Install Secure Web Appliance on Microsoft Hyper-V

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Introduction

This document describes the steps required to install the Secure Web Appliance (SWA) on Microsoft Hyper-V.

Prerequisites

Requirements

Cisco recommends that you have knowledge of these topics:

- SWA administration.
- Fundamental networking principles.
- Microsoft Hyper-V administration.

Cisco recommends that you have:

- Microsoft Hyper-V Installed.
- Administrative Access to the Microsoft Hyper-V.
- Valid Cisco Account to Download the SWA Image file.

Components Used

This document is not restricted to specific software and hardware versions.

The information in this document was created from the devices in a specific lab environment. All of the devices used in this document started with a cleared (default) configuration. If your network is live, ensure that you understand the potential impact of any command.

Microsoft Hyper-V

Hyper-V is a powerful virtualization platform developed by Microsoft that allows users to create and manage virtual machines (VMs) on a Windows operating system. It provides a robust environment for

running multiple operating systems simultaneously on a single physical host, making it an ideal choice for businesses looking to optimize their IT infrastructure.

In this article, we guide you through the essential steps to install SWA on Hyper-V. Cisco SWA is a dedicated web security solution designed to protect organizations from cyber threats by monitoring and controlling Internet traffic. Our step-by-step instructions help you configure and deploy Cisco SWA efficiently on your Hyper-V environment, ensuring enhanced security and performance for your network.

Download the Image

To download the desired and latest SWA Images, use these steps:

Step 1. Navigate to <u>https://software.cisco.com/</u>.

Step 2. Log in with your Cisco Account

Step 3. Choose Access Downloads.

Cisco Software Ce	entral	uluulu cisco		
			III internalTestDemoAct	count18.cisco.com
Cisco Access everything you n your Cisco Smart Licens	Software eed to activate and manage es.	e Central		
Downlo	ad and mar	nage		
Smart Software Mai Track and manage your I traditional licenses to Sm Manage licenses >	nager Download licenses. Convert Download r current soft Access dow	d and Upgrade new software or updates to your tware.	Traditional Licenses Generate and manage PAK-based and other device licenses, including demo licenses.	

Image - Cisco Software Central

Step 4. Search for "Secure Web Appliance Virtual".

My Previous Downloa	ads			Most Popular
Product	Software Type	Latest Release	Last Downloaded	Most Popular for Web Security
Secure Web Appliance Virtual	AsyncOS for WSA	15.2.1 MD	15.2.0(GD)	Secure Web Appliance Virtual :14.5.1MD :A
				Secure Web Appliance Virtual :15.2.1 MD :A
Secure Web Appliance Virtual	AsyncOS for WSA	15.2.1 MD 🕢	14.5.1 MD	Secure Web Appliance Virtual :14.0.5 MD :A
Secure Web Appliance Virtual	AsyncOS for WSA	15.2.1 MD 🕕	14.5.1 MD	Secure Web Appliance Virtual :15.2.0(GD) :/
View all 9 Downloads >				Secure Web Appliance Virtual :15.0.1 MR :A
Select a Product	Q Secure Web Appliance Virtual			× Browse all
Select a Product	Secure Web Appliance Virtual Secure Web Appliance Virtual			X Browse all
Select a Product www.loads.Home / Security / Web Security Cloud and Systems Management	Secure Web Appliance Virtual Secure Web Appliance Virtual Email Security		Secure Em	Browse all ail and Web Manager
Select a Product Downloads Home / Security / Web Security Cloud and Systems Management Collaboration Endpoints	Secure Web Appliance Virtual Secure Web Appliance Virtual Email Security Endpoint Security		Secure Em Secure Em	Browse all ail and Web Manager ail and Web Manager Virtual
Select a Product Downloads Home / Security / Web Security Cloud and Systems Management Collaboration Endpoints Conferencing	Secure Web Appliance Virtual Secure Web Appliance Virtual Email Security Endpoint Security Firewalls		Secure Em Secure Em Secure We	Browse all Browse all ail and Web Manager ail and Web Manager Virtual b Appliance
Select a Product Downloads Home / Security / Web Security Cloud and Systems Management Collaboration Endpoints Conferencing Connected Safety and Security	Secure Web Appliance Virtual Secure Web Appliance Virtual Email Security Endpoint Security Firewalls Intrusion Prevention System	m (IPS)	Secure Em Secure Em Secure We Secure We	Browse all Browse all ail and Web Manager ail and Web Manager Virtual b Appliance b Appliance
Select a Product Downloads Home / Security / Web Security Cloud and Systems Management Collaboration Endpoints Conferencing Connected Safety and Security Contact Center	Secure Web Appliance Virtual Secure Web Appliance Virtual Email Security Endpoint Security Firewalls Intrusion Prevention Systee Network Security	m (IPS)	Secure Em Secure Em Secure We Secure We Umbrella	Browse all ail and Web Manager ail and Web Manager Virtual bb Appliance bb Appliance Virtual
Select a Product Downloads Home / Security / Web Security Cloud and Systems Management Collaboration Endpoints Conferencing Connected Safety and Security Contact Center Data Center Networking	Secure Web Appliance Virtual Secure Web Appliance Virtual Email Security Endpoint Security Firewalls Intrusion Prevention Syste Network Security Network Visibility and Seg	m (IPS) jmentation	Secure Em Secure Em Secure We Secure We Umbrella	Browse all ail and Web Manager ail and Web Manager Virtual ab Appliance bb Appliance Virtual
Select a Product Downloads Home / Security / Web Security Cloud and Systems Management Collaboration Endpoints Conferencing Connected Safety and Security Contact Center Data Center Networking Hyperconverged Infrastructure	Secure Web Appliance Virtual Secure Web Appliance Virtual Email Security Endpoint Security Firewalls Intrusion Prevention Syste Network Security Network Visibility and Seg Next-Generation Intrusion	m (IPS) jmentation Prevention System (NGIPS)	Secure Em Secure Em Secure We Secure We Umbrella	Browse all ail and Web Manager ail and Web Manager Virtual ab Appliance bb Appliance Virtual

