

XenServer Quick Start Guide



Exinda ExOS Version 6.4
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Using this guide

Before using this guide, become familiar with the Exinda documentation system.

- ["Exinda documentation conventions" on page 2](#)
- ["Notes, Tips, Examples, and Cautions" on page 3](#)

Exinda documentation conventions

The Exinda documentation uses the following conventions in the documentation.

Graphical interface conventions

The following is a summary of the conventions used for graphic interfaces such as those in the Exinda Web UI and the Central Management Technical Preview UI.

| Convention | Definition |
|----------------|------------------------------------------------------------------------------------------------|
| bold | Interface element such as buttons or menus. For example: Select the Enable checkbox. |
| <i>Italics</i> | Reference to other documents. For example: Refer to the <i>Exinda Application List</i> . |
| > | Separates navigation elements. For example: Select File > Save . |

Command line conventions

The following is a summary of the syntax used for the CLI commands.

```
(config)# command <user input> keyword {list|of|options|to|select|from} [optional parameter]
```

| Convention | Definition |
|---------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|
| <code>monospace text</code> | Command line text or file names |
| <code><courier italics></code> | Arguments for which you use values appropriate to your environment. |
| <code>courier bold</code> | Commands and keywords that you enter exactly as shown. |
| <code>[x]</code> | Enclose an optional keyword or argument. |
| <code>{x}</code> | Enclose a required element, such as a keyword or argument. |
| <code> </code> | Separates choices within an optional or required element. |
| <code>[x {y z}]</code> | Braces and vertical lines (pipes) within square brackets indicate a required choice within an optional element. |
| <code>command with many parameters that wrap onto two lines in the documentation</code> | Underlined CLI commands may wrap on the page, but should be entered as a single line. |

Notes, Tips, Examples, and Cautions

Throughout the manual the following text styles are used to highlight important points:

- **Notes** include useful features, important issues. They are identified by a light blue background.

Note Note text

- **Tips** include hints and shortcuts. They are identified by a light blue box.

Tip Tip text

- **Examples** are presented throughout the manual for deeper understanding of specific concepts. Examples are identified by a light gray background.

Example

Text

- **Cautions** and warnings that can cause damage to the device are included when necessary, and are highlighted in yellow.

Caution Caution text

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Chapter 1: Run the Virtual Appliance on Citrix XenServer

Exinda Virtual Appliances are available for Citrix XenServer hypervisors. Deploy Exinda Virtual Appliances as well as customize the virtual hardware to suit your requirements.

Note The Exinda Virtual Appliance requires Citrix XenServer 5.5 or later.

Installing the Virtual Appliance on XenServer

1. Locate the latest release of the Exinda XenServer Virtual Appliance from the Firmware Downloads section of the Exinda [website](#).
Download the ZIP file to your local PC and unzip the Virtual Appliance XVA file.
2. Open your Citrix XenCenter client and select **File > Import...**
Then, select the unzipped Virtual Appliance XVA file.
Click **Next**.
3. Select the target XenServer to deploy the Virtual Appliance.
Then click Next.
4. Choose the storage location for the Virtual Appliance. By default, the Virtual Appliance comes with a single, 50GB disk. Additional storage can be added in the form of another disk after the Virtual Appliance has been deployed. See the [Additional Storage](#) section for more information.
Then click Next.
5. Choose the NIC mapping. By default, the Virtual Appliance comes with 2 NICs. The first NIC is the Management Interface, and you should connect it to a network that allows you to manage the Virtual Appliance. The second NIC is an AUX Interface, and is usually used for clustering, high availability or out-of-path deployments. This interface can be left disconnected if not required. In order to deploy the Virtual Appliance inline, you will need to add additional NICs after deployment. See the [Additional NICs](#) section for more information.
Then click Next.
6. Review the information and uncheck the 'Start VM(s) after import' box if you want to add extra NICs or storage.

Click Finish to deploy the Virtual Appliance.

