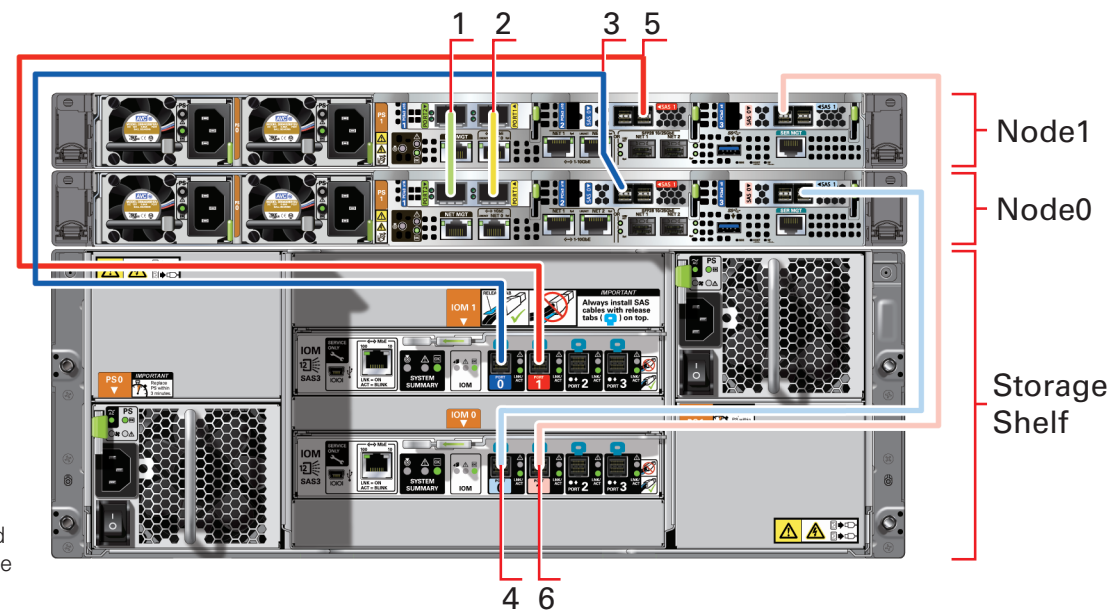


Cabling the Interconnect and Storage for Oracle Database Appliance X7-2-HA



Connect interconnect and storage to Oracle Database Appliance X7-2-HA.

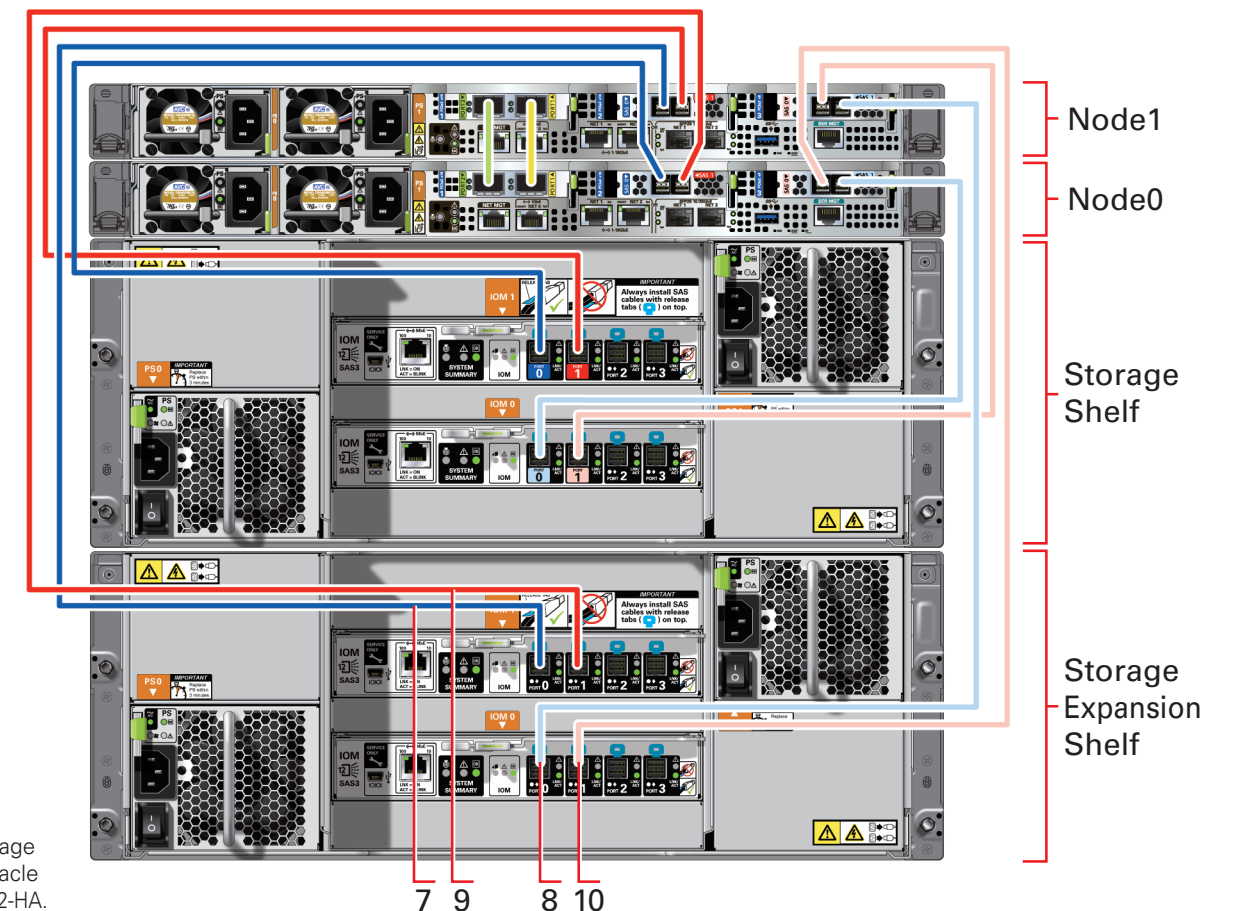
Note: The following cables are included as part of the Oracle Database Appliance shipment.

