

Oracle® Linux Storage Appliance

How-To Guide

ORACLE®

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About this document

This guide describes the Oracle Linux Storage Appliance that is delivered as an Oracle Cloud Infrastructure image. The guide includes overview information, installation instructions, and a basic use summary.

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Chapter 1 Installing the Oracle Linux Storage Appliance

This chapter describes how to install the Oracle Linux Storage Appliance. Requirements and prerequisite tasks are also described here.

1.1 Oracle Linux Storage Appliance Installation Prerequisites

Before you install the Oracle Linux Storage Appliance, review the following information and perform all of the prerequisite tasks that are described here:

- **Obtain an Oracle Cloud Infrastructure account.**

For more information, go to <https://cloud.oracle.com/infrastructure/compute>.

- **Configure ports for the virtual cloud network.**

To access the appliance and its services, you must add the required ports to the stateful Ingress rules, which is located in the default Security List for the virtual cloud network. The appliance will then be associated with each of these ports, allowing traffic on that port for the specified protocol, service, and function.

The following table lists each of the ports that can be configured.

Table 1.1 Ports to Associate With the Virtual Cloud Network

Service	Destination Port Range	Protocol Type	Function
NFS	111	TCP	NFS
NFS	2049	TCP	NFS
mountd	111	UDP	Autofs/Showmount
httpd	443	TCP	HTTPS
statd	662	TCP	NFS <i>statd</i>
mountd	20048	TCP	Autofs/Showmount
lockd	32803	TCP	NFS <i>lockd</i>
SSH	22	TCP	SSH
smbd	135	TCP	<i>smbd</i>
smbd	139	TCP	<i>smbd</i>
smbd	445	TCP	<i>smbd</i>
nmbd	137	UDP	<i>nmbd</i>
nmbd	138	UDP	<i>nmbd</i>

When adding the port configuration, use the following format:

Source: *CIDR-range-of-your-VCN*

IP Protocol: *IP-protocol*

Source Port Range: All

Destination Port Range: *port-range*

For example, if your VCN CIDR range is `172.16.0.0/16`, you would use the following port configuration:

Source: `172.16.0.0/16`

IP Protocol: TCP

Source Port Range: All

Destination Port Range: `111`

The port configuration in the previous example provides access to the appliance from any instance in your VCN. You can restrict access to a smaller set of instances by changing the source CIDR as required. For more details, see <https://docs.us-phoenix-1.oraclecloud.com/Content/Network/Concepts/securitylists.htm>.

Note that the source CIDR range for SSH should be `0.0.0.0/0` so that you can access SSH remotely. See Step 2g. of [Section 1.2, “Installing the Oracle Linux Storage Appliance Compute Instance”](#) for instructions on accessing the web interface over SSH.

- **Import the appliance image.**

1. In the Oracle Cloud Infrastructure console, from the Compute menu, select the Custom Image option.
2. Click Import Image to open the Custom Image dialog.
3. In the Custom Image dialog, provide the necessary information:

- In the Create Compartment drop-down, select the compartment in which the image will be visible.
- In the Name field, provide a name for the image.

Note the name of the image, as this is the image that you will select in Step 2c. of [Section 1.2, “Installing the Oracle Linux Storage Appliance Compute Instance”](#).

- In the Object Storage URL field, type the URL to the latest image, which is available at:

<http://www.oracle.com/technetwork/server-storage/linux/technologies/default-3868073.html>

- For the Image Type setting, click the **qcow2** radio button.
- For the Launch Mode setting, click the **Native Mode** radio button.
- Click Import Image.

When imported, the appliance image will be available in the Custom Image section.

4. **Perform NFS client installation (applies to Oracle Linux 7 Update 3 only)**

For instructions and additional information, see [Section 1.3, “Mounting NFS Shares That Are Created on the Appliance”](#).

1.2 Installing the Oracle Linux Storage Appliance Compute Instance

Install a compute instance as follows:

1. In the Oracle Cloud Infrastructure console, from the Compute menu, click Launch Instance.

2. Configure the following parameters for the instance:
 - a. Name the instance.
 - b. Select the availability domain.
 - c. Select the appliance image that you imported previously, which is located in the Custom section.

Refer to the "Import the appliance" instructions in [Section 1.1, "Oracle Linux Storage Appliance Installation Prerequisites"](#).
 - d. Select a supported shape instance. A list of supported shapes is available at:

<http://www.oracle.com/technetwork/server-storage/linux/technologies/default-3868073.html>
 - e. Select the virtual cloud network that has its ports configured with the appropriate information.

Refer to [Section 1.1, "Oracle Linux Storage Appliance Installation Prerequisites"](#).
 - f. Define any remaining parameters for the instance as you normally would for any other instance.
 - g. Gain secure access to the web interface by using SSH to port forward, as follows:
 - i. On your local Linux or macOS client, run the following command:

```
# ssh -N -L 8443:127.0.0.1:443 opc@public-IP-of-the-NFS-appliance
```


The command will not return.
 - ii. Open a browser and go <https://localhost:8443>, then accept the self-signed certificate to continue.

1.3 Mounting NFS Shares That Are Created on the Appliance

You access the shares that you create on client VMs over NFS by using a standard `mount` command, for example:

```
# mount appliance-ip:share-path destination path
```

For more information about mounting file systems, see http://docs.oracle.com/cd/E52668_01/E54669/html/index.html#.

The Oracle Linux 7 Update 3 installation image does not install NFS packages by default. To mount NFS shares on this release, you must install the `nfs-utils` package on the client:

```
# yum install -y nfs-utils
```



Note

If you want to make automount directories available, such as `/net`, you must first install the `autofs` package.

