



# FortiVoice-VM Install Guide



## FortiVoice-VM Install Guide

March 6, 2015

Copyright© 2015 Fortinet, Inc. All rights reserved. Fortinet®, FortiGate®, FortiCare® and FortiGuard®, and certain other marks are registered trademarks of Fortinet, Inc., in the U.S. and other jurisdictions, and other Fortinet names herein may also be registered and/or common law trademarks of Fortinet. All other product or company names may be trademarks of their respective owners. Performance and other metrics contained herein were attained in internal lab tests under ideal conditions, and actual performance and other results may vary. Network variables, different network environments and other conditions may affect performance results. Nothing herein represents any binding commitment by Fortinet, and Fortinet disclaims all warranties, whether express or implied, except to the extent Fortinet enters a binding written contract, signed by Fortinet's General Counsel, with a purchaser that expressly warrants that the identified product will perform according to certain expressly-identified performance metrics and, in such event, only the specific performance metrics expressly identified in such binding written contract shall be binding on Fortinet. For absolute clarity, any such warranty will be limited to performance in the same ideal conditions as in Fortinet's internal lab tests. In no event does Fortinet make any commitment related to future deliverables, features or development, and circumstances may change such that any forward-looking statements herein are not accurate. Fortinet disclaims in full any covenants, representations, and guarantees pursuant hereto, whether express or implied. Fortinet reserves the right to change, modify, transfer, or otherwise revise this publication without notice, and the most current version of the publication shall be applicable.

Technical Documentation	<a href="http://docs.fortinet.com">docs.fortinet.com</a>
Knowledge Base	<a href="http://kb.fortinet.com">kb.fortinet.com</a>
Customer Service & Support	<a href="http://support.fortinet.com">support.fortinet.com</a>
Training Services	<a href="http://training.fortinet.com">training.fortinet.com</a>
FortiGuard	<a href="http://fortiguard.com">fortiguard.com</a>
Document Feedback	<a href="mailto:techdocs@fortinet.com">techdocs@fortinet.com</a>

# Table of Contents

<b>Overview</b>	<b>5</b>
Licensing	5
Trial mode	5
System requirements	5
Registering FortiVoice VM	6
Downloading FortiVoice VM software	7
Deployment package contents	8
Citrix XenServer	8
Microsoft Hyper-V	8
KVM	8
VMware ESX/ESXi	8
Deploying the FortiMail appliance	8
<b>Deployment example: VMWare</b>	<b>9</b>
Deploying the FortiVoice VM OVF software	9
Powering on your FortiVoice VM	11
<b>Deployment example: Hyper-V</b>	<b>12</b>
Creating the FortiVoice VM virtual machine	12
Configuring FortiVoice VM hardware settings	13
FortiVoice VM virtual processors	14
FortiVoice VM network adapters	15
FortiVoice VM virtual hard disk	15
Starting FortiVoice VM	16
FortiVoice VM backup	16
<b>Deployment example: KVM</b>	<b>17</b>
Creating the FortiVoice virtual machine	17
Configuring FortiVoice hardware settings	17
Starting FortiVoice VM	18
<b>Deployment example: Citrix XenServer</b>	<b>19</b>
Creating the FortiVoice VM virtual machine (XenCenter)	19
Configuring virtual hardware	23
Configuring number of CPUs and memory size	23
<b>Initial Configuration</b>	<b>25</b>
FortiVoice VM console access	25
Connecting to the FortiVoice VM web UI	26
Uploading the FortiVoice VM license file	27
Configuring your FortiVoice VM	28



# Overview

Welcome and thank you for selecting Fortinet products.

The FortiVoice Enterprise Phone System enables you to completely control your organization's telephone communications. Easy to use and reliable, the FortiVoice phone system delivers everything you need to handle calls professionally, control communication costs, and stay connected everywhere.

The VMware version of FortiVoice Enterprise Phone System allows you to install the FortiVoice virtual machine on a VMware server.

This guide assumes that the reader has a thorough understanding of virtualization servers.

VMware vSphere Hypervisor™ (ESX/ESXi) software **must** be installed on a server prior to installing FortiVoice VM. Go to <http://www.vmware.com/products/vsphere-hypervisor/index.html> for installation details.

This section includes the following topics:

- [Licensing](#)
- [System requirements](#)
- [Registering FortiVoice VM](#)
- [Downloading FortiVoice VM software](#)

## Licensing

The base license of FortiVoice VM allows the connection of 50 phones. Stackable license allows the connection of up to 350 phones. For stackable license information, contact Customer Service & Support at <https://support.fortinet.com>.

There are no other restrictions to the license other than the number of active phones, i.e. there is no restriction on the number of virtual CPUs, disk space, etc.

After placing an order for FortiVoice VM, a license registration code is sent to the email address used in the order form. Use the license registration code provided to register your FortiVoice VM with Customer Service & Support at <https://support.fortinet.com>.

Upon registration, you can download the license file. You will need this file to activate your FortiVoice VM. You can configure basic network settings from the CLI to complete the deployment. Once the license file is uploaded, the CLI and Web-based Manager are fully functional.

### Trial mode

When FortiVoice-VM is first installed, it will be in trial mode. Trial mode supports a maximum of 50 active phones for 45 days.

## System requirements

The installation instructions for FortiVoice VM assume you are familiar with VMware ESX/ESXi server and terminology.

Ensure the following prerequisites are met before installing FortiVoice VM:

- Minimum hardware requirement: 1GB memory, 50GB of hard disk.
- The VMware vSphere Hypervisor (ESX/ESXi 5.0 or 5.1) must be installed and configured. For more details, refer to <http://www.vmware.com/products/vsphere-hypervisor/overview.html>.
- The VMware vSphere Client is installed on the management computer.

## Registering FortiVoice VM

To obtain the FortiVoice VM license file, you must first register your FortiVoice VM with [Customer Service & Support](#).

### To register your FortiVoice VM:

1. Log in to the Fortinet Customer Service & Support portal using an existing support account or select *Create an Account* to create a new account.
2. In the toolbar select *Asset > Register/Renew*.  
The *Registration Wizard* opens.
3. Enter the license registration code from the FortiVoice VM License Certificate that was emailed to you and select *Next*. A registration form will appear. You must specify the IP address that you will use to access the FortiVoice VM.
4. Follow the instructions to finish the registration.



As a part of the license validation process FortiVoice VM compares its IP addresses with the IP information in the license file. If a new license has been imported or the FortiVoice's IP address has been changed, the FortiVoice VM must be rebooted in order for the system to validate the change and operate with a valid license.



The [Customer Service & Support](#) portal currently does not support IPv6 for FortiVoice VM license validation. You must specify an IPv4 address in both the support portal and the port1 management interface.

- 
5. After completing the form, a registration acknowledgement page will appear.
  6. Select the *License File Download* link. You will be prompted to save the license file (.lic) to your local computer. See “[Uploading the FortiVoice VM license file](#)” on page 27 for instructions on uploading the license file to your FortiVoice VM via the Web-based Manager.
  7. Select the *IP Address* link to change the IP address of your FortiVoice VM.

### To edit the FortiVoice VM IP address:

1. In the toolbar select *Asset > Manage/View Products*.  
The *View Products* page opens.
2. Select the FortiVoice VM serial number.  
The *Product Details* page opens.
3. Select *Edit* to change the description, partner information, and IP address of your FortiVoice VM.  
The *Edit Product Info* page opens.