Network

Purpose	Start - Compute Node0	End - Compute Node1
1. Connect green SFP+ cable	Connect into green port (PORT 2) in PCIe slot 1	Connect into green port (PORT 2) in PCIe slot 1
2. Connect yellow SFP+ cable	Connect into yellow port (PORT 1) in PCIe slot 1	Connect into yellow port (PORT 1) in PCIe slot 1

Storage Shelf

Purpose	Start - Compute Nodes	End - Storage Shelf
3. Connect dark blue SAS cable	Connect into dark blue port (SAS0) in PCIe slot 2 in Node0	Connect into dark blue port in top IO Module (PORT 0)
4. Connect light blue SAS cable	Connect into light blue port (SAS1) in PCIe slot 3 in Node0	Connect into light blue port in bottom IO Module (PORT 0)
5. Connect dark red SAS cable	Connect into dark red port (SAS1) in PCIe slot 2 in Node1	Connect into dark red port in top IO Module (PORT 1)
6. Connect light red SAS cable	Connect into light red port (SAS0) in PCIe slot 3 in Node1	Connect into light red port in bottom IO Module (PORT 1)



Connect optional storage expansion shelf to Oracle Database Appliance X7-2-HA.

Note: The following cables are included as part of the Oracle Database Appliance shipment.

Storage Expansion Shelf

Purpose	Start - Compute Nodes	End - Expansion Shelf
7. Connect dark blue SAS cable	Connect into dark blue port (SAS0) in PCIe slot 2 in Node1	Connect into dark blue port in top IO Module (PORT 0)
8. Connect light blue SAS cable	Connect into light blue port (SAS1) in PCIe slot 3 in Node1	Connect into light blue port in bottom IO Module (PORT 0)
9. Connect dark red SAS cable	Connect into dark red port (SAS1) in PCIe slot 2 in Node0	Connect into dark red port in top IO Module (PORT 1)
10. Connect light red SAS cable	Connect into light red port (SAS0) in PCIe slot 3 in Node0	Connect into light red port in bottom IO Module (PORT 1)

Preparing to Deploy Oracle Database Appliance X7-2-HA

You can also scan the Quick Response Code with your mobile device to read the documentation.



1 Set Up the Hardware and Register with My Oracle Support

- A Ensure that the system hardware is set up and mounted properly as specified in the instructions in the *Oracle Database Appliance Owner's Guide*, found on: <http://www.oracle.com/goto/oda/docs>
- B Verify that your shipment contains the correct power cables for your location.
- C Oracle Database Appliance includes the network cables for the interconnect between the two servers. Public network cables are not included in Oracle Database Appliance shipments.
- D Obtain your hardware Support Identifier (SI) from your hardware vendor.
- E Add the hardware SI and new software licenses that you received with Oracle Database Appliance to your My Oracle Support profile. Each SI registration may take up to 24 hours.

