

VX 9000 Virtualized Controller

Installation Guide

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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.

License	Description
VX-9000-APPLNC-LIC	VX 9000 appliance license
VX-9000-ADP-16	16x adaptive access point license pack
VX-9000-ADP-64	64x adaptive access point license pack
VX-9000-ADP-256	256x adaptive access point license pack
VX-9000-ADP-512	512x adaptive access point license pack
VX-9000-ADP-1024	1024x adaptive access point license pack

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2 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.

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 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**.

File	Edit View Inventory Ad	minis	stration Plug-ins Help
	New	•	Virtual Machine Ctrl+N
	Deploy OVF Template		Resource Pool Ctrl+O
	Export	٠	Add Permission Ctrl+P
1	Report	۲	esx-1.tmelabs.local VMware ESXi, 5.
	Browse VA Marketplace		Getting Started Summary Virtual M
	Print Maps	÷	
	Exit		What is a Host?

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

- Contraction	puration
æ 1	Typical
C	create a new virtual machine with the most common devices and configuration options.
C c	Lustom
c	create a virtual machine with additional devices or specific configuration options.

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

Name:	
VX9000-1	
Virtual machine (VM) names may co vCenter Server VM folder.	ntain up to 80 characters and they must be unique within each
VM folders are not viewable when o for this VM, connect to the vCenter	connected directly to a host. To view VM folders and specify a location Server.

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

Nam	e	Drive Type	Capacity	Provisioned	Free	Туре	Thin Pro
Ð	datastore1	Non-SSD	227.75 GB	7.71 GB	220.04 GB	VMFS5	Support
8	datastore2	Non-SSD	931.25 GB	165.35 GB	850.68 GB	VMFS3	Support
EI.	datastore3	Non-SSD	931.25 GB	\$77.00 MB	930.69 GB	VMES3	Support
-							
							- of f and
							Coppen

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.

C Windows	
🕫 Linux	
Cother	
/ersion:	
Other Linux (64-bit)	

- 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.

How m	any NJCs do you want to connect?	1 -		
	Network		Adapter	Connect a Power On
NIC 1:	LAB-SERVICES	+	E1000	- V
II II	supported by this virtual machine vers	ion, more than 41 ttings dialog.	NICs can be add	ed after the

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.

Datastore:	datastore3	
Available space (G8):	930.7	
Virtual disk size:	Þ±	GB 💌
Thick Provision Lazy Zeroe	ed	
C Thick Provision Eager Zero	bed	
C Thin Provision		

7

10 Select the **Edit the virtual machine settings before completion** checkbox, then select **Continue** from the lower, right-hand, side of the screen.

Name:	VX9000-1
Host/Cluster:	esx-1.tmelabs.local
Datastore:	detestore3
Guest OS:	Other Linux (64-bit)
NICs:	1
NIC 1 Network:	LAB-SERVICES
Diskprovisioning	Thick Provision Lazy Zeroed
Virtual Disk Size:	8 GB
Z Edit the virtual machine cell	toor before completion
Z Edit the virtual machine sett	tngs before completion

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

Show All Devices	Add Remove	1011 GB	Memory Size: 4 - G8
 Hemory (adding) CPUs (adding) Video card (adding) VHCI device (adding) New CD/DVD (adding) New Floppy (adding) New SCSI Controller (add New NIC (adding) New Hard Disk (adding) 	4096 HB 1 Video card Restricted Client Device LSI Logic Parallel LAB-SERVICES Virtual Disk	256 G9 256 G9 128 G8 64 G8 32 G9 4 G9 2 G8 4 G9 2 G8 1 G8 512 M9 4 256 M8 1 28 M8 4 G9 512 M9 4 2 6 M8 4 G9 5 12 M9 4 2 6 M8 4 G8 5 12 M8 5 1	Maximum recommended for this quest OS: 1011 GB. Maximum recommended for best performance: 32668 MB. Default recommended for this guest OS: 334 MB. Minimum recommended for this guest OS: 32 MB.

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	Virtual Switches	2. Create virtual switch
	👫 New virtual network switch	
œ	External	What type of virtual switch do you want to create?
	Intel(R) PRO/100 + Management A	External
œ	1 Internal	Internal
	Internal only	Private
	Private	
	Private virtual switch	
۰	CorpNet	
	Intel(R) 82579LM Gigabit Network	Create Virtual Switch
\$	Global Network Settings	
	MAC Address Range 00-15-5D-CD-0E-00 to 00-15-5D-C	Creates a virtual switch that binds to the physical network adapter so that virtual machines can access a physical network.