4. Enter the new IP address and select *Save*.



You can change the IP address five (5) times on a regular FortiVoice VM license. There is no restriction on a full evaluation license.

5. Select the *License File Download* link. You will be prompted to save the license file (.lic) to your management computer. See “[Uploading the FortiVoice VM license file](#)” on page 27 for instructions on uploading the license file to your FortiVoice VM via the Web-based Manager.

## Downloading FortiVoice VM software

FortiMail deployment packages are included with FortiMail firmware images on the [Customer Service & Support](#) site. First, see [Table 1](#) to determine the appropriate VM deployment package for your VM platform.

**Table 1:** Selecting the correct FortiVoice VM deployment package for your VM platform

VM Platform	FortiVoice VM Deployment File
Citrix XenServer v5.6sp2, 6.0 and later	FVC_VMXE-64-v500-buildnnnn-FORTINET.out.xenserver.zip
Microsoft Hyper-V Server 2008R2 and 2012	FVC_VMHV-64-v500-buildnnnn-FORTINET.out.hyperv.zip
KVM (qemu 0.12.1)	FVC_VMKV-64-v500-buildnnnn-FORTINET.out.kvm.zip
VMware ESX 4.0, 4.1 ESXi 4.0/4.1/5.0/5.1/5.5	FVC_VM-64-v500-buildnnnn-FORTINET.out.ovf.zip

The firmware images FTP directory is organized by firmware version, major release, and patch release. The firmware images in the directories follow a specific naming convention and each firmware image is specific to the device model.

### To download the FortiVoice VM deployment package

1. In the main page of the Customer Service & Support portal, in the *Download* area, select *Firmware Images*.  
The *Firmware Images* page opens.
2. In the *Firmware Images* page, select *FortiVoice*.
3. Browse to the appropriate directory on the FTP site for the version that you would like to download.
4. Download the appropriate .zip file for your VM server platform.  
You can also download the corresponding release notes.
5. Extract the contents of the deployment package to a new file folder.

## Deployment package contents

### Citrix XenServer

The FORTINET.out.CitrixXen.zip file contains:

- fortivoice-vm-xen.vhd and xxx.vhd files: the FortiMail system hard disk in VHD format
- fortivoice-vm-xen-xxxgb.ovf: Open Virtualization Format (OVF) template file, containing virtual hardware settings for Xen

### Microsoft Hyper-V

The FORTINET.out.hyperv.zip file folder contains the following file:

- fortivoice-hv.vhd: Virtual hard disk (VHD) format file
- nnngb.vhd: the VHD files for the virtual storage disk

### KVM

The FORTINET.out.kvm.zip contains:

- fortivoice-kvm.qcow2: the FortiMail system hard disk in qcow2 format
- nnngb.qcow2 files: the qcow2 files for the virtual storage disk

### VMware ESX/ESXi

The contents of the extract vary with the size version of FortiVoice VM you downloaded.

- Virtual Machine Disk (VMDK) files.
- OVF files.



The 1024-GB OVF may not function if the ESXi block size is set as 1 MB or 2MB. It needs 4-MB blocks.

---

## Deploying the FortiMail appliance

Prior to deploying the FortiMail appliance, the VM platform must be installed and configured so that it is ready to create virtual machines. The installation instructions for FortiMail assume that you are familiar with the management software and terminology of your VM platform.

For assistance in deploying FortiMail, refer to the deployment chapter in this guide that corresponds to your VMware environment. You might also need to refer to the documentation provided with your VM server. The deployment chapters are presented as examples because for any particular VM server there are multiple ways to create a virtual machine. There are command line tools, APIs, and even alternative graphical user interface tools.

Before you start your FortiMail appliance for the first time, you might need to adjust virtual disk sizes and networking settings. The first time you start FortiMail, you will have access only through the console window of your VM server environment. After you configure one FortiVoice network interface with an IP address and administrative access, you can access the FortiMail web-based manager.

# Deployment example: VMWare

Once you have downloaded the install file and extracted the package contents to a folder on your local computer, you can use the vSphere client to create the virtual machine from the deployment package OVF template.

This section contains the following topics:

- Deploying the FortiVoice VM OVF software
- Powering on your FortiVoice VM

## Deploying the FortiVoice VM OVF software

To install FortiVoice VM, you must successfully deploy the OVF file using the VMware vSphere Client™.

### To deploy the software

1. Start the VMware vSphere Client.

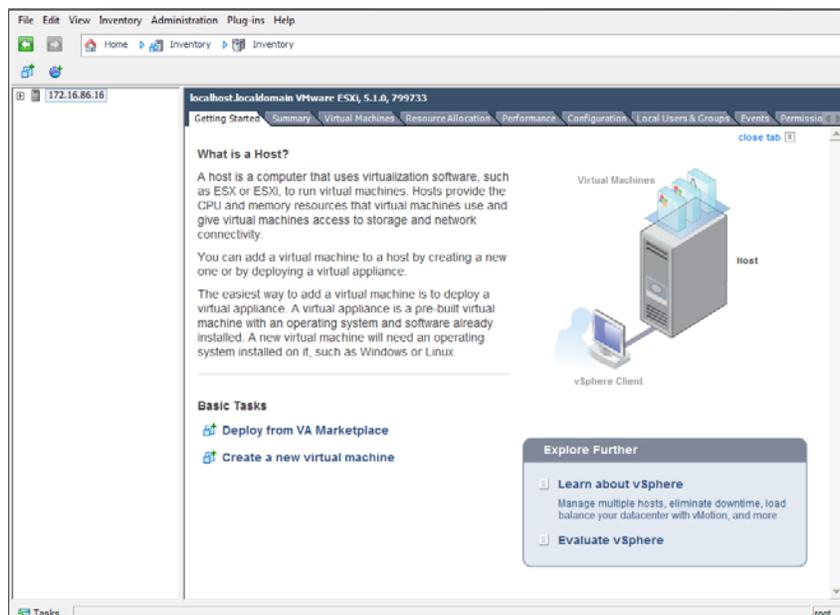
The client's login dialog appears.

2. Enter:

- the IP address of the ESX/ESXi server hosting VMware vSphere Hypervisor
- an account user name on the ESX/ESXi server
- the account password

When you successfully log in, the vSphere Client window appears.

**Figure 1:** vSphere Client window



3. Select *File > Deploy OVF Template* to launch the OVF Template wizard.
4. Select the source location of the OVF file. Select *Browse* and locate the file folder on your computer. Select the appropriate FortiRecorder VM OVF file and select *Next* to continue.

5. Verify the OVF template details. This page details the product name, download size, size on disk, and description. Select *Next* to continue.
6. Read the end user license agreement for FortiRecorder VM. Select *Accept* and then select *Next* to continue.
7. Enter a name for this OVF template. The name can contain up to 80 characters and it must be unique within the inventory folder. Select *Next* to continue.
8. Select one of the following:
  - *Thick Provision Lazy Zeroed*: Allocates the disk space statically (no other volumes can take the space), but does not write zeros to the blocks until the first write takes place to that block during runtime (which includes a full disk format).
  - *Thick Provision Eager Zeroed*: Allocates the disk space statically (no other volumes can take the space), and writes zeros to all the blocks.
  - *Thin Provision*: Allocates the disk space only when a write occurs to a block, but the total volume size is reported by VMFS to the OS. Other volumes can take the remaining space. This allows you to float space between your servers, and expand your storage when your size monitoring indicates there is a problem. Note that once a Thin Provisioned block is allocated, it remains in the volume regardless if you have deleted data, etc.