Note: You cannot obtain software or support from Oracle without registered hardware and software SIs.

2 Planning the Network Configuration

- A Collect the following network and cluster information from your network administrator:
 - Generic network information
 - Domain name (for example, example.com)
 - Domain name server addresses
 - **(Optional) Network Time Protocol server addresses**
 - Cluster network information
 - Single Client Access Name (SCAN) and two addresses (for example, hrsys-scan and 192.0.2.16, 192.0.2.17)
 - Netmask for public network (for example, 255.255.252.0)
 - Gateway for public network (for example, 192.0.2.1)

3 Plan the Network Configuration, Continued

- B Collect the following cluster node information from your network administrator:
 - Node0 network information
 - Public name and address (for example, hrsys0 and 192.0.2.18)
 - VIP name and address (for example, hrsys0-vip and 192.0.2.19)
 - **(Optional) VLAN ID**
 - Node1 network information
 - Public name and address (for example, hrsys1 and 192.0.2.20)
 - VIP name and address (for example, hrsys1-vip and 192.0.2.21)
 - Gateway for public network (for example, 192.0.2.1)
 - **(Optional) VLAN ID**

Note: Public, VIP, and SCAN IP addresses must be on the same subnet.

Note: For Oracle Database Appliance Virtualized Platform, your network administrator must provide extra IP addresses for dom0, ODA_BASE, and the virtual machines.

4 Set Up Oracle ILOM Configuration

- A Configure Oracle Integrated Lights Out Manager (Oracle ILOM) for managing Oracle Database Appliance independently of the operating system.

Collect the following information for your Oracle ILOM network:

- Oracle ILOM name and address for Node0 (for example, hrsysilom1 and 10.0.0.3)
- Oracle ILOM name and address for Node1 (for example, hrsysilom2 and 10.0.0.4)
- Netmask for management network (for example, 255.255.255.0)
- Gateway for management network (for example, 10.0.0.1)

5 Plan the Software and Database Configuration Choices

- A Plan your software installation choices as follows:
 - System name (for example, hrsys)
 - Region (for example, America) and Time Zone (for example, America/Los_Angeles)
 - Deployment type (for example, Oracle Real Application Clusters)
 - Disk group redundancy: High (triple-mirrored) or Normal (double-mirrored)
 - Data storage percentage (for example, 80)
- B Prepare to enter information for the following Database fields:

• Name (for example, hrdb)	• Class (for example, OLTP)
• Unique Name	• Storage (for example, ASM)
• Deployment type (for example, Oracle Real Application Clusters)	• Language (for example, English)
• Shape (for example, odb-02)	• Character Set (for example, AL32UTF8)
• DB Edition (for example, Enterprise Edition)	• Territory (for example, America)

6 Plan for Oracle ASR and Oracle Cloud File System Size

- A **(Optional)** To configure Oracle Auto Service Request (Oracle ASR) provide the following:
 - Oracle online account user name and password
 - SNMP version
 - **(Optional)** Proxy server name and port to use for your deployment
 - **(Optional)** Proxy user name and password
- B **(Optional)** Configure External Oracle ASR Manager
 - Oracle ASR Manager IP, host name, and port
 - Your My Oracle Support account user name and password
- C To change the default name and size of Oracle Cloud File System, provide the following:
 - Name of file system (default name is /cloudfs)
 - Size of file system (default size is 50GB)

For more information about ASR, see: www.oracle.com/technetwork/systems/asr/overview/index.html

7 Determine the Deployment Type

- A A Bare Metal Platform
 - Proceed to step 9
- B Virtualized Platform
(Recommended) Download Oracle Appliance Manager Configurator:
<http://www.oracle.com/technetwork/database/database-appliance/overview/index.html>
 - (i) Run the Configurator, preferably on a computer that is on a network that is local to where you plan to install Oracle Database Appliance.
 - (ii) Enter and validate your configuration choices with the Configurator. This creates a configuration file that you can use during actual deployment. You can also run Oracle Appliance Manager Configurator directly from Oracle Database Appliance during deployment.