7. Select the Exinda virtual machine you are importing, and switch to the Log tab to see the progress and the completion notification. It is highly recommend that you import the virtual machine on a Gigabit network connection or local storage, as the import file is large in size and installation is affected by slowly performing networks.
8. Right-click the imported Exinda and select Start the Exinda virtual appliance. You will see the progress bar screen below in the Log tab indicating you have successfully started the virtual appliance.
9. On the XenCenter Console tab of the Exinda virtual machine, enter the credentials and the default parameters as part of the first time wizard setup. The default user name is admin, and the password is Exinda.
10. Press Enter to read the EULA agreement. Press Ctrl-C to get to the EULA agreement question.
11. Press Y to accept the EULA agreement and press Enter.
12. You will prompted with a series of questions as part of the initial configuration Wizard. It is recommended you accept the defaults, as you have the option to configure the system later from the Exinda GUI. Press Yes.

Use the following defaults to complete the wizard configuration.

- a. Select No to disable IPv6.
 - b. Select Yes to configure ETH0 for management access. This will disable the BR0 bridge.
 - c. Select Yes to use DHCP on ETH0.
 - d. Select null to default to the Exinda hostname.
 - e. Select null for SMTP server address.
 - f. Select null for email address for reports and alerts.
 - g. Select null to use the default password which is "Exinda".
 - h. Select Yes to change the interface speed.
 - i. Select AUTO to configure the interface speed on ETH0 (assumes a gigabit NIC).
- You have successfully completed the wizard setup.
13. Determine the IP address of your Exinda virtual appliance on the XenServer Network tab of the Exinda virtual machine and note IP address assigned by default to NIC 0.
 14. Browse to the Dashboard tab and find the Host-ID that the XenServer host created for this virtual machine.

Once the appliance is deployed, review the following sections on [Custom Settings](#) and adding extra [NICs](#) and [Storage](#).

Custom Settings

The most common customizations to Virtual Appliances are to increase the number of CPUs and the amount of RAM. By default, all Virtual Appliances come configured with 2 virtual CPUs and 2GB RAM.

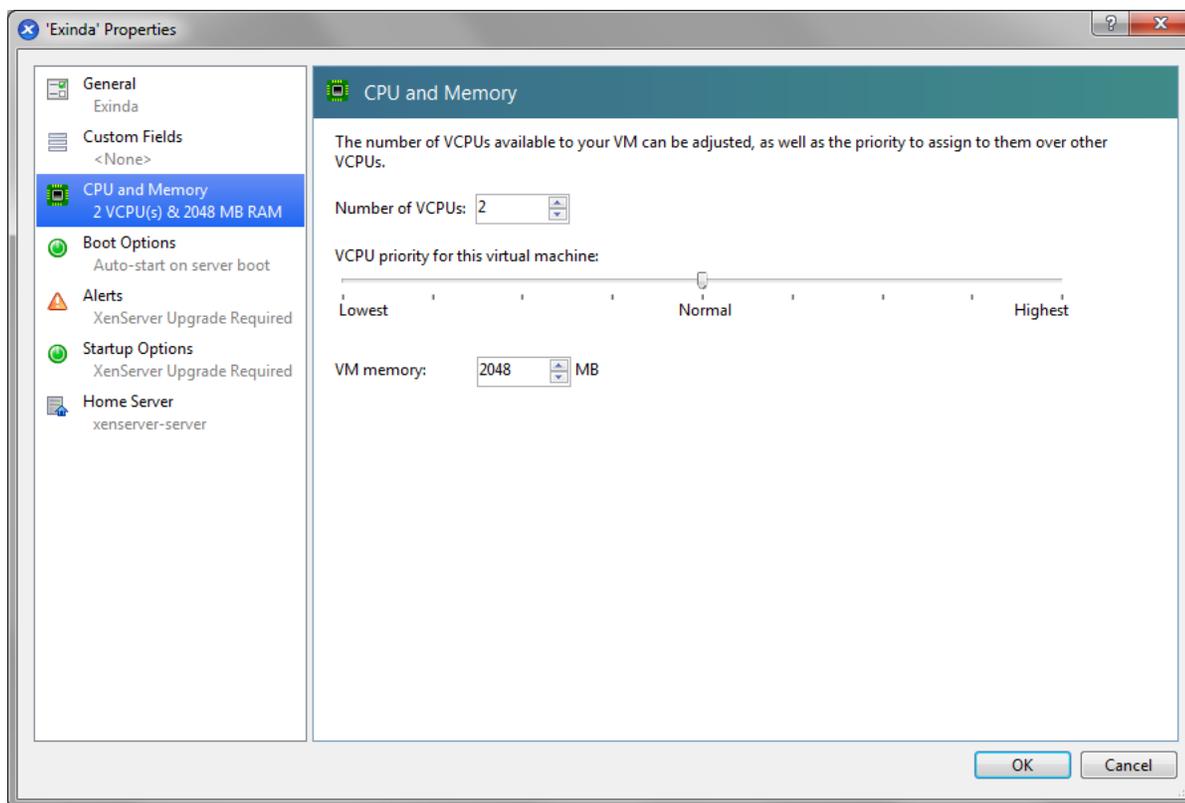
These should be considered minimum values, however, you can increase these to suit your requirements.