The Thick Provision allocation options are the recommended to avoid future space issues in the resource pool.

9. Select *Next* to continue.

The OVF Template *Network Mapping* page opens.

**Figure 2:** Network mapping page

Source Networks	Destination Networks
Network 1	VM Network
Network 2	VM Network
Network 3	VM Network
Network 4	VM Network

Description:  
The "Network 1" network

Warning: Multiple source networks are mapped to the host network: VM Network

10. Map the networks used in this OVF template to networks in your inventory. Network 1 maps to port1 of the FortiRecorder VM. You must set the destination network for this entry to access the device console. Select *Next* to continue.

The OVF Template *Ready to Complete* page opens.

11. Review the template configuration. To power on the FortiRecorder VM select the checkbox beside *Power on after deployment*.
12. Select *Finish* to deploy the OVF template. You will receive a *Deployment Completed Successfully* dialog box once the FortiRecorder VM OVF template wizard has finished.

## Powering on your FortiVoice VM

You can now proceed to power on your FortiRecorder VM. From the VMware vSphere client, select the name of the FortiRecorder VM you deployed in the inventory list and select *Power on the virtual machine* in the *Getting Started* tab. Optionally, you can select the name of the FortiRecorder VM you deployed, right-click and select *Power > Power On*.

# Deployment example: Hyper-V

Once you have downloaded the `.hyperv.zip` file and extracted the package contents to a folder on your Microsoft server, you can deploy the VHD package to your Microsoft Hyper-V environment.

The following topics are included in this section:

- Creating the FortiVoice VM virtual machine
- Configuring FortiVoice VM hardware settings
- Starting FortiVoice VM

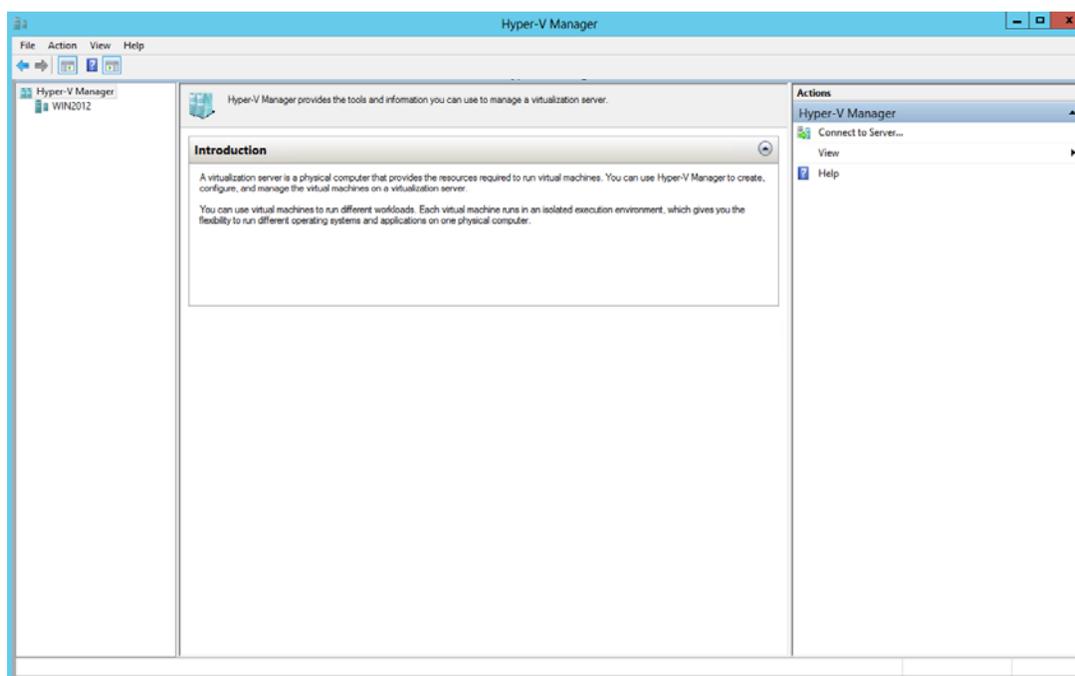
## Creating the FortiVoice VM virtual machine

**To create the FortiVoice VM virtual machine:**

1. Launch the Hyper-V Manager in your Microsoft server.

The *Hyper-V Manager* home page opens.

**Figure 3:** Hyper-V Manager home page



2. Select the server in the right-tree menu. The server details page is displayed.
3. Right-click the server and select *New* and select *Virtual Machine* from the menu. Optionally, in the *Actions* menu, select *New* and select *Virtual Machine* from the menu. The *New Virtual Machine Wizard* opens.
4. Select *Next* to create a virtual machine with a custom configuration. The *Specify Name and Location* page is displayed.

5. Enter a name for this virtual machine. For example, FortiMail-VM. The name is displayed in the Hyper-V Manager.  
Select *Next* to continue. The *Assign Memory* page is displayed.
6. Specify the amount of memory to allocate to this virtual machine. The default memory for FortiVoice VM is 2GB (2048MB).  
Select *Next* to continue. The *Configure Networking* page is displayed.
7. Each new virtual machine includes a network adapter. You can configure the network adapter to use a virtual switch, or it can remain disconnected. FortiVoice VM requires four network adapters. You must configure network adapters in the *Settings* page.  
Select *Next* to continue. The *Connect Virtual Hard Disk* page is displayed.
8. Select to use an existing virtual hard disk and browse for the `fortimail-hv.vhd` file that you downloaded from the [Fortinet Customer Service & Support portal](#).  
Select *Next* to continue. The *Summary* page is displayed.
9. To create the virtual machine and close the wizard, select *Finish*.

## Configuring FortiVoice VM hardware settings

Before powering on your FortiVoice VM you must configure the virtual CPU, and create network adapters and virtual disk configuration to match your FortiVoice VM license. See “[Licensing](#)” on [page 5](#) for FortiVoice VM license information.

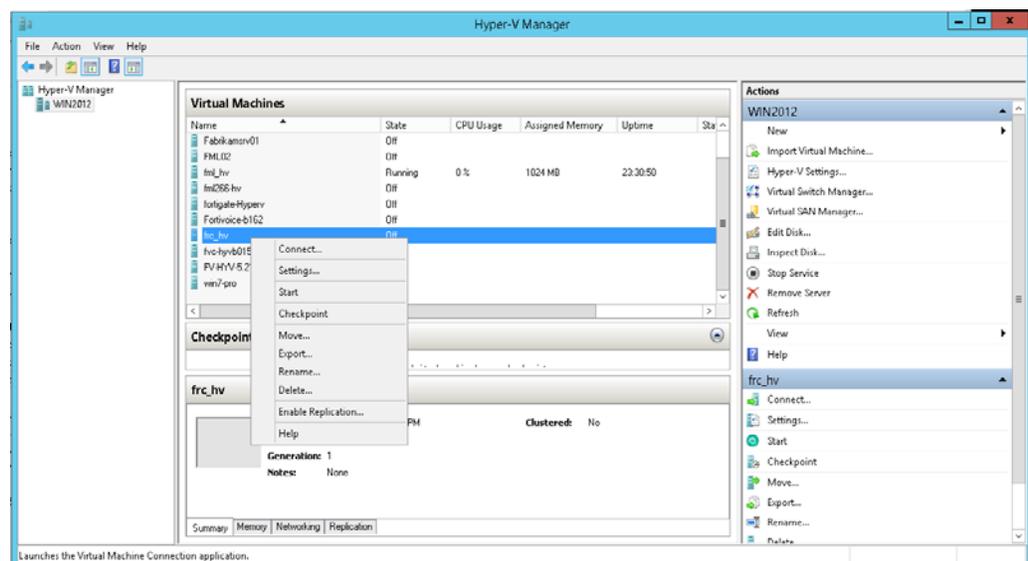


It is recommended to configure the FortiVoice VM hardware settings prior to powering on the FortiVoice VM.