8 Prepare for a Virtualized Platform

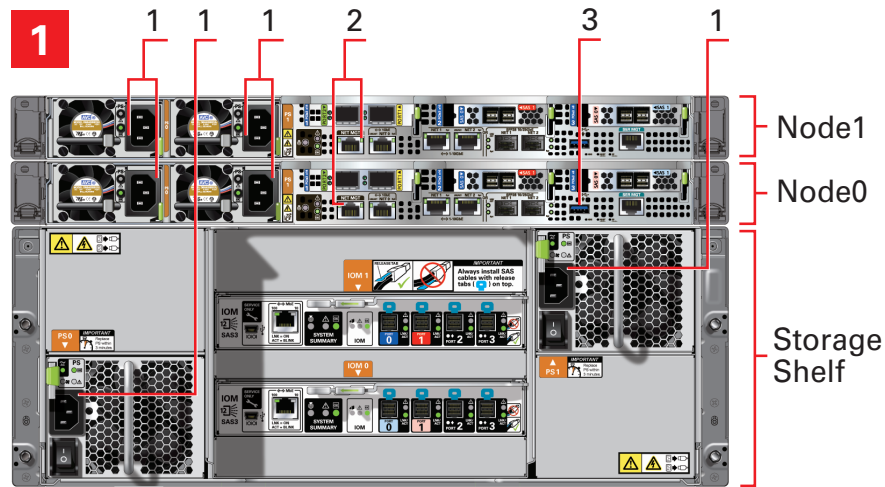
- From a browser on an external client, download the latest Oracle Database Appliance virtualization software.
- A Download the Virtualization Template (ODA_BASE template)
 - B Download Virtualized OS ISO Image
 - C Install the Virtualized OS ISO image
- To locate the latest software, go to <http://www.oracle.com/goto/oda/docs>, select the latest version, then see the *Oracle Database Appliance Release Notes*, and the *Oracle Database Appliance X7-2 Deployment and User's Guide*.
- Note: Refer to the patch file README for the zip file names and commands.*

9 Review Oracle Database Appliance Information

- Review the most recent version of this poster in the Oracle Database Appliance online documentation library: <http://www.oracle.com/goto/oda/docs>
- For more information about where to get the patches, known issues, and how to update the Server components, see the *Oracle Database Appliance Release Notes* and the *Oracle Database Appliance X7-2 Deployment and User's Guide*.
<http://www.oracle.com/goto/oda/docs> and select the latest version.
- Review the Oracle Database Appliance white papers on Oracle Technology Network: www.oracle.com/technetwork/server-storage/engineered-systems/database-appliance/index.html
- Review the Oracle Database Appliance Information Center, which is contained in My Oracle Support Note 888888.1: support.oracle.com/CSP/main/article?cmd=show&type=NOT&id=888888.1
- Review the latest information about Oracle software and hardware products: www.oracle.com

Oracle Database Appliance X7-2-HA Bare Metal Setup

You can also scan the Quick Response Code with your mobile device to read the documentation.



Connect the Power and Public Network Cables

Important: Follow the instructions on Page 1 to cable the server nodes, storage system(s) and interconnect before proceeding. On both nodes, connect:

- A Power to the power supply unit (PSU) (1)
- B (Optional) Ethernet to network management for Oracle Integrated Lights Out Manager (Oracle ILOM) (2)
- C (Optional) On Node0 only, connect peripheral to USB (3).

2 Start Up the Systems

Connect power to the power supply.

- A Turn on power to the storage shelf and optional storage expansion shelf.
- B On each node, after the green SP OK LED (4) is steady ON, push the power button (5).
- C Wait for the green Power OK LED (6) to turn steady ON. The Power OK LED might blink for several minutes. **Do not repeatedly push the power buttons.**



3 Validate Storage

To ensure that the storage cabling is properly configured, log into the console as root and run the following `odacli validate-storage topology` command:

```
/opt/oracle/dcs/bin/odacli validate-storage topology
```

4 Configure the Network

Plumb the network enables you to use `scp` to copy files to Oracle Database Appliance. Consult with your network administrator to obtain the information that you need to complete the initial configuration.

- A Connect to the ILOM remote console and log in as root.
- B Configure the network using the command:
`/opt/oracle/oak/bin/configure-firstnet`
- C Enter the domain name, DNS servers, host names, network interface, IP addresses for nodes, netmask, gateway, and VLAN ID (optional) when prompted.

