

F5[®] BIG-IQ[®] Centralized Management and VMware ESXi: Setup

Version 5.0



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Getting Started with BIG-IQ Virtual Edition

What is BIG-IQ Virtual Edition?

BIG-IQ[®] Virtual Edition (VE) is a version of the BIG-IQ system that runs as a virtual machine in specifically-supported hypervisors. BIG-IQ VE emulates a hardware-based BIG-IQ system running a VE-compatible version of BIG-IQ software.

About BIG-IQ VE compatibility with ESXi hypervisor products

Each time there is a new release of BIG-IQ[®] Virtual Edition (VE) software, it includes support for additional hypervisor management products. The Virtual Edition and Supported Hypervisors Matrix on the AskF5[™] website, <http://support.f5.com>, details which hypervisors are supported for each release.

Important: *Hypervisors other than those identified in this guide are not supported with this BIG-IQ version; any installation attempts on unsupported platforms might not be successful.*

About the hypervisor guest definition requirements

The ESXi virtual machine guest environment for the BIG-IQ[®] Virtual Edition (VE), at minimum, must include:

- 2 x virtual CPUs
- 4 GB RAM

Important: *When you provision the amount of RAM allocated to the virtual machine, it must match the amount of reserve RAM.*

- 1 x VMXNET3 virtual network adapter
- 1 x 95 GB disk

Important: *Not supplying at least the minimum virtual configuration limits will produce unexpected results.*

Important: *Although you can successfully deploy BIG-IQ software with as few as 2 CPUs and 4 GB RAM, this configuration should only be used for evaluation purposes. For production use, F5 Networks recommends either 4 CPUs and 16 GB RAM, or (for higher performance) 8 CPUs and 32 GB RAM.*

There are also some maximum configuration limits to consider for deploying a BIG-IQ VE virtual machine, such as:

- CPU reservation can be up to 100 percent of the defined virtual machine hardware. For example, if the hypervisor has a 3 GHz core speed, the reservation of a virtual machine with 2 CPUs can be only 6 GHz or less.
- To achieve optimum performance limits, all allocated RAM must be reserved and virtual disks should be deployed Thick (allocated up front).

Deploying BIG-IQ Virtual Edition

About VE ESXi deployment

To deploy the BIG-IQ® Virtual Edition (VE) system on ESXi, you perform these tasks:

- Verify the host machine requirements.
- Deploy a BIG-IQ® system as a virtual machine.
- Deploy a BIG-IP® system.
- After you have deployed the virtual machines, log in to the BIG-IQ VE system and run the Setup utility. Using the Setup utility, you perform basic network configuration tasks, such as assigning VLANs to interfaces.
- Configure secure communication between the BIG-IQ system and the BIG-IP device.

Host machine requirements and recommendations

To successfully deploy and run the BIG-IQ® VE system, the host system must satisfy minimum requirements.

The host system must include these elements:

- VMware ESX or ESXi. The *BIG-IQ Virtual Edition and Supported Hypervisors Matrix*, published on the AskF5™ web site, <http://support.f5.com> identifies the versions that are supported.
- VMware vSphere™ client
- Connection to a common NTP source (this is especially important for each host in a redundant system configuration)

Important: *The hypervisor CPU must meet the following requirements:*

- Use a 64-bit architecture.
 - Have support for virtualization (AMD-V or Intel VT-x) enabled.
 - Support a one-to-one thread-to-defined virtual CPU ratio, or (on single-threading architectures) support at least one core per defined virtual CPU.
 - Intel processors must be from the Core (or newer) workstation or server family of CPUs.
-

Deploying a BIG-IQ VE virtual machine

The first step in deploying BIG-IQ® Virtual Edition (VE) is to download the OVA file to your local system. Next, you can run the Deploy OVF Template wizard from within the ESXi vSphere client. Follow the steps in this procedure to create an instance of the BIG-IQ system that runs as a virtual machine on the host system.

Important: *Do not modify the configuration of the ESXi guest environment with settings less powerful than the ones recommended in this document. This includes the settings for the CPU, RAM, and network adapters. Doing so might produce unexpected results.*

1. In a browser, open the F5 Downloads page (<https://downloads.f5.com>).
2. On the Downloads Overview page, select **Find a Download**.

3. Under Product Line, select **Centralized Management**.
4. Under Name, select the release you want to install.
5. If the End User Software License is displayed, read it and then click **I Accept**.
6. Determine which BIG-IQ v5.x/Virtual Edition file package to download.
 - If you are installing a BIG-IQ, download the file name that ends in `.scsi.ova`
 - If you are installing a Logging Node, download the file name that ends in `LARGE.scsi.ova`

The BIG-IQ file package creates a 95GB disk footprint at installation.

The Logging Node file package creates a 500GB disk footprint at installation.