### To configure settings for FortiVoice VM on the server

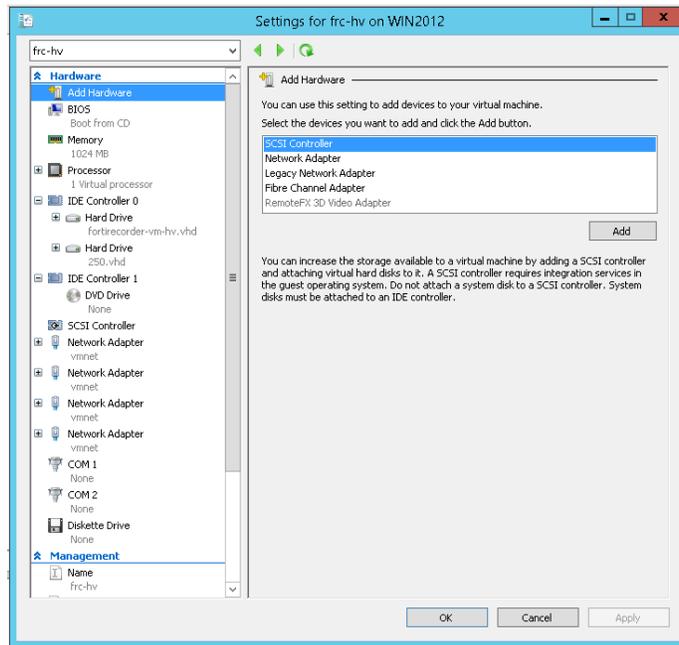
1. In the Hyper-V Manager, locate the name of the virtual machine, right-click the entry, and select *Settings* from the menu. Optionally, you can select the virtual machine and select *Settings* in the *Actions* menu.

**Figure 4:** Hyper-V Manager



The *Settings* page is displayed.

**Figure 5:** Settings page



2. Configure virtual processors, network adapters, and virtual hard drive settings.
3. Select *Apply* to save the settings and then select *OK* to close the settings page.

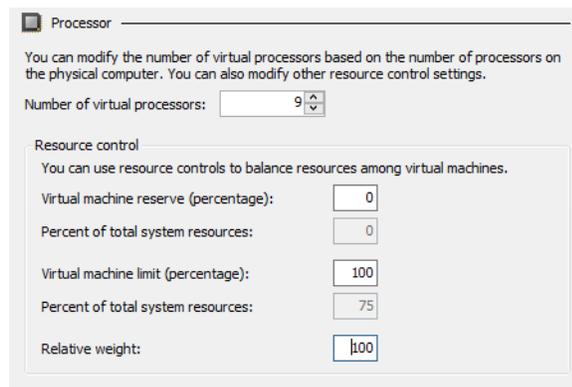
## FortiVoice VM virtual processors

You must configure FortiVoice VM virtual processors in the server settings page. The number of processors is dependent on your server environment.

### Configure FortiVoice VM virtual processors:

1. In the *Settings* page, select *Processor* from the *Hardware* menu.  
The *Processor* page is displayed.

**Figure 6:** Processor page



2. Configure the number of virtual processors for the FortiVoice VM virtual machine. Optionally, you can use resource controls to balance resources among virtual machines.
3. Select *Apply* to save the settings.

## FortiVoice VM network adapters

You must configure FortiVoice VM network adapters in the server settings page. FortiVoice VM supports four network adapters.

### Configure FortiVoice VM network adapters:

1. In the *Settings* page, select *Add Hardware* from the *Hardware* menu, select *Network Adapter* in the device list, and select the *Add* button.

The *Network Adapter* page is displayed.

**Figure 7:** Network Adapter page

2. You must manually configure four network adapters for FortiVoice VM in the settings page. For each network adapter, select the virtual switch from the drop-down list.
3. Select *Apply* to save the settings.

## FortiVoice VM virtual hard disk

You must configure the FortiVoice VM virtual hard disk in the server settings page.



FortiVoice VM requires at least two virtual hard disks. Before powering on the FortiVoice VM, you need to add at least one more virtual hard disk. The default hard drive, `fortimail-hv.vhd`, contains the operating system. The second hard drive will be used for logs and mail data.



If you know your environment will expand in the future, it is recommended to add hard disks larger than the 250GB FortiVoice VM base license requirement. This will allow your environment to be expanded as required while not taking up more space in the SAN than is needed.



FortiVoice VM allows for twelve virtual log disks to be added to a deployed instance. When adding additional hard disks to your FortiVoice VM use the following CLI command to extend the LVM logical volume:

```
execute lvm enable
execute lvm extend <arg ..>
```

---

#### Create a FortiVoice VM virtual hard drive:

1. In the *Settings* page, select *IDE Controller 1* from the *Hardware* menu.
2. Select *Virtual Hard Disk*.
3. Select *Browse* and select the *.vhd* file that matches your license.
4. Select *OK*.

## Starting FortiVoice VM

You can now proceed to power on your FortiVoice VM. Select the name of the FortiVoice VM in the list of virtual machines, right-click, and select *Start* in the menu. Optionally, you can select the name of the FortiVoice VM in the list of virtual machines and select *Start* in the *Actions* menu.

## FortiVoice VM backup

Once the FortiVoice VM license has been validated you can begin to configure your device. For more information on configuring your FortiVoice VM, see the *FortiMail Administration Guide* available at the [Fortinet Document Library](#).



In VM environments, it is recommended that you use the Microsoft Hyper-V Manager *Snapshot* utility to backup the VM instance (depending on the Hyper-V version you use, the utility might be called checkpoint). In the event of an issue with a firmware upgrade or configuration issue, you can use *Snapshots* to revert the VM instance to a previous *Snapshot*.

---

#### To create a virtual machine snapshot:

1. In the Hyper-V Manager, locate the name of the virtual machine, right-click the entry, and select *Snapshot* from the menu. Optionally, you can select the virtual machine and select *Snapshot* in the *Actions* menu.
2. The virtual machine snapshot will be listed in the *Snapshot* pane in the Hyper-V Manager.

#### To apply a virtual machine snapshot:

1. In the Hyper-V Manager, locate the name of the virtual machine. All snapshots for this virtual machine are displayed in the *Snapshots* pane.
2. Right-click the snapshot entry, and select *Apply* from the menu.

Select *Apply* in the confirmation dialog box. The virtual machine's current state will be lost.

# Deployment example: KVM

Once you have downloaded the install file and extracted the package contents to a folder on your local computer, you can create the virtual machine in your KVM environment.

