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Introduction

The VX virtualized controller is a software WLAN controller appliance running as a virtual machine (VM) on a variety of Hypervisor and Amazon EC2 cloud infrastructures. The VX 9000 supports virtually any server and commercially available Hypervisors for fast and seamless integration into an existing network infrastructure, without adding new hardware. You can run multiple instances of the VX 9000 on a single server, reducing cost, space and power in the Network Operations Center (NOC). With the ability to run in a private or public cloud, you have the freedom to choose the model that works best for your deployment needs, install on your own servers or lease a server in the public cloud.

Like existing controller platforms, the VX virtualized controller has its own unique VX 9000 product category. However, the VX 9000 is unique, in the sense it requires a software license to enable it. The VX virtualized controller is a license only orderable software SKU, and does not come as a resident application within an existing hardware product. Users are required to purchase a license to activate their VX 9000 downloaded. The ordering and fulfillment process however is similar to other software products, with an appliance license shipped in the form or a hard-copy license certificate.

A license is required to enable VX virtualized controller functionality within WiNG. There are different AP license packs available depending on the number of adaptive access points you’d like to support.

<table>
<thead>
<tr>
<th>License</th>
<th>Description</th>
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<tbody>
<tr>
<td>VX-9000-APPLNC-LIC</td>
<td>VX 9000 appliance license</td>
</tr>
<tr>
<td>VX-9000-ADP-16</td>
<td>16x adaptive access point license pack</td>
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<td>VX-9000-ADP-64</td>
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<tr>
<td>VX-9000-ADP-1024</td>
<td>1024x adaptive access point license pack</td>
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Installing the VX Virtualized Controller on a Hypervisor

To license and install the VX virtualized controller:

1. Use the following link to go to the extranet downloads page:
   Extreme Networks Extranet Download Page

2. If you do not have an extranet account, register here:
   https://secure.extremenetworks.com/register.aspx

3. Select the appropriate product family and then the product.
   The Firmware sub-tab is present for EOS, SecureStack, S/K/7100-Series, ExtremeWireless (IdentiFi and WiNG), Management, Control, Analytics, Security, WiNG, AirDefense and Legacy products.

4. Select the Firmware sub-tab.

5. The Firmware page displays the resources that you are entitled to. If you do not see the items that you need or think that you are entitled to, please contact GTAC http://www.extremenetworks.com/support/contact/ or e-mail portal@extremenetworks.com
   The VX appliance is downloaded as an .iso image.

6. Ensure a Hypervisor (ESXi, Xen, Hyper V) is installed in your server environment or the downloaded .iso image will not run.

7. Install the .iso in a manner similar to a standard VM.

8. Boot the VX appliance for the first time.
   The system prompts the user to change the password.

9. Configure your network for your data center environment (static IP address). Commit your updates.
   The serial number is automatically generated. The VX appliance is ready for license activation.

**NOTE**

Extreme Networks recommends you save the serial number generated in step nine.

**NOTE**

Do not change the IP address. If changed, the VX will not function until you obtain a new license by calling Support.

10. Run the `show version` command to display the serial number.
Installing in an ESXi Environment

To install the VX 9000 in an ESXi environment:

1. Within the vSphere client, select **File > New > Virtual Machine**.

2. Select **Typical** within the **Configuration** field, then **Next >** from the lower, right-hand, side of the screen.

3. Enter a 80 character maximum virtual machine name, then **Next >** from the lower, right-hand, side of the screen.

4. Select the target **Storage** location from amongst the destinations listed, then **Next >** from the lower, right-hand, side of the screen.

5. Within the **Guest Operating System** screen, select **Linux** as the guest operating system.
6 Use the **Version** drop-down menu to select **Other Linux (64-bit)**, then select **Next >** from the lower, right-hand, side of the screen.

7 Select one network interface card (NIC) from the **How many NICs do you want to connect?** drop-down menu.

8 Assign a **Network** to NIC1, then select **Next >** from the lower, right-hand, side of the screen.

9 Set the **Virtual disk size** from within the Create a Disk screen, then select **Next >** from the lower, right-hand, side of the screen.
10. Select the **Edit the virtual machine settings before completion** checkbox, then select **Continue** from the lower, right-hand, side of the screen.

11. From within the **Hardware** tab, select **Memory** as the hardware type and set the **Memory Size**.

12. Remain within the **Hardware** tab, and select **CD/DVD**.
13 Set the device type to **Datastore ISO File**. Select the **Browse** button and select the VX 9000 ISO file. Select **Finish** from the lower, right-hand, side of the screen.

14 Highlight the new VX 9000 VM and select the **Console** tab.

15 Right-click and select **Power > Power On** (or CTRL+B).

16 Select the **Enter** key when prompted to begin the VX 9000 installation process.

17 When the installation is completed, select the Enter key again to reboot the VX 9000. The VX 9000 is now ready to configure.
Installing in a Hyper-V Environment

To install the VX 9000 in a Hyper-V environment:

1. From the Hyper-V Virtual manager, under actions, select Virtual Switches > New virtual network switch.

2. Select External from within the Create virtual switch field.

3. Provide a Name for the switch and the physical interface used for External network connection. Select OK to save the updates.
4 From the Hyper-V manager, select New > Virtual Machine to launch the New Virtual Machine Wizard used to create a virtual machine for the VX 9000. Select Next > from the lower right to continue.

5 From the Specify Name and Location screen, provide a Name for the virtual machine and specify its location. Select Next > from the lower right to continue.

6 From the Assign Memory screen, enter a Startup memory (in MB) for the virtual machine. Select Next > from the lower right to continue.
7 From the **Configure Networking** screen, use the **Connection** drop-down menu to select the external network connection defined earlier in this Hyper-V installation. Select **Next >** from the lower right to continue.

8 From the **Connect Virtual Hard Disk** screen, select the **Create a virtual hard disk** option and specify the **Location** and **Size** of a dynamically expanding virtual hard disk. Select **Next >** from the lower right to continue.

9 From the **Installation Options** screen, select the **Install an operating system from a boot CD/DVD-ROM** option and select the **Image file (.iso)** option.

10 Select the **Browse** button and navigate to the location of the downloaded VX 9000 image file. Select **Next >** from the lower right to continue.
11 From the **Summary** screen, review the parameters you’ve defined for the virtual machine. Select **Finish** from the lower right to continue to commit the listed settings to the virtual machine configuration.

12 From Hyper-V manager, double click on the virtual machine and start it by selecting the power button.

13 When prompted within the console, select **Enter** to start the VX 9000 installation.
14 When the installation is completed, select **Enter** to reboot the VX 9000.

The VX 9000 is now ready for configuration.
License Key Activation

License Key activation instruction are available at:
https://gtacknowledge.extremenetworks.com/articles/How_To/How-to-activate-a-WiNG-license-voucher