBFT) capable or have a main board BIOS that is iBFT capable. To configure iSCSI boot properly, refer to the documentation for your specific NIC hardware.

For further information, see `iscsiadm`(8) man page.

About Device Drivers on the System

Before installing the Oracle Solaris OS, you need to determine whether your system's devices are supported. Review the Hardware Compatibility Lists (HCL) at https://www.oracle.com/webfolder/technetwork/hcl/index.html. The HCL provides information about hardware that is certified or reported to work with the Oracle Solaris operating system.

♦ ♦ ♦ CHAPTER 3

Using the Text Installer

This chapter describes how to install Oracle Solaris by using the text installer. It covers the following topics:

- "About Text Installation"
- "Text Installation Tasks"

About Text Installation

The text installer can be used to do simple installations on both SPARC and x86 platforms. It can operate with a minimum of memory and also enables you to select, create, or modify disk partitions while you are installing the operating system.

The text installer has the following advantages:

- Can be used on systems that do not have nor require graphics cards.
- Enables manual configuration of the network and naming services.
- Can be used even in an environment that is set up for automated installation over the network. See "How to Start a Text Installation Over the Network" on page 25.
- Enables you to modify disk partitions if necessary.

Note - The text installer installs a small set of software that is appropriate for a general-purpose system. In particular, the text installer does not install the GNOME desktop. To install additional packages after an installation performed with the text installer, see "Adding Software After a Text Installation" on page 27. The step to add the desktop is also included in the installation procedures described in this chapter.

Text Installation Tasks

This section includes the following tasks:

- "How to Prepare for a Text Installation" on page 22
- "How to Perform a Text Installation" on page 23
- "How to Start a Text Installation Over the Network" on page 25
- "Adding Software After a Text Installation" on page 27

Note that the tasks in this guide assume that the clients have no operating system installed and you are performing a fresh installation.

▼ How to Prepare for a Text Installation

Complete the actions in this procedure before you perform a text installation.

Before You Begin Ensure that your role has the appropriate rights profiles to perform this procedure. See "Using Rights Profiles to Install Oracle Solaris" on page 13.

1. **Download the text installer image.**

   a. **Go to `https://www.oracle.com/solaris/solaris11/downloads/solaris-downloads.html`.**

   b. **Select** *Installation from CD/DVD or USB***.**

   c. **Under the Text Installer heading, download either the ISO image or the USB image.**

      Make sure to download the image that corresponds to the client platform on which the OS will be installed.

2. **Perform one of the following:**

   - **If you downloaded the ISO image, ensure that it is accessible on the network.**
   - **If you downloaded the USB image, copy the image to a USB media.**

     To copy, use one of the following methods:

- On systems without Oracle Solaris installed, use the `dd` command. For example:

  ```
  $ dd bs=16k conv=sync if=image-path of=/dev/rdsk/disk
  ```

- On Oracle Solaris systems that includes the `pkg:/install/distribution-constructor`, use the `usbcopy` command instead.

3. **Check the requirements and limitations for running the installer on your system.**

   a. **Verify that your system meets all of the necessary system requirements.**
   See *Oracle Solaris 11.4 Release Notes*.

   b. **Verify that you have all of the necessary device drivers.**
   See "About Device Drivers on the System" on page 19.

4. **Set up the required environment.**

   a. **If necessary, back up your system.**

   b. **If you want to partition your system before installing, review the guidelines in "Partitioning a System Prior To Installation" on page 15.**

How to Perform a Text Installation

This procedure assumes you are using a USB image for installation.

Before You Begin Ensure that your role has the appropriate rights profiles to perform this procedure. See "Using Rights Profiles to Install Oracle Solaris" on page 13.

1. **Boot the client from the media with the USB image.**

2. **If requested, make any preliminary keyboard and language selections.**

   Note - The keyboard and language selections are requested during the x86 installation process. These values are preset for the SPARC installation process.

   The main menu appears.