Caution

You must power off the virtual appliance while changing the virtual machine configuration.

Note You should adjust CPU and RAM settings while the Virtual Appliance is powered off.

From the Exinda Virtual Appliance Properties screen, you can increase the number of virtual CPUs and the amount of RAM as shown below.



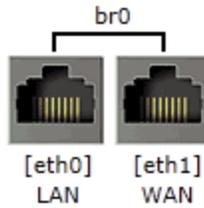
Additional NICs

By default, all Exinda Virtual Appliances come with two NICs. By default, the first NIC is the Management Interface (for managing the Virtual Appliance) and the second NIC is the Auxiliary Interface (for things like HA, clustering and out-of-path deployments).

There are 2 options when it comes to placing the Virtual Appliance inline:

- Convert the 2 default NICs into a bridge, so that the Management Interface becomes a LAN Interface and the Auxiliary Interface becomes a WAN Interface. This is achieved by booting into the Virtual

Appliance and navigating to the **System > Network > IP Address** page on the Web UI, advanced mode. From this page, you can click the 'br0' checkbox to bridge the 2 default NICs together. In order to manage the Virtual Appliance, an IP Address must be specified for this bridge.



| Interface Settings | |
|------------------------------------------------|-------------------------------------------------------------------------------------|
| Autoconf: | IPv4: <input checked="" type="checkbox"/> DHCP IPv6: <input type="checkbox"/> SLAAC |
| Dynamic Addresses: | 192.168.0.221/24 fe80::20c:29ff:feaa:b541/64 |
| br0 <input checked="" type="checkbox"/> | Static Addresses: <input type="text"/> / <input type="text"/> |
| Comment: | <input type="text"/> |
| Gateway Settings | |
| IPv4: | <input type="text"/> |
| IPv6: | <input type="text"/> |

Take care when using this option as this will cause the 2 default NICs to be bridged.

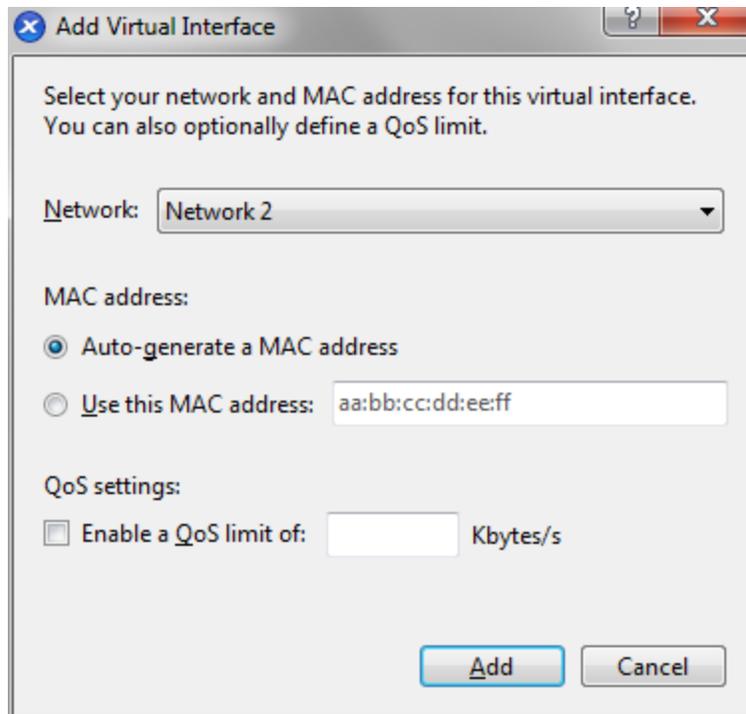
- Add 2 extra NICs to be used as LAN and WAN ports. The 2 additional NICs will be bridged and allow the Virtual Appliance to be placed inline.