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

Xintual Switches	🖑 Virtual Switch Properties	
Intel(R) PRO/100+ Management A	Corpnet	
Internal only	Notes:	
E 📲 Private Private virtual switch		^
CorpNet Intel(R) 82579LM Gigabit Network		~
E 1 Corpnet Intel(R) 82579LM Gigabit Net	Connection type What do you want to connect this virtual switch to?	
A Global Network Settings	External network:	
MAC Address Range 00-15-50-CD-0E-00 to 00-15-50-C	Intel(R) 82579LM Gigabit Network Connection	~
	Allow management operating system to share this network adapter Enable single-root I/O virtualization (SR-80/)	
	Internal network	
	Private network	

3 Provide a **Name** for the switch and the physical interface used for **External network** connection. Select **OK** to save the updates.

Before You	Begin
Before You Begin Specify Name and Location Assign Memory Configure Networking Connect Virtual Hard Disk Installation Options Summary	This wizard helps you create a virtual machine. You can use virtual machines in place of physical computers for a variety of uses. You can use this wizard to configure the virtual machine now, and you can change the configuration later using Hyper-V Manager. To create a virtual machine, do one of the following: • Click Finish to create a virtual machine that is configured with default values. • Click Next to create a virtual machine with a custom configuration.

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.

Specify Nar	ne and Location	
Before You Begin Specify Name and Location Assign Memory Configure Networking Connect Virtual Hard Disk Installation Options Summary	Choose a name and location for this virtual machine. The name is displayed in Hyper-V Manager. We recommend that you use a name that helps you use identify this virtual machine, such as the name of the guest operating system or workload. Name: ALPS VX You can create a folder or use an existing folder to store the virtual machine. If you don't select a folder, the virtual machine is stored in the default folder configured for this server. Store the virtual machine in a different location Location: C:\ProgramData\Vicrosoft\Vindows\Pyper-V\ Browse if you plan to take enopshots of this virtual machine, select a location that has enough free topsec. Snoobhot include virtual machine date and may require a large amount of posec.	asly

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.

Assign Men	iory
Before You Begin Specify Name and Location	Specify the amount of memory to allocate to this virtual machine. You can specify an amount from 8 NB through 6272 NB. To improve performance, specify more than the minimum amount recommended for the operating system.
Assign Menory Configure Networking Connect Virtual Hard Disk Installation Options Summary	Startup memory: 4098 MB Use Dynamic Memory for this virtual machine. When you dedde how much memory to assign to a virtual machine, consider how you intend to use the virtual machine and the operating system that it will run.

6 From the Assign Memory screen, enter a Startup memory (in MB) for the virtual machine. Select Next > from the lower right to continue.

Configure Networking			
Before You Begin Specify Name and Location Assign Memory	Each new virtual machine includes a network adapter. You virtual switch, or it can remain disconnected. Connection: CorpNet	can configure the network adapter to use a	
Configure Networking Connect Virtual Hard Disk Installation Options Summary			

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.

Connect Vir	tual Hard Disk
Before You Begin Specify Name and Location Assign Memory Configure Networking	A virtual machine requires storage so that you can install an operating system. You can specify the storage now or configure it later by modifying the virtual machine's properties. © Create a virtual hard disk Use this option to create a dynamically expanding virtual hard disk with the default format (VHDX).
Connect Virtual Hard Disk Installation Options Summary	Name: ALPS VX.vhdx Location: C: Users'Public/Documents\/Hyper-V\/Irtual Hard Disks\ Browse Size: 127 G8 (Maximum: 64 T8)

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.

	Options			
Before You Begin Specify Name and Location Assign Memory	You can install an operating system now if you have access to the setup media, or you can install it later.			
Configure Networking	Install an operating system from a boot CD/DVD-ROM			
Connect Virtual Hard Disk	Media			
Installation Options	○ Physical CD/DVD drives G: ✓			
Summary	Image file (,iso): Iments/9772-WISC-V-INSTALL-5.7.0.0-0030.lss Browse			

- 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 navigae to the location of the downloaded VX 9000 image file. Select **Next >** from the lower right to continue.

Completing Before You Begin Specify Name and Location Assign Memory	the New Virtual M You have successfully following virtual mach Description:	achine Wizard r completed the New Virtual Machine Wizard. You are about inc.	to create the
Configure Networking Connect Virtual Hard Disk Installation Options Summery	Name: Memory: Network: Hard Disk: Operating System:	ALPS VX 4096 MB CorpNet C: {Users \Public \Documents \Hyper-V \Virtual Herd Disks \ALP Will be installed from C: {Users \Administrator \Documents \97	5 VX.vindx (VHDX, dyr 72-WESC-V-ENSTALL-5
	٢		2

To create the virtual machine and close the wizard, click Finish.

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 instruction are available at:

 $https://gtacknowledge.extremenetworks.com/articles/How_To/How-to-activate-a-WiNG-license-voucher$

