F5® BIG-IQ® Centralized Management and Citrix XenServer: Setup

Version 5.2

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

* 4 x virtual CPUs
* 16 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 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 XenServer deployment

To deploy the BIG-IQ® Virtual Edition (VE) system on XenServer, 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:

- 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 the 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 XenServer XenCenter 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 XenServer 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 `ide.ova` or `-scsi.ova`
   - If you are installing a Data Collection Device, download the file name that ends in `LARGE-ide.ova` or `LARGE-scsi.ova`

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

   The Data Collection Device file package creates a 500GB disk footprint at installation.

7. Extract the file from the Zip archive.

8. Before starting the import wizard, review the prospective hypervisor environment for the following.

   - Make sure a DHCP server is active on the same network as the XenServer host before you start the XenCenter® OVF Appliance.
   - Make sure there are no firewall or other restrictions between the required ports for connectivity between the XenCenter Client and XenServer. For more information and networking requirements, refer to the *XenServer Virtual Machine Installation Guide.*
   - Make sure enough storage space is available on the XenServer for the F5 virtual machine.

9. Start the XenServer XenCenter client and log in.

10. From the XenCenter 6.x File menu, click **File** > **Import**.
    The Import wizard starts.

11. For the file name use the **Browse** button to locate the OVF file, open it, and then click **Next**.
    For example: `\MyDocuments\Work\Virtualization\<F5_OVF_filename>`
    This displays the End-User License Agreement (EULA).

12. Read and accept the license agreement, and click **Next**.
    The Location window opens.

13. Under Home Server, select the home server for the F5 VE virtual machine from the list, and click **Next**.

14. On the Storage window, click **Place imported virtual disks onto specified target SRs**, select the 100 GB storage size (for Data Collection Devices, select 500 GB) and location for the F5 VE virtual machine, and then click **Next**.

15. On the Networking window, assign the Management, Internal, External, and HA virtual machines to their respective Target Networks and click **Next**.

    Tip: There is no need to enter MAC addresses, MAC addresses will be assigned automatically.

16. In the OS Fixup Settings window, make sure the **Use Operating System Fixup** check box is cleared, and click **Next**.

    Important: The Use Operating System Fixup check box is selected by default.

17. On the Transfer VM Settings window, click **Next**, then on the Finish window, review your settings before continuing.

    Note: The recommended settings in production scenarios are 4 CPU and 16 GB RAM as minimum, or 8 CPU and 32 GB RAM for better performance. A lower setting of 2 CPU and 4 GB RAM can be used for evaluation purposes, but as of version 5.2.0 is deprecated and no longer supported.

18. Click **Finish**.
    The progress bar and text in the Progress pane indicate when the F5 virtual machine creation is complete.

Power on the BIG-IQ VE virtual machine

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

1. In the XenCenter client window, select the Server View.

2. Select the virtual machine that you want to power on.
3. Click the **Start** icon.

*Note: If you do not see the **Start** icon, look at the tool bar under the View menu.*

The status icon changes to indicate that the virtual machine is on. The virtual machine boots and becomes ready for configuration.

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-IQConfiguration utility.

1. In the XenCenter client screen, select the Server View.
2. In the Resources pane, select the virtual machine.
3. Click the Console tab.
   You might need to click the console area and press Enter to activate the console.
4. At the local host login prompt, type `root`.
5. At the password prompt, type `default`.
6. Type `config` and press Enter.
   The F5 Management Port Setup screen opens.
7. Click **OK**.
8. 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.

You can use a hypervisor generic statement, such as `tmsh list sys management-ip` to confirm that the management IP address has been properly assigned.

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

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