Caution

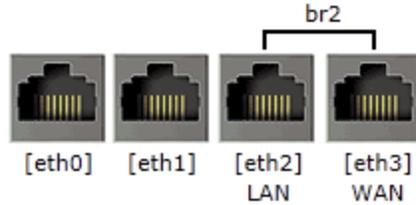
You must power off the virtual appliance while changing the virtual machine configuration.

The following steps describe how to add extra NICs to the Virtual Appliance. You need to add extra NICs in pairs, in order to create LAN/WAN bridges.

1. From the Networking tab in the Exinda Virtual Appliance settings, click **Add Interface**.
2. Choose the network to map this new NIC to, then click **Add**.



3. When the Virtual Appliance is next booted, the new NICs will be automatically detected and any additional NIC pairs will be bridged. Below is what the System -> Network -> IP Address page on the Web UI looks like after 2 extra NICs have been added.



| Interface Settings | |
|------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| br0 <input type="checkbox"/> | Role: <input type="checkbox"/> Cluster <input type="checkbox"/> Mirror <input type="checkbox"/> WCCP Autoconf: IPv4: <input checked="" type="checkbox"/> DHCP IPv6: <input type="checkbox"/> SLAAC Dynamic Addresses: 192.168.0.225/24 fe80::10e0:9ff:fe0d:3021/64 Static Addresses: <input type="text"/> / <input type="text"/> Comment: <input type="text"/> |
| eth0 | Role: <input type="checkbox"/> Cluster <input type="checkbox"/> Mirror <input type="checkbox"/> WCCP Autoconf: IPv4: <input type="checkbox"/> DHCP IPv6: <input type="checkbox"/> SLAAC Dynamic Addresses: fe80::4430:b2ff:fe2a:c4a5/64 Static Addresses: <input type="text"/> / <input type="text"/> Comment: <input type="text"/> |
| eth1 | Role: <input type="checkbox"/> Cluster <input type="checkbox"/> Mirror <input type="checkbox"/> WCCP Autoconf: IPv4: <input type="checkbox"/> DHCP IPv6: <input type="checkbox"/> SLAAC Dynamic Addresses: fe80::2c5d:7fff:fe84:9221/64 Static Addresses: <input type="text"/> / <input type="text"/> Comment: <input type="text"/> |
| br2 <input checked="" type="checkbox"/> | Autoconf: IPv4: <input type="checkbox"/> DHCP IPv6: <input type="checkbox"/> SLAAC Dynamic Addresses: fe80::2c5d:7fff:fe84:9221/64 Static Addresses: <input type="text"/> / <input type="text"/> Comment: <input type="text"/> |
| Gateway Settings | |
| IPv4: | <input type="text"/> |
| IPv6: | <input type="text"/> |
| <input type="button" value="Apply Changes"/> | |