7. Start your vSphere Client and log in.
8. From the vSphere Client File menu, choose Deploy OVF Template.
The Deploy OVF Template wizard starts.
9. In the Source pane, click **Deploy from file or URL**, and, using the **Browse** button, locate the OVF file, open it, and then click **Next**.
For example: `\MyDocuments\Work\Virtualization\<BIG-IQ_OVF_filename>`
The OVF Template Details pane opens.
10. Verify that the OVF template details are correct, and click **Next**.
This displays the End-User License Agreement (EULA).
11. Read and accept the license agreement, and click **Next**.
The Name and Location pane opens.
12. In the **Name** field, type a name for the F5 VE virtual machine, such as: `smith_f5_ve`.
13. In the Inventory Location area, select a folder name and click **Next**.
14. From the **Configuration** list, select the number of CPUs and disks required for your system, and then click **Next**.

Important: Although you can successfully deploy BIG-IQ software with as few as 2 CPUs and 4 GB RAM, this configuration should only be used for evaluation purposes. For production use, F5 Networks recommends either 4 CPUs and 16 GB RAM, or (for higher performance) 8 CPUs and 32 GB RAM.

15. If the host system is controlled by VMware vCenter, the Host Cluster screen opens. Choose the preferred host and click **Next**. Otherwise, proceed to the next step.
16. In the **Datastore** field, type the name of data source your system will use, in the **Available space** field, type in the amount of space your system needs (in Gigabytes), and then click **Next**.
The Network Mapping dialog box opens.
17. Map the Source Networks to the Destination Networks in your inventory.
 - a) Map the source network **Management** to the name of the appropriate management network in your inventory.
The network used for this interface is usually the same subnet as the vCenter Server, ESXi Host and NSX Manager.
 - b) If you choose to manage the BIG-IP devices using an interface other than management, you can map the source network **Internal** to that non-management network.
An example of a destination internal network is **Private Access**.
 - c) Leave the source network **External** at its default setting. This network is not used in most configurations.
An example of a destination external network is **Public Access**.
 - d) When you have the destination networks correctly mapped, click **Next**.
The Ready to Complete screen opens.
18. Verify that all deployment settings are correct, and click **Finish**.

Power on the BIG-IQ VE virtual machine

Power on the virtual machine so that you can begin assigning IP addresses.

1. In the main vSphere client window, click the Administration menu.
2. Select the virtual machine that you want to power on.
3. Click the Summary tab, and in the Commands area, click **Power On**.
The status icon changes to indicate that the virtual machine is on. Note that the system will not process traffic until you configure the virtual machine from its command line or through its web interface.

There are two default accounts used for initial configuration and setup:

- The root account provides access locally, or using SSH, or using the F5 Configuration utility. The root account password is `default`.
- The admin account provides access through the web interface. The admin account password is `admin`.

You should change passwords for both accounts before bringing a system into production.

Accessing the BIG-IQ VE management user interface

If your network has DHCP, an IP address is automatically assigned to BIG-IQ[®] VE during deployment. You can use this address to access the BIG-IQVE user interface or `tmsh` command-line utility.

If no IP address was assigned, you can assign one by using the BIG-IQ Configuration utility.

Important: Do not use VMware tools to configure the IP address; the BIG-IQ system will not use these changes.

1. In the vSphere client, click **Launch Virtual Machine Console**.
The console screen opens. After a few seconds, a login prompt appears.
2. At the <username> login prompt, type `root`.
3. At the password prompt, type `default`.
4. Type `config` and press Enter.
The F5 Management Port Setup screen opens.
5. Click **OK**.
6. If you want DHCP to automatically assign an address for the management port, select **Yes**. Otherwise, select **No** and follow the instructions for manually assigning an IP address and netmask for the management port.

When assigned, the management IP address appears in the Summary tab of the vSphere client.

Alternatively, a hypervisor generic statement can be used, such as `tmsh list sys management-ip`.

You can now log into the BIG-IQ VE user interface, and license and provision BIG-IQ VE.

Legal Notices

Legal notices

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This is a Class A product. In a domestic environment this product may cause radio interference, in which case the user may be required to take adequate measures.

FCC Compliance

This equipment has been tested and found to comply with the limits for a Class A digital device pursuant to Part 15 of FCC rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This unit generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference, in which case the user, at his own expense, will be required to take whatever measures may be required to correct the interference.

Legal Notices

Any modifications to this device, unless expressly approved by the manufacturer, can void the user's authority to operate this equipment under part 15 of the FCC rules.

Canadian Regulatory Compliance

This Class A digital apparatus complies with Canadian ICES-003.

Standards Compliance

This product conforms to the IEC, European Union, ANSI/UL and Canadian CSA standards applicable to Information Technology products at the time of manufacture.

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