   ```
   1 Install Oracle Solaris
   2 Shell
   3 Terminal type (currently sun-color)
   ```

```
4 Reboot

Please enter a number [1]:
```

3. **(Optional) Type 2 to go to the shell command prompt.**

   This enables you to perform tasks that require you to use the command line. After using the command lines, press Ctrl-D to return to the menu.

   For example, suppose that you want to use iSCSI discovery over IPoIB connections. If the connections have not yet been set, then you would need to configure IPoIB similar to the following example.

```
# dladm show-ib
LINK     HCAGUID         PORTGUID        PORT STATE   GWNAME     GWPORT     PKEYS
net4     212800013F2EC6 212900013F2EC7 1    down    -          --FFFF
net5     212800013F2EC6 212900013F2EC8 1    up      -          --FFFF

# dladm create-part -l net5 -P 0xFFFF ibd5     Creating the partition.
# dladm show-part
LINK         PKEY  OVER         STATE    FLAGS
ibd5         FFFF  net5         unknown  ----

# ipadm create-ip ibd5     Creating the IP interface over the partition.
# ipadm create-addr -T static -a 192.0.2.53/27 ibd5/v4     Configuring IP address.

# ^D     Exiting the shell.
```

   Note - For non-IPoIB connections, network configuration is an option you can choose as part of the installation process.

4. **Type 1 to begin the installation.**

5. **On the opening screen, use the "Continue" function key to move to the next panel.**

6. **On the series of screens that appear, provide the information as prompted.**

   For a description of these installation screens and the type of information that is required, see Appendix A, “Text Installer Panels”.

7. **On the summary screen, press the function key to apply the installation specifications that you have provided.**

Caution - Do not interrupt an installation that is in progress. An incomplete installation can leave a disk in an indeterminate state.

8. **On the final screen, select to reboot the system.**

   To view the log contents, go to `/var/log/install/install_log` after the system reboot is completed.

9. **(Optional) To add the `solaris-large-server` and `solaris-desktop` packages, issue the following commands.**

```
# pkg install solaris-desktop
# pkg install solaris-large-server
```

Next Steps

- "Adding Software After a Text Installation" on page 27
- "Setting the GRUB Console Type" in *Booting and Shutting Down Oracle Solaris 11.4 Systems* to disable the graphics display during the boot process

How to Start a Text Installation Over the Network

Use this procedure if your system is not equipped to use an installation media. This type of installation performs a minimal installation only of the `solaris-auto-install` package. You must manually add the larger package as an additional step.

Before You Begin

An AI setup must already be configured. For instructions, see "Configuring an AI Server" in *Automatically Installing Oracle Solaris 11.4 Systems*.

You must also download the AI boot image that corresponds to the client's platform as described in "How to Prepare for a Text Installation" on page 22.

Ensure that your role has the appropriate rights profiles to perform this procedure. See "Using Rights Profiles to Install Oracle Solaris" on page 13.

1. **Move the downloaded `iso` file to the AI server.**

2. **On the AI server, create an install service for that image.**

   For example:

```
aiserver$ installadm create-service -n service-name -s boot-image
```

   Make sure to include the full path to *boot-image*.

   For more information about install services, see "Working With Install Services" in *Automatically Installing Oracle Solaris 11.4 Systems*.

3. **Boot the AI client over the network.**

- **For SPARC AI clients, type the following command at the OBP prompt:**

  ```
  # boot net:dhcp
  ```

- **For x86 AI clients, perform these steps:**

  a. **While the system is booting, press the appropriate function key to access the BIOS screen.**

     For example, some systems use F12.

  b. **Configure the boot device information to boot the system also from the network, then continue booting.**

     The GRUB menu displays the options of using either the text installer or the automated installer to install the operating system.

4. **Select the text installation method and press Enter.**

   After some time, the Installation Menu appears:

   ```
   1 Install Oracle Solaris
   2 Shell
   3 Terminal type (currently sun-color)
   4 Reboot

   Please enter a number [1]:
   ```

5. **Type 1 to begin the installation.**

6. **On the opening screen, use the "Continue" function key to move to the next panel.**

7. **On the series of screens that appear, provide the information as prompted.**

   For a description of these installation screens and the type of information that is required, see Appendix A, “Text Installer Panels”.

