

F5[®] iWorkflow[™] and Microsoft Hyper-V: Setup

Version 2.2.0



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Getting Started with iWorkflow Virtual Edition

What is iWorkflow Virtual Edition?

iWorkflow® is a multi-tenant platform for deploying application delivery policy onto BIG-IP® devices. Only available as a virtual appliance, it accelerates the deployment of application-oriented services, simplifies architecture, and reduces exposure to operational risk.

iWorkflow Virtual Edition (VE) is a version of the iWorkflow system that runs as a virtual machine in specifically-supported hypervisors.

About iWorkflow VE compatibility with Hyper-V hypervisor products

Each time there is a new release of iWorkflow™ Virtual Edition (VE) software, it includes support for additional hypervisor management products. The iWorkflow Virtual Edition and Supported Hypervisors Matrix on the AskF5™ website, 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 iWorkflow version; any installation attempts on unsupported platforms might not be successful.*

About the hypervisor guest definition requirements

The Hyper-V virtual machine guest environment for the iWorkflow™ 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 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 iWorkflow 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 iWorkflow 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 iWorkflow Virtual Edition

About VE Hyper-V deployment

To deploy the iWorkflow™ Virtual Edition (VE) system on Hyper-V, you perform these tasks:

- Verify the host machine requirements.
- Deploy an iWorkflow™ system as a virtual machine.
- Deploy a BIG-IP® system.
- After you have deployed the virtual machines, log in to the iWorkflow 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 iWorkflow system and the BIG-IP device.

Host machine requirements and recommendations

To successfully deploy and run the iWorkflow™ VE system, the host system must satisfy minimum requirements.

The host system must include these elements:

- Microsoft® Windows Server® with the Hyper-V® role enabled. The *Virtual Edition and Supported Hypervisors Matrix*, published on the AskF5™ web site, <http://support.f5.com> identifies the versions that are supported.
- 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.
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Deploying the iWorkflow VE virtual machine

The first steps in deploying iWorkflow™ VE are to open the ZIP file and extract the virtual hard drive (VHD) file, and save it to the server running with the Hyper-V® role enabled. Next, you configure the virtual machine using Hyper-V Manager and the Settings window.

Important: *Do not modify the configuration of the Hyper-V 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. Download the iWorkflow v2.x/Virtual Edition file package. The file name ends in `.vhd.zip`
The file package creates a 95GB disk footprint at installation.
3. Extract the file from the Zip archive and save it where your VHD files reside on the Hyper-V server.

Note: The name of the file is similar to `iWorkflow-<version_number>.<build_number>.vhd`.

4. Start Hyper-V Manager, log in to the Hyper-V server, and from the Actions pane, click **New > Virtual Machine**.
The New Virtual Machine Wizard opens.
5. In the **Name** field, type a name for the F5 VE virtual machine, such as: `smith_f5_ve` and click **Next**.
6. In the **Memory** field, type `4096` and click **Next**.

Tip: To increase performance, you can specify a value up to `65535`.

7. For the **Connection** setting, select **Management** and click **Next**.
8. Map the source network **HA** to the name of a high-availability network in your inventory.
An example of a destination high-availability network is **HA**.
9. Select the **Use an existing virtual hard disk** check box, browse to the location where you saved your VHD file, select the larger of the two files, open it, and click **Next**.
The file name will be similar to `iWorkflow-<version_number>.<build_number>.vhd`.
10. In the Summary page, review your settings and click **Finish**.
The New Virtual Machine Wizard closes, and the new F5 VE shows in the Virtual Machines list.
11. From the Virtual Machines list, select the new F5 VE.
The name of the F5 VE appears in the bottom half of the Actions pane.
12. In the lower half of the Actions pane, click **Settings**.
The Settings window for the selected F5 VE opens.
13. From the Hardware list, select **Processor**, and then change the **Number of logical processors** to `4`, and increase the **Virtual machine reserve (percentage)** to `100`.
14. Click **Add Hardware**, select **Storage** and click **Add**.
15. In the Inventory pane, select **IDE Controller**, and in the details pane select **Hard Drive** and click **Add**.
16. Under Media, select **Virtual Hard Disk**, then browse to the location where you saved your VHD files, and select the smaller of the two files.
The file name will be similar to `iWorkflow-<version_number>.<build_number>.DATASTOR.LTM.vhd`
17. Click **Apply** to save your Storage settings.
18. Click **Add Hardware**, select **Network Adapter**, click **Add**, and specify a management NIC.

Note: For *iWorkflow*, you need only a single network adapter.

19. In the Management area, click **Automatic Stop Action** and select **Shut down the guest operating system**.
This setting ensures that the F5 VE virtual machine restarts with all previously-configured virtual hardware, and at the current system time.
20. Click **OK** to save your changes and close the Settings window.

Power on the iWorkflow VE virtual machine

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

1. Open the Hyper-V Manager client.
2. Select the virtual machine that you want to power on.
3. From the Action menu, choose **Start**.

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 iWorkflow VE management user interface

If your network has DHCP, an IP address is automatically assigned to iWorkflow™ VE during deployment. You can use this address to access the iWorkflowVE user interface or `tmsh` command-line utility.

If no IP address was assigned, you can assign one by using the iWorkflowConfiguration utility.

1. In the Hyper-V Manager, locate and highlight the virtual machine to which you want to assign the management IP address.
2. In the Actions pane, choose **Connect**.
The console screen opens. After a few seconds, a login prompt appears.
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.

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 iWorkflow VE user interface, and license and provision iWorkflow VE.

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Publication Date

This document was published on July 28, 2017.

Publication Number

MAN-0628-02

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