5 Update the Repository with the GI and RDBMS Files

- A Download the Oracle Database Appliance GI patch and RDBMS Clone files to a local computer on the network.
 - B Unzip the files. If a patch file is split into more than one zip file, concatenate the zip files.
 - C Upload the files to the appliance, then unzip each patch.
 - D Update the repository. You must include the fully qualified directory.
`# odacli update-repository -f /u01/tmp/patch_file_name.zip`
If you have more than one bundle, you can use a comma-separated list. Spaces are not allowed between the filenames.
 - E Check the job status to confirm that the status of the job is **Success**.
`# odacli list-jobs`
 - F Run these steps on both nodes.
- See the *Oracle Database Appliance Release Notes* and *Oracle Database Appliance X7-2 Deployment and User's Guide* for more information.

6 Deploy the Oracle Software

Perform the following steps on Node0 to deploy Oracle Database Appliance:

- A In your browser type the following URL:
<https://<ODA-host-ip-address>:7093/mgmt/index.html>
- B Enter the following credentials
 - Username: `oda-admin`
 - Password: `password`

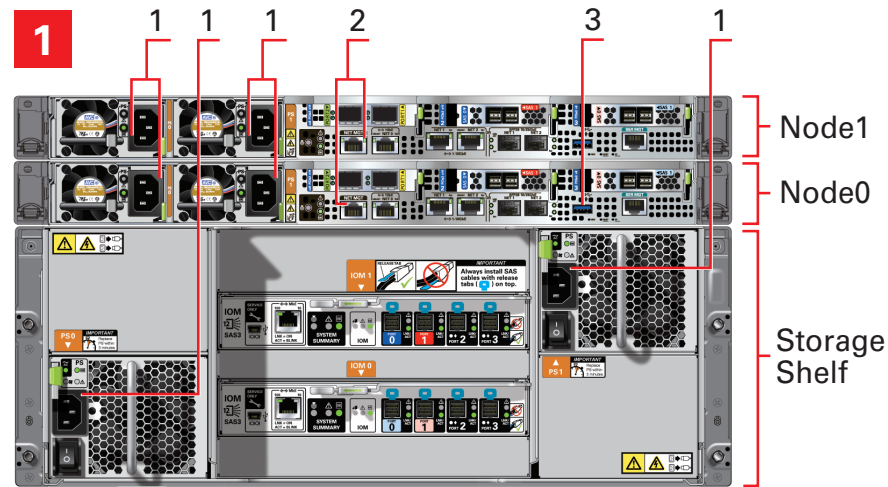
See the *Oracle Database Appliance X7-2 Deployment and User's Guide*.
- C Click **Create Appliance** on the Appliance page
- D Enter the configuration information details
- E Review your configuration
- F Click **Submit** to start the deployment

7 Monitor Deployment Progress

- You can monitor the progress on the **Activity** tab.

Oracle Database Appliance X7-2-HA Virtualized Platform Setup

You can also scan the Quick Response Code with your mobile device to read the documentation.



Connect the Power and Public Network Cables

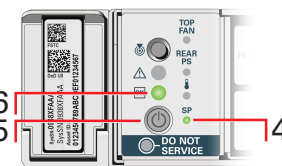
Important: Follow the instructions on Page 1 to cable the server nodes, storage system(s) and interconnect before proceeding. On both nodes, connect:

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- C (Optional) On Node0 only, connect peripheral to USB (3).

2 Start Up the Systems

Connect power to the power supply.

- A Turn on power to the storage shelf and optional storage expansion shelf.
- B On each node, after the green SP OK LED (4) is steady ON, push the power button (5).
- C Wait for the green Power OK LED (6) to turn steady ON. The Power OK LED might blink for several minutes. **Do not repeatedly push the power buttons.**



3 Verify Virtual Machine Image and Cabling

Check that Oracle Virtual Machine Image is installed.

- A Log in to dom0 as root.
- B Confirm that you have Oracle Virtual Machine image for Oracle Database Appliance installed by running the command `oakcli show env_hw`:

`/opt/oracle/oak/bin/oakcli show env_hw`
- C If the resulting output does not include the string `VM-Dom0` or the command fails, install the Oracle Database Appliance Virtualized Platform image.
- D To ensure that the storage cabling is properly configured, run the command `odacli validate-storage topology`:

`/opt/oracle/dcs/bin/odacli validate-storage topology`

Note: To install the Oracle Database Appliance Virtual Platform image follow the instructions in the Oracle Database Appliance X7-2 Deployment and User's Guide.