Add storage to the XenServer virtual appliance

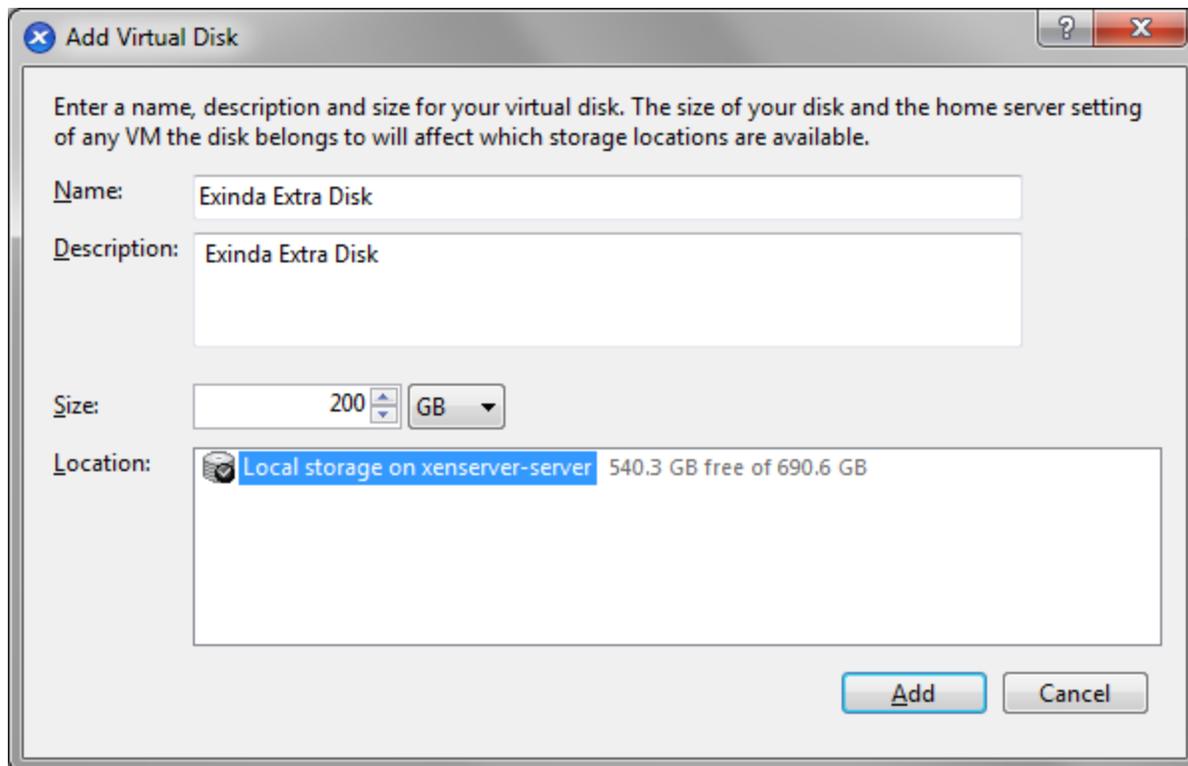
By default, all Exinda Virtual Appliances come with a single 50GB (fixed-size) disk. Usually, you will want more storage for features such as WAN Memory and Edge Cache. This is achieved by adding an additional disk to the Virtual Appliance.

The size of the disk you should add largely depends on the amount of RAM allocated to the Virtual Appliance. As a general rule, you should add a maximum of 100GB of disk storage per 1GB of RAM. So if you have given 4GB of RAM to your Virtual Appliance, you can add up to 400GB of extra storage.

Caution

You must power off the virtual appliance while changing the virtual machine configuration.

1. From the Storage tab in the Exinda Virtual Appliance settings, click **Add**.



2. Specify the size of the additional disk to create. This space will be added to the default 50GB that comes with the Virtual Appliance. So if you add a 200GB disk here, the total storage for the Virtual Appliance will be 250GB.
3. Then click Add.

The Virtual Appliance storage should look something like this:

| Position | Name | Description | SR | Size | Read Only | Priority | Active | Device Path |
|----------|-------------------|-------------------|-----------------------------------|--------|-----------|-------------|--------|-------------|
| 0 | Exinda Base Disk | Exinda Base Disk | Local storage on xenserver-server | 50 GB | No | 0 (Highest) | No | <unknown> |
| 1 | Exinda Extra Disk | Exinda Extra Disk | Local storage on xenserver-server | 200 GB | No | 0 (Highest) | No | <unknown> |

4. When the Virtual Appliance is next booted, you can use the storage commands in the CLI to provision the new storage. The 'show storage' command lists the current storage allocations as well as the Virtual Appliance's disks.

```
(config) # show storage
Services:
  cifs: available - 3743.46M free of 3876M total
  edge-cache: available - 3723.53M free of 3872M total
  monitor: available - 9882.83M free of 10G total
  users: available - 974.62M free of 1024M total
```

```
wan-memory: available - 17.21G free of 17.65G total
```

Disks:

```
xvda10(internal): in use - 36.22 GB
xvdb: not in use - 214.7 GB
```

```
Total:          36.22
Unallocated: 0
```

- The output shows that our new 200G disk is called 'xvdb' and it's currently not in use. The 'storage disk add' command is used to provision the new disk.

```
(config)# storage disk add xvdb
```

This will erase all data on the disk. Do you really want to do this (Y/N)? [N] Y

- After this command has executed, another look at 'show storage' shows that the new disk is now in use and our 200G is ready for allocation.

```
(config) # show storage
```

Services:

```
cifs: available - 3743.46M free of 3876M total
edge-cache: available - 3723.53M free of 3872M total
monitor: available - 9882.83M free of 10G total
users: available - 974.62M free of 1024M total
wan-memory: available - 17.21G free of 17.65G total
```

Disks:

```
xvda10(internal): in use - 36.22 GB
xvdb: in use - 200.00 GB
```

```
Total:          236.21G
Unallocated: 200G
```

For more information on adding disks in general and allocating storage, see the Storage How to Guide.