This section contains the following topics:

- [Creating the FortiVoice virtual machine](#)
- [Configuring FortiVoice hardware settings](#)
- [Starting FortiVoice VM](#)

## Creating the FortiVoice virtual machine

**To create the FortiVoice virtual machine:**

1. Launch Virtual Machine Manager (virt-manager) on your KVM host server.  
The *Virtual Machine Manager* home page opens.
2. In the toolbar, select *Create a new virtual machine*.
3. Enter a *Name* for the VM, FortiMail-VM for example.
4. Ensure that *Connection* is localhost. (This is the default.)
5. Select *Import existing disk image*.
6. Select *Forward*.
7. In *OS Type* select *Linux*.
8. In *Version*, select *Generic 2.6 and later kernel*.
9. Select *Browse*.
10. If you copied the fortimail-kvm.qcow2 file to `/var/lib/libvirt/images`, it will be visible on the right. If you saved it somewhere else on your server, select *Browse Local* and find it.
11. Select *Choose Volume*.
12. Select *Forward*.
13. Specify the amount of memory and number of CPUs to allocate to this virtual machine.
14. Select *Forward*.
15. Expand *Advanced options*. A new virtual machine includes one network adapter by default. Select a network adapter on the host computer. Optionally, set a specific MAC address for the virtual network interface. Set *Virt Type* to *virtio* and *Architecture* to *qcow2*.
16. Select *Finish*.

## Configuring FortiVoice hardware settings

Before powering on your FortiVoice you must add the storage disk and configure the virtual hardware of your FortiVoice.

**To configure settings for FortiVoice on the server:**

1. In the Virtual Machine Manager, locate the name of the virtual machine and then select *Open* from the toolbar.
2. Select *Add Hardware*. In the *Add Hardware* window select *Storage*.

3. Browse to the storage disk file that matches your licence, for example, 250.qcow2 (250 GB storage space) and click OK.
4. Select *Network* to add more network interfaces. The *Device type* must be *Virtio*.  
A new virtual machine includes one network adapter by default. You can add more through the Add Hardware window. FortiVoice requires four or six network adapters. You can configure network adapters to connect to a virtual switch or to network adapters on the host computer.
5. Select *Finish*.

## Starting FortiVoice VM

You can now proceed to power on your FortiVoice. Select the name of the FortiVoice in the list of virtual machines. In the toolbar, select *Console* and then select *Start*.

# Deployment example: Citrix XenServer

Once you have downloaded the install file and extracted the package contents to a folder on your local computer, you can create the virtual machine in your Citrix XenServer environment/

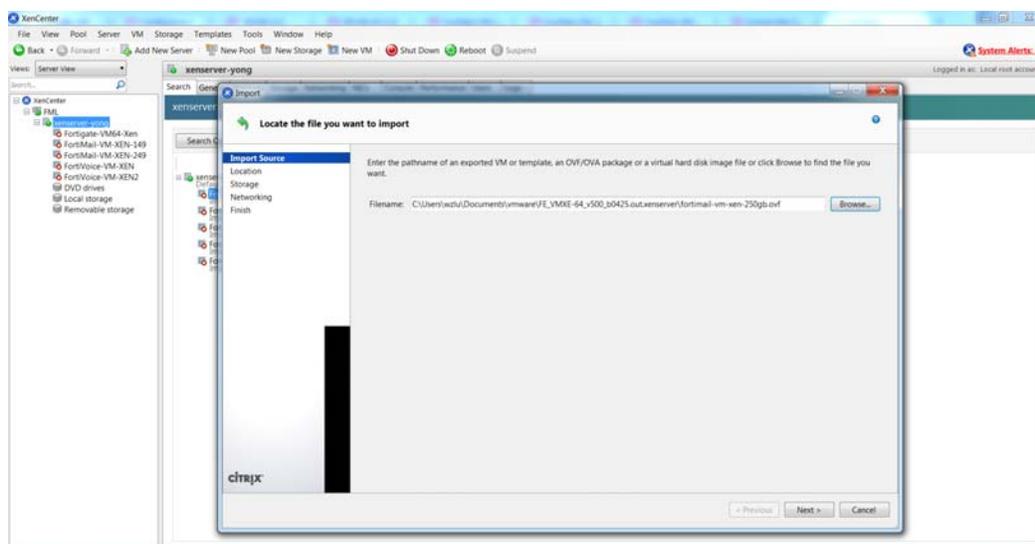
This section contains the following topics:

- Creating the FortiVoice VM virtual machine (XenCenter)
- Configuring virtual hardware

## Creating the FortiVoice VM virtual machine (XenCenter)

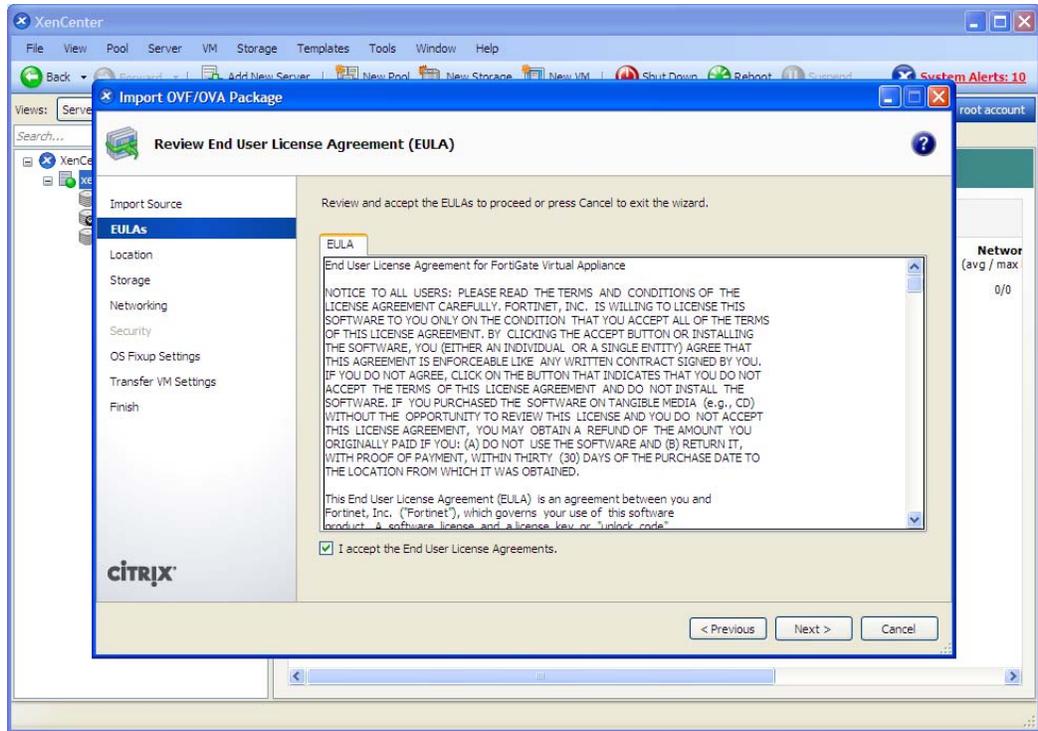
**To create the FortiVoice virtual machine from the OVF file**

1. Launch XenCenter on your management computer.  
The management computer can be any computer that can run Citrix XenCenter, a Windows application.
2. If you have not already done so, select *ADD a server*. Enter your Citrix XenServer IP address and the root logon credentials required to manage that server.  
Your Citrix XenServer is added to the list in the left pane.  
The *Virtual Machine Manager* home page opens.
3. Go to *File > Import*. An import dialog will appear.
4. Click the *Browse* button, find the FortiVoice .ovf template file, then click *Open*.