8. **On the summary screen, press the function key to apply the installation specifications that you have provided.**

Caution - Do not interrupt an installation that is in progress. An incomplete installation can leave a disk in an indeterminate state.

9. **On the final screen, select to reboot the system.**

To view the log contents, go to `/var/log/install/install_log` after the system reboot is completed.

10. **(Optional) To add the `solaris-large-server` and `solaris-desktop` packages, issue the following commands.**

```
# pkg install solaris-desktop
# pkg install solaris-large-server
```

Adding Software After a Text Installation

To add software packages after you have installed the operating system, use the `pkg` commands as described in the `pkg(1)` man page. You can also use the `pkg` command to find the names of packages you might want to install, get more information about the packages, and install the packages.

Note - For more information, see "Installation Privileges" in *Updating Systems and Adding Software in Oracle Solaris 11.4*.

As a best practice, use the `pkg install -nv` command first. The command simulates an installation but no packages are actually installed. You can then preview the output to identify specific packages you want to install. To selectively install packages, use the following command syntax:

```
# pkg install package-name
```

To install packages to a different boot environment, use the following command:

```
# pkg install --require-new-be --be-name new-be-name install package-name
```

Note - Ensure that your role has the appropriate rights profiles to perform this procedure. See "Using Rights Profiles to Install Oracle Solaris" on page 13.

♦ ♦ ♦ APPENDIX A

Text Installer Panels

Panels for Configuring the Installation

This appendix describes the different screens or panels that are displayed when you run the text installer. These panels provide options that enable you to determine how the installation runs.

Use the function keys listed at the bottom of each panel to navigate between the panels. Use the arrow keys to move between fields in a given panel. If your keyboard does not have function keys or if the keys do not respond, press ESC to view alternate keys for navigation.

At any time during the installation, you may back up to a previous panel.

Discovery Selection Panel

On this panel, you select the discovery method for the disk on which you want to install the operating system.

- Local Disks – to use disks that are attached to the computer, including internal and external hard disks.
- iSCSI – to search for remote disks accessible over a network using the iSCSI standard. Make sure that you have completed the configuration as provided in the example in Step 4 of "How to Perform a Text Installation" on page 23. If you select this option, another screen prompts for additional information:

Target IP	IP address of the iSCSI target. Provide four numbers in the range 0-255. The system at this IP address must be online and accessible. This field is required.
Target LUN	Logical Unit Number of the iSCSI device located at the provided IP address. This field is optional.
Target Name	Name of the iSCSI target in iSCSI Qualified Name (IQN) format. This field is optional.

Port	Port number used in conjunction with the provided IP address for discovering the iSCSI device. Typically, `3260` is used for iSCSI. This field is optional.
Initiator Name	Initiator node name to be set for the iSCSI discovery session. For iSCSI booting, this field is hidden because the initiator node name cannot be modified. This field is generated for you.
CHAP Name	If using CHAP for authentication, the CHAP (Challenge-Handshake Authentication Protocol) name to be used for authentication. This field is optional.
CHAP Password	CHAP secret value for authentication. If provided, this value must be between 12 and 16 characters long. This field is optional.

Selecting the iSCSI option might cause a small delay proceeding with the installation while the details you provided are validated. If the iSCSI LUN cannot be discovered, an error is displayed. You cannot proceed until the problem is resolved, either by entering valid criteria or by deselecting iSCSI.

Disk Panel

If your system has multiple disks, these disks would be listed on this panel, where you can either accept the default selection or choose another disk as the installation target.

Partitions Panel

On this panel, you would choose from one of the following options which part of the disk to use for the operating system.

- Use the entire disk
- Use a GPT partition

  You would specify the target installation partition. If the existing partition table is unreadable, the panel would propose a partition, and data on the disk is destroyed during the installation.