To identify the latest software and update your base image, go to <http://www.oracle.com/goto/oda/docs>, select the latest version, then see the Oracle Database Appliance Release Notes, and the Oracle Database Appliance X7-2 Deployment and User's Guide.

4 Configure the Network

Configuring the network enables you to use `scp` to copy files to Oracle Database Appliance. Consult with your network administrator to obtain the information that you need to complete the initial configuration.

Configure the network on both nodes.

- A Log in to dom0 as root.
- B Configure the network using the command:

`/opt/oracle/oak/bin/configure-firstnet`
- C Select the **Global** option and then enter the domain name, DNS servers, host names, network interface, IP addresses for nodes, netmask, and gateway when prompted.

5 Deploy ODA_BASE and Validate Storage

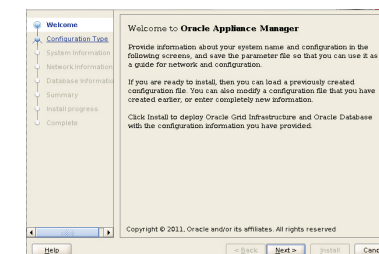
- A From a browser on an external client, identify the latest software version.
- B Download the ODA_BASE template and copy the template to the /OVS directory on dom0:
<https://updates.oracle.com/download/16186172.html>
- C Deploy ODA_BASE using the command:
`/opt/oracle/oak/bin/oakcli deploy oda_base`
- D When prompted for Location, enter the full path name for the ODA_BASE template that you downloaded and copied, for example:
`/OVS/templateBuild-2017-10-19-02-33.tar.gz`
- E Select the number of cores and amount of memory allocated to ODA_BASE.
- F To ensure that the storage cabling is properly configured, connect to ODA_BASE using VNC with Dom0 for the hostname and 5900 for the Port. Log in as root and run the following `oakcli validate` command:
`/opt/oracle/oak/bin/oakcli validate-storage topology`

6 Deploy the Oracle Software on ODA_BASE

- A Configure the ODA_BASE network using the command:
`/opt/oracle/oak/bin/oakcli configure-firstnet`
- B Select the **Global** option and then enter the domain name, DNS servers, host names, network interface, IP addresses for nodes, netmask, and gateway when prompted.
- C Start VNC server on ODA_BASE by entering the following command: `vncserver :1`
- D Use a VNC client to connect to the ODA_BASE IP address (from Step A) and port 5901
- E Enter the following command: `/opt/oracle/oak/bin/oakcli deploy`
- F The Oracle Appliance Manager Welcome window opens.

7 Deploy the Oracle Software on ODA_BASE, Continued

- G Click **Next**.



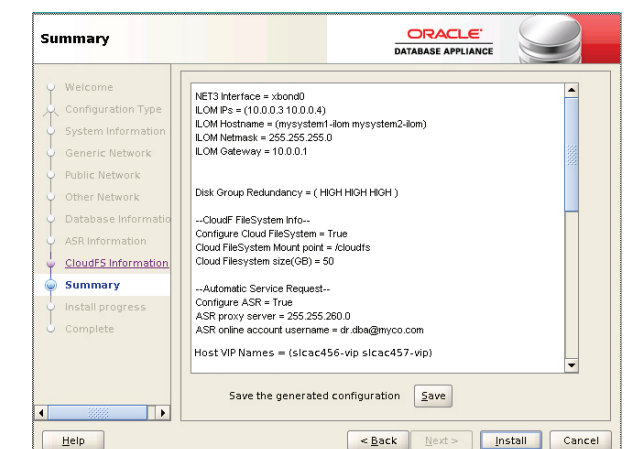
- H The Configuration Type window opens. Make your selection for each configuration option and click **Next**.
- I Enter the requested information on the remaining windows.

Note: Select **Custom** to configure options that have default values in **Typical** configurations, such as:

- Normal disk redundancy
- NTP servers
- Oracle ILOM
- Additional network interfaces
- Oracle Auto Service Requests (Oracle ASR)
- Size of the /cloudfs file system (default is 50 GB)

8 Complete Oracle Database Appliance Deployment

Click **Install** to begin deployment when the configuration information is complete.



The deployment takes about 1 hour to finish.

For more information about Oracle Database Appliance, go to Oracle Technology Network: oracle.com/technetwork/server-storage/engineered-systems/database-appliance/index.html
For more information about deployment, go to: <http://www.oracle.com/goto/oda/docs> You can also scan the Quick Response Code with your mobile device to read the documentation.