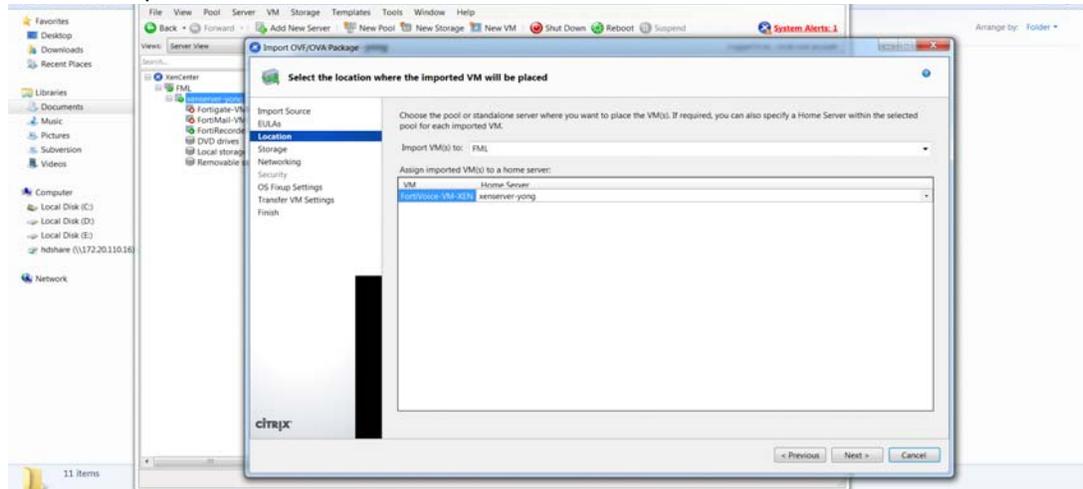


5. Select *Next*.

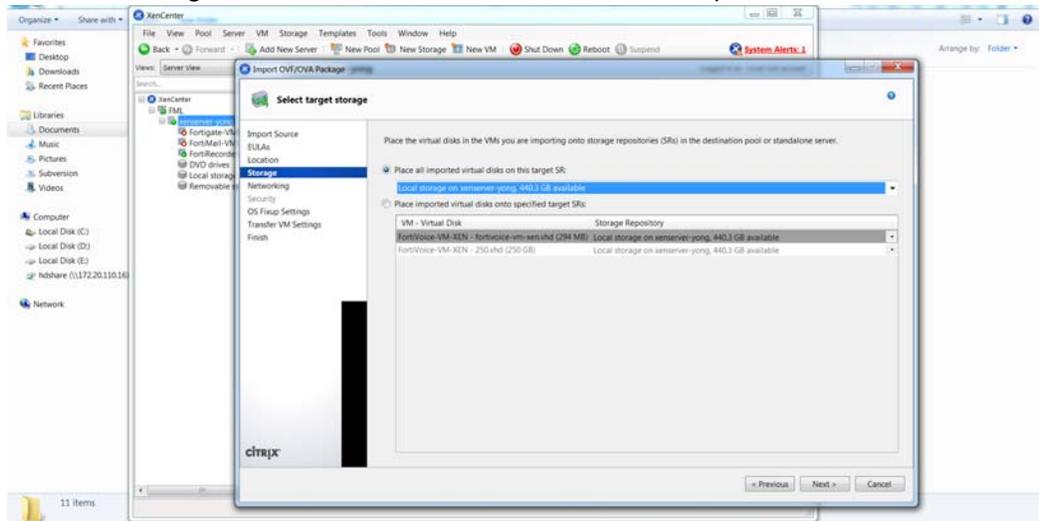
6. Accept the FortiVoice Virtual Appliance EULA, then select Next.



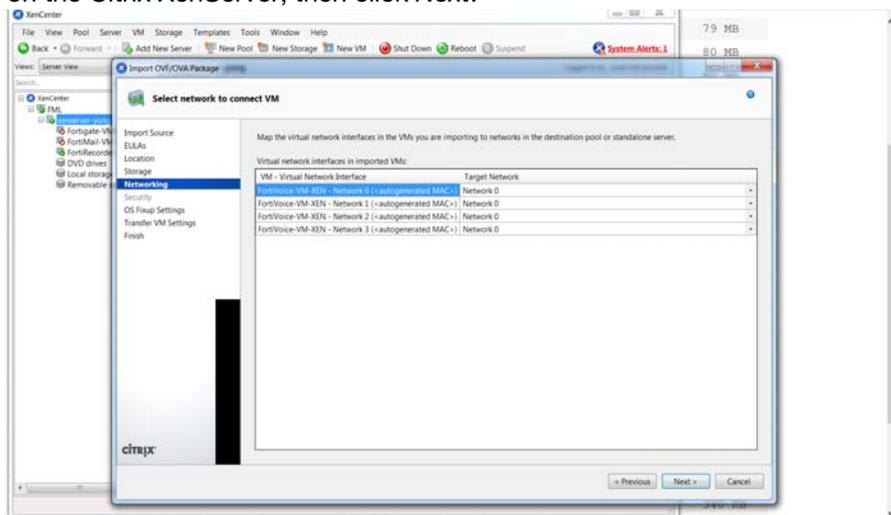
7. Choose the pool or standalone server that will host the VM, then select Next.



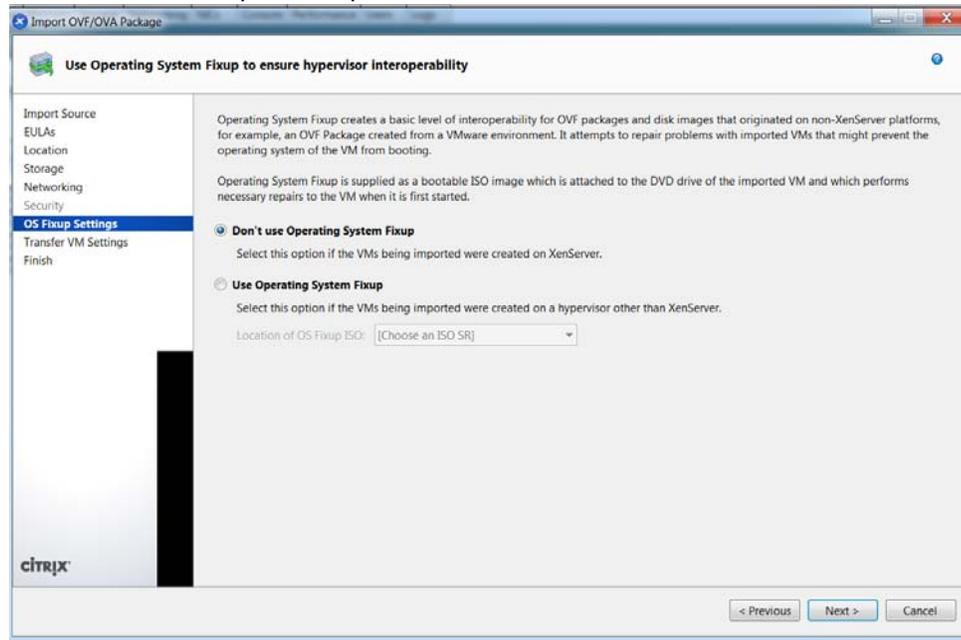
8. Select the storage location for FortiVoice disk drives or accept the default. Select Next.