Booting

When you're ready to boot the Virtual Appliance for the first time, go ahead and power it on. The Virtual Appliance will boot, and when ready, will display a login prompt on the XenCenter console.

At this point, you can login with the default username 'admin' and password 'Exinda'.

If the first NIC is connected to a network that provides addresses using DHCP, the Virtual Appliance should have picked up an IP address. On the Virtual Appliance Networking screen, XenCenter should display the IP address that the Virtual Appliance has obtained.

Networks

| Device | MAC | Limit | Network | IP Address | Active |
|--------|-------------------|-------|-----------|---------------|--------|
| 0 | 12:e0:09:cd:30:21 | | Network 0 | 192.168.0.225 | Yes |
| 1 | 46:30:b2:2a:c4:a5 | | Network 1 | Unknown | Yes |

If the first NIC is not able to obtain an address using DHCP, you'll need to use the XenCenter console to enter the following CLI commands to set a static IP address.

```
> en
# con t
(config) # interface eth0 ip address <ip> <netmask>
(config) # ip default-gateway <default gateway>
(config) # ip name-server <dns server>
```

Once you have determined the IP address or set a static IP address, you can access the web-based user interface by navigating to `https://<ip address>`.

At this point, the following tasks should be completed before using the Virtual Appliance:

1. Obtain a [license](#) for this Virtual Appliance.
2. Add and provision extra [storage](#) (if required).
3. Add extra [NICs](#) (if required) and deploy the Virtual Appliance either inline or out-of-path.

Chapter 2: Licensing

Licensing is a little different for Virtual Appliances compared to Hardware Appliances. All Virtual Appliances are shipped unlicensed. On first-boot, they automatically generate a unique Host ID. Exinda must be notified of this Host ID before a license can be issued. All Virtual Appliances must have access to Exinda's licensing server, and must be able to access <https://license.exinda.com>. Virtual Appliances that do not have access will become unlicensed after 96 hours.

To obtain a trial license or to purchase a full license for the Exinda Virtual appliance, contact sales@exinda.com.

Generating a virtual appliance trial license

In this step you will go to https://license.exinda.com/virtual_trial/ URL to create your trial license. Your trial license will be emailed to you after you complete this step.

1. Navigate to https://license.exinda.com/virtual_trial/.
2. Enter in the Host-ID for the virtual appliance.
3. Select the License Type for the virtual appliance.
4. Type your email address, and which Hypervisor Type you have installed the virtual appliance on.
5. Click **Create**.

Your trial license is emailed to the address provided.

6. Once you have received your license key, copy the license key into the Exinda GUI.
 - a. In a browser, navigate to the IP address assigned to your Exinda Virtual machine.
 - b. To view the status of your license, select **System > Setup** and switch to the **License** tab.
 - c. If your Host-ID has been previously entered into the system, click **Check for License Online**.

If this is the first time you are licensing the virtual appliance, and your Host-ID was recently created, paste the license key provided in the email..

Note You must be connected to the Exinda License Server at all times for the virtual appliance to work.

- d. Click **Add License**.
7. Confirm your system has been licensed by refreshing the page.
 8. Save any changes, and restart the virtual appliance.

Purchasing a virtual appliance license

In this step you will purchase a license from a web form. You must have your Host-ID information for each EX-V appliance and the PO number. As with the trial license process, you must have installed the EX-V and captured the Host-ID information to complete this process.

1. In a browser, navigate to the address of your Exinda Virtual Appliance.
2. Log into your Exinda VM.

The default user name is admin, and the password is exinda.

3. On the **Dashboard > System** tab, find the Host ID that the ESXi created for this virtual machine.

You must have your purchase order number that details the type of license and number of licenses you have purchased. You will need the following:

- Host ID
- Hypervisor Type
- License Level – this will be based on a bandwidth license

You will need this information for each EX-V virtual appliance.

4. To purchase a license, navigate to https://license.exinda.com/virtual_purchase/.
5. Complete the Virtual Appliance Purchase form as required.