



# Introduction to Cisco Prime IP Express Virtual Appliance

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The Cisco Prime IP Express virtual appliance aims at eliminating the installation, configuration and maintenance costs associated with running Cisco Prime IP Express on a local system. It also guarantees portability and thus reduces the risk in moving Cisco Prime IP Express from one machine to another.

You must get a license of Cisco Prime IP Express virtual appliance, and download the virtual appliance from Cisco.com. Upon initializing the virtual appliance, you have to add the license file. Cisco Prime IP Express will then be up and running, available to be configured. This is applicable for both the local and regional appliance.

This is different from just downloading a copy of Cisco Prime IP Express and installing it on a server or virtual machine provided by the customer, in that the operating system on which Cisco Prime IP Express runs is also provided in the virtual appliance.

The Cisco Prime IP Express virtual appliance supports VMware ESXi 5.0 or later platforms.

To know about the difference between vApp and a virtual appliance, see the *User's Guide to Deploying vApps and Virtual Appliances*.

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## How the Cisco Prime IP Express Virtual Appliance Works

The virtual appliance consists of a virtual machine in the OVF format, which contains a runnable guest OS (CentOS 7.4 in CPIPE 8.3.6 and CentOS 6.x in pre-8.3.6 releases) and Cisco Prime IP Express installed on that OS. When the virtual appliance is installed, Cisco Prime IP Express is already installed and is started by the virtual machine power-up like in the case of any regular server power-up.

## How to Download the Cisco Prime IP Express Virtual Appliance

Do the following to download the Cisco Prime IP Express virtual appliance:

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- Step 1** You have to point the ESXi systems at a Cisco web-site and download an OVF format virtual appliance containing the guest operating system and a running version of Cisco PrimeIP Express and power up the virtual machine/appliance.
- Step 2** Set a root password for the virtual appliance when you are prompted to. There is no default password. For more details on deployment the virtual appliance and configuration on first boot, see *Cisco Prime IP Express Installation Guide* . Two virtual appliances will be created, one for a local Cisco Prime IP Express cluster and one for a regional cluster. Each of these will have the security kit installed.
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## Invoking Cisco Prime IP Express on the Virtual Appliance

You can invoke the Cisco Prime IP Express application directly by using the URL `http://hostname:8080`. The secure `https` connection is also available via the URL `https://hostname:8443`.

## Monitoring Disk Space Availability

To view the disk space availability, do the following:

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- Step 1** In the vSphere Client window, select the host/server on which the virtual Cisco Prime IP Express appliance resides.
- Step 2** Click **Storage Views** to see the list of the machines hosted by the server and the details about the space currently used by each machine.  
Also, you can go to the Virtual Machines tab to view both the **Provisioned Space** and the **Used Space** by machine.
- Step 3** Click **Summary**.  
The **Resources** area of the Summary tab, displays the capacity of the disk and the CPU and memory used.
- Step 4** Select the virtual machine and click the **Summary** tab.  
The **Resources** area of the Summary tab displays the disk space details for the machine.
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## Monitoring Disk Space Availability (Using the Console)

To monitor the disk space availability using the console, do the following:

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- Step 1** Select the virtual machine in the vSphere Client window and either click the **Console** tab on the right pane or right-click the virtual machine name and choose **Open Console**.
- Step 2** Log in as root and type `df -k`. The disk space details are displayed. If the disk space on the disk mounted on `/var/nwreg2` is not enough, then you should increase the size of the disk (see [Increasing the Size of Disk](#), on page 3).
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## Increasing the Size of Disk

The `cnr_growfilesystem` script causes the data partition, `/dev/sdb1` to grow to be the size of the entire data disk. It is trivial to expand the size of the data disk that the operating system sees, using VMware. To ensure that the operating system recognizes the bigger disk, you have to restart the VM and run the `cnr_growfilesystem` after increasing the size of the disk.



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**Note** Before running the `cnr_growfilesystem` script, ensure that you backup the entire `/var/nwreg2/` data and that it is not stored anywhere in the file system under `/var/nwreg2`. Running the `cnr_growfilesystem` script after restarting the VM ensures that the filesystem uses all the space in the partition.

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If you need a bigger disk, do the following:

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- Step 1** Stop the VM.
- Step 2** Increase the size of the disk by changing the size in the Virtual Machine Properties window. To open the Virtual Machine Properties window, you have to select the host name, right-click, and choose Edit Settings.
- Step 3** Restart the VM. This ensures that the partition for the Cisco Prime IP Express data covers the entire disk.
- Step 4** After the VM is up and running, log in as the root user and run the `cnr_growfilesystem` script:

```
/opt/nwreg2/local/usrbin/cnr_growfilesystem
```

This script will:

- Stop Cisco PrimeIP Express
- Unmount the data partition
- Increase the size of the partition to be the size of the disk
- Turn the ext3 filesystem into an ext2 filesystem
- Expand the filesystem to be the size of the partition (which is now the size of the disk)
- Turn the ext2 filesystem back into an ext3 filesystem

- Remount the disk
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## Troubleshooting

If you experience any issues while working with the Cisco Prime IP Express virtual appliance, we recommend you to do the following:

Examine the log files in `/var/nwreg2/{local | regional}/logs`. Look particularly for errors in the log files as these signal exceptional conditions. If you are unable to resolve the problem and you have purchased Cisco support, then submit a case to Cisco Technical Assistance Center (TAC) regarding the problem.