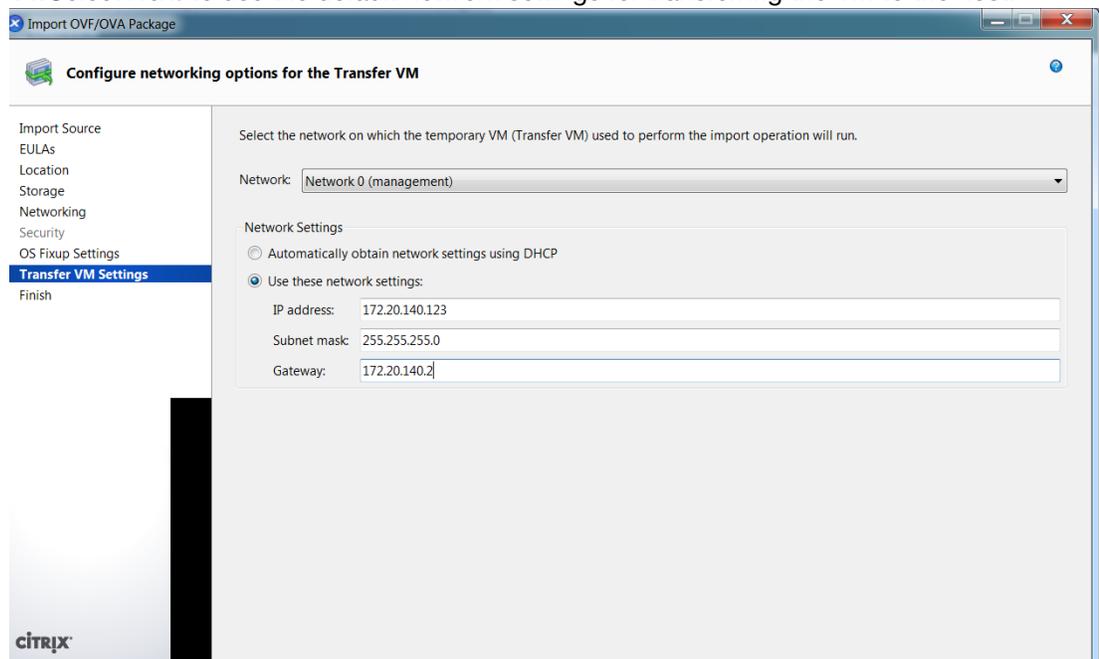
9. Configure how each vNIC (virtual network adapter) in FortiVoice will be mapped to each vNetwork on the Citrix XenServer, then click Next.



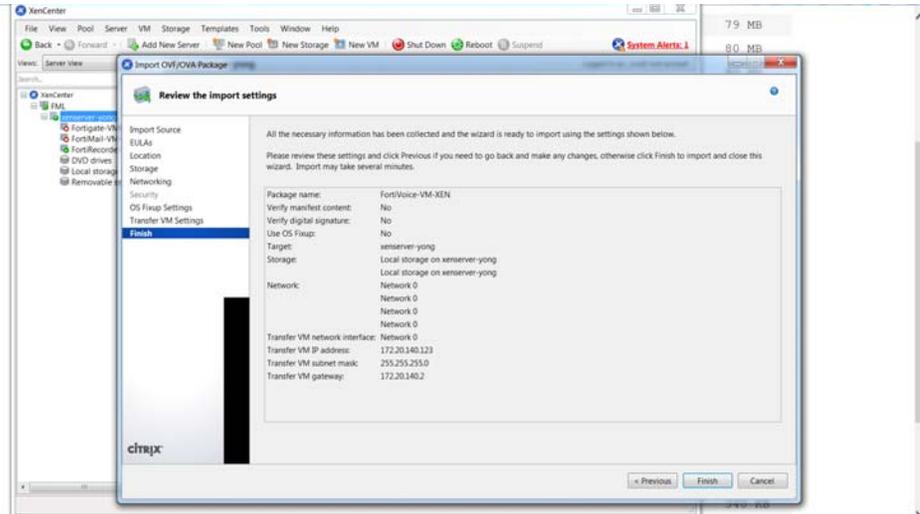
10. Click *Next* to skip OS fixup.



11. Select *Next* to use the default network settings for transferring the VM to the host.



## 12. Select *Finish*.



The Citrix XenServer imports the FortiVoice files and configures the VM as specified in the OVF template. Depending on your computer's hardware speed and resource load, and also on the file size and speed of the network connection, this might take several minutes to complete.



When VM import is complete, the XenCenter left pane includes the FortiVoice in the list of deployed VMs for your Citrix XenServer.

## Configuring virtual hardware

Before you start your FortiMail VM for the first time, you can optionally adjust your virtual machine's virtual hardware settings to meet your network requirements.

### Configuring number of CPUs and memory size

Your FortiMail VM license limits the number CPUs and amount of memory that you can use. The amounts you allocate must not exceed your license limits. See "Licensing" on page 5.

#### To access virtual machine settings

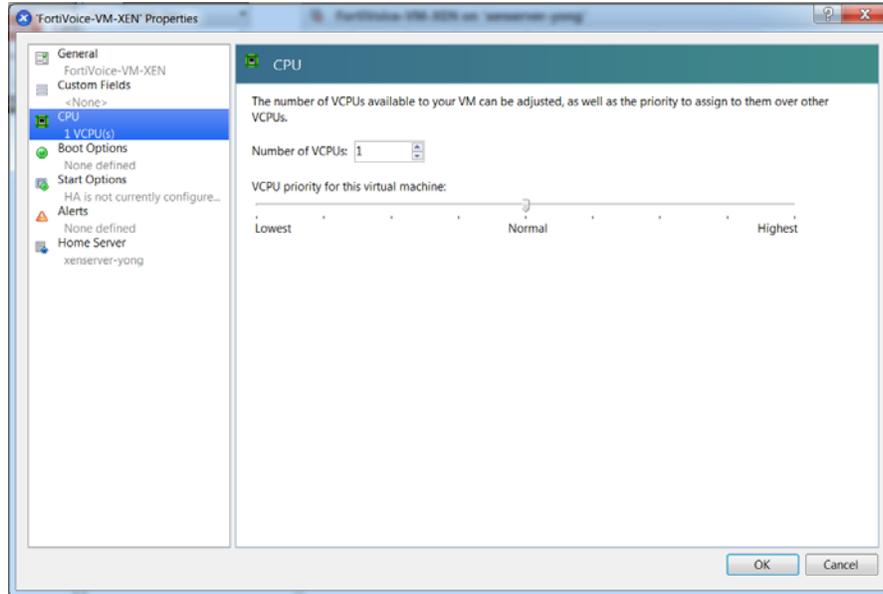
1. Open XenCenter.
2. Select your FortiMail VM in the left pane.

The tabs in the right pane provide access to the virtual hardware configuration. The Console tab provides access to the FortiMail console.

#### To set the number of CPUs

1. In the XenCenter left pane, right-click the FortiMail VM and select Properties.  
The Properties window opens.

2. In the left pane, select CPU.

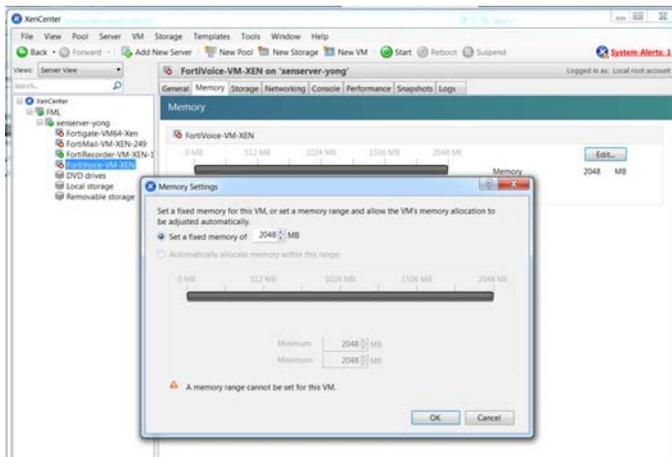


3. Adjust *Number of CPUs* and then select *OK*.

XenCenter will warn if you select more CPUs than the Xen host computer contains. Such a configuration might reduce performance.