  Note the following:

  - If the disk contains existing DOS partitions, up to four DOS primary partitions are displayed. If a DOS extended partition exists, its logical partitions are also displayed in

the disk layout order within the extended partition. Only one Oracle Solaris partition is allowed, and that Oracle Solaris partition must be used for the installation. The Oracle Solaris partition can be a logical partition within an extended partition.

- If the disk contains existing GPT partitions, the GPT partitions are displayed. Up to seven GPT partitions are supported. You can create one or more Oracle Solaris partitions during the installation, but you must choose one Oracle Solaris partition as the installation target. If there are multiple, existing Oracle Solaris GPT partitions, the first suitable Oracle Solaris GPT partition will be chosen by default as the installation target.

On SPARC systems, the installation process will prompt for information about the disks.

For detailed partitioning instructions, see "Partitioning a System During an Interactive Installation" on page 15, or see the online help in the installer.

Boot Panel

Specifying options on this panel is optional. The panel displays the dedicated on-board devices as well as other boot devices. By default, the Dedicated and Selected columns show Yes for these devices. Use the F5 key to change the boot pool devices.

System Identity Panel

Provide a computer name to identify the system on the network.

Network Panel

On this panel, you would determine how to configure the wired Ethernet network connection. Your options depend on whether the network is unconfigured, or if you want to use DHCP, or if you prefer to manually configure the network yourself. You can also select to skip the network configuration process.

In both DHCP or manual configuration, IPv6 autoconfiguration is enabled on the interface.

Manual network configuration generates its own set of additional panels. After you select a connection to be configured, the following panels are displayed:

- Manually Configure, where you either specify the type of connection settings or accept the default information as detected and provided by the installer.

Note - The IP address and netmask are required fields. The router is an optional field.

Only one wired network interface may be configured.

- DNS Name Service, where, if you select to use this service, you would need to provide the following information:
  - Name of the DNS Service.
  - At least one IP address for a DNS server.
  - At least one domain name to be searched when a DNS query is made.
- Alternate Name Service:

  If you selected to use the DNS name service, LDAP would be set up as an alternate name service. Otherwise, LDAP would be the only name service.

  Select None if you want to manually configure LDAP without an LDAP profile after installation is completed. If no network naming services are selected, network names can be resolved by using standard name source files such as `/etc/hosts`. For further information, see the `nsswitch.conf(5)` man page.
- Domain Name

  On this panel you would specify the domain where the system resides for the selected alternate name service.

  Note - To determine the domain name, check with your system administrator. Or, use the `domainname` command on a previously installed system.

- LDAP Profile

  To use LDAP as an alternate name service, you would provide the following LDAP information on this panel:
  - LDAP profile to be used to configure the LDAP name service on the system
  - IP address for the LDAP profile server
  - LDAP search base
  - On the LDAP Proxy panel, specify whether LDAP proxy bind information will be provided.

    If needed, provide the LDAP proxy bind distinguished name and proxy bind password.

Additional Panels

The following additional panels are displayed after the Network Panel:

- Time Zone: Select the region, location, and time zone.
- Locale: Select the language and language territory.
- Date and time: Specify the date and time.
- Keyboard: Select the keyboard layout.

User Panel

You are not required to create a user account, but you must create a root password.

If you create a user account in this panel, you need to provide both the user's password and a root password. The user is then assigned the `root` role.

Support-Related Items

These panels enable you to specify your support configurations:

- Support registration where you determine how you want to start Oracle Auto Service Request (ASR).
- Support – Network Configuration where you select an access method for ASR:
  - No proxy
  - Proxy – the next panel prompts for the proxy hostname, port number, and username and password if using secure proxy.
  - Aggregation Hubs – the next panel prompts for the OCM Hub URL and the ASR Manager URL.

Summary Panel

This panel gathers and displays all the information you previously specified to enable you to review your choices. You can go back to previous screens if you want to make any specification changes.

Make sure that you review the information thoroughly before you proceed with the installation to ensure that your specifications are correct.

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