### To set memory size

1. In the XenCenter left pane, select the FortiMail VM.
2. In the right pane, select the *Memory* tab.
3. Select *Edit*, modify the value in the *Set a fixed memory of* field and select *OK*.



# Initial Configuration

Before you can connect to the FortiVoice VM web UI, you must configure basic configuration via the console tab in your vSphere client. Once configured, you can connect to the FortiVoice VM Web-based Manager and upload the FortiVoice VM license file that you downloaded from the [Customer Service & Support portal](#).

The following topics are included in this section:

- [FortiVoice VM console access](#)
- [Connecting to the FortiVoice VM web UI](#)
- [Uploading the FortiVoice VM license file](#)
- [Configuring your FortiVoice VM](#)

## FortiVoice VM console access

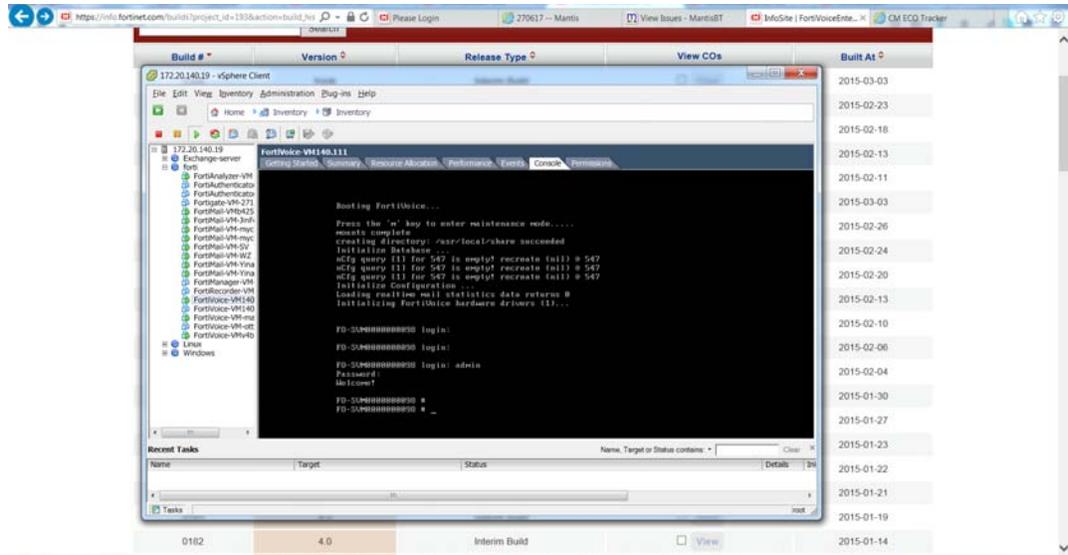
To enable web UI access to the FortiVoice VM, you must configure the port1 IP address and netmask of the FortiVoice VM.

### **To configure the port1 IP address and netmask:**

1. In the list of virtual machines, select the FortiVoice VM that you deployed, right-click, and select *Connect* from the menu.

The *Console* window appears.

**Figure 8:** FortiVoice VM console access



2. At the FortiVoice VM login prompt, enter the username `admin` and password. The default password is no password.
3. To configure the port1 IP address and netmask, enter the following CLI commands:

```
config system interface
edit port1
set ip <IP address Netmask>
end
```



The port management interface should match the first network adapter and virtual switch that you have configured in the virtual machine settings.



The Customer Service & Support portal currently does not support IPv6 for FortiVoice VM license validation. You must specify an IPv4 address in both the support portal and the port management interface.

## Connecting to the FortiVoice VM web UI

Once you have configured the port1 IP address and netmask, launch a web browser and enter the IP address you configured for port1. At the login page, enter the username `admin` and select *Login*. The default password is no password. The Web-based Manager will appear with an *Evaluation License* dialog box.



By default, the Web-based Manager is accessible via HTTPS.

---

## Uploading the FortiVoice VM license file

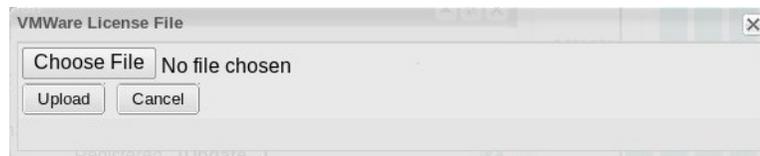
The FortiVoice VM comes with a 45-day trial license. During this time the FortiVoice VM operates in trial mode (see “[Trial mode](#)” on page 5). Before using the FortiVoice VM you must enter the license file that you downloaded from the [Customer Service & Support](#) portal upon registration.

### To upload the FortiVoice VM licence file:

1. In the *License Information* widget on the FortiRecorder VM web-based manager, click the *Update* link to the right of *VM*.

The license prompt appears.

**Figure 9:** FortiRecorder VM license prompt



2. Click *Choose File* and locate the license file (.lic) you downloaded earlier from Fortinet.
3. Click *Upload* on the license prompt dialog.

A message box appears stating your license is being authenticated. This may take a few minutes.

If you uploaded a valid license, a second message box will appear informing you that your license authenticated successfully.
4. Click *OK* on the message box.

The system will reload and log out.
5. Log in again if prompted using `admin`, as the user name. The VM registration status appears as valid in the *License Information* widget once the license has been validated.



As a part of the license validation process FortiRecorder VM compares its IP address with the IP information in the license file. If a new license has been imported, the FortiRecorder VM must be rebooted in order for the system to validate the change and operate with a valid license.

---

6. If the IP address in the license file and the IP address configured in the FortiRecorder VM do not match, you will receive an error message dialog box when you log back into the VM. If this occurs, you will need to change the IP address in the [Customer Service & Support](#) portal to match the management IP and re-download the license file.



After an invalid license file is loaded to FortiRecorder VM, the Web-based Manager will be locked until a valid license file is uploaded.

---

## Configuring your FortiVoice VM

Once the FortiVoice VM license has been validated you can begin to configure your device. For more information on configuring your FortiVoice VM see the [FortiVoice Enterprise Phone System Administration Guide](#) at [Fortinet Document Library](#).



In VM environments, it is recommended that you use the VMware *Snapshot* utility to backup the VM instance. In the event of an issue with a firmware upgrade or configuration issue, you can use the *Snapshot Manager* to revert the VM instance to a previous *Snapshot*. To create a *Snapshot*, right-click the VM instance and select *Snapshot > Take Snapshot*.

---

# Index

## C

console access 25  
customer support 6

## D

deploy 9  
download VM 7

## E

ESX/ESXi 5, 6

## H

Hypervisor 6

## I

IP address 9

## L

license  
  file 27  
  prompt 27

license file 27

## M

message box 27

## O

OVF file 9

## R

register 6

## S

system requirement 6

## T

trial mode 5

## V

VMware 6