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Select a Software Type AsyncOS for WSA Cisco Advanced Web Security Reporting

Software Download

Downloads Home / Security / Web Security / Secure Web Appliance Virtual

Image - Choose AsyncOS for WSA

Step 6. Choose your desired version.

CISCO Products & Services Support How to Buy Training & Events Partners Employees

Step 7. Download the Virtual Disk Image (.vhdx) file associated with the model you would like to install.

	CISCO Products & Services	Support	How to Buy Training & Events Partners Employe	ees	Amirhossein Mojarrad	3 🖗 🧿 C Ø
	Software Downl	oad				
	Downloads Home / Security / Web Securit	y / Secur	Web Appliance Virtual / AsyncOS for WSA- 15.2.1 MD(MD)			
	Q Search	\supset	Secure Web Appliance Virtual			
_	Expand All Collapse All		Release 15.2.1 MD MD KVM Ir	nage Micros	soft Hyper-V	
Release	Suggested Release	~	My Notifications Vmware ESXi	1	Image	
	14.5.1MD(MD) 🔿		Image			
	Latest Release	~	File Information	Release Date	Size	
	15.2.1 MD(MD)		coeus-15-2-1-011-S1000V.qcow2.tgz KVM build qcow image	14-Oct-2024	4683.31 MB	$\pm \because \blacksquare$
	14.5.3 MD(MD)		Advisories 😭			
	12.5.6 MD(MD)		coeus-15-2-1-011-S1000V.vhdx.tgz Hypervisor mage	14-Oct-2024	4688.42 MB	±∵∵∎
	11.8.3(MD)		Advisories 🖆			
	All Release	~	Cisco Web Security Virtual Appliance S1000V	14-Oct-2024	4826.82 MB	±∵, ∎
	Config Migration	>	Advisories 📑			
	15	>	coeus-15-2-1-011-S100V.qcow2.tgz KVM build qcow image	14-Oct-2024	4683.05 MB	±₩∎
	14	>	Advisories 📑			
	12	>	coeus-15-2-1-011 S100V.vt dx.tgz Hypervisor Image	14-Oct-2024	4686.41 MB	± \: 🖬
	11	>	Advisor to T			
			I I Version Model			

Image - Download Hyper-V Disk Image

Installing SWA Setup

Use these steps to install the SWA on Hyper-V:

Step 1. Open your Hyper-V Manager console.

Step 2. Click New from the right menu.

Step 3. Choose Virtual Machine.



Image - Create a New Virtual Machine

Step 4. Click Next in the Before You Begin Page.

Step 5. Choose a Name for your Virtual Machine.

Step 6. (Optional) If you would like to change the path to store the Virtual Machine files, Select the Check box next to "Store the virtual machine in a different location" and **Browse** to the new path.

🖳 New Virtual Machine Wizar	d	×
Specify Name	e and Location	
Before You Begin Specify Name and Location Specify Generation Assign Memory	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 eas	ily
	Name: WSA15-2	5
Connect Virtual Hard Disk	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.	
Summary	Location: C:\ProgramData\Microsoft\Windows\Hyper-V\ Browse	.] (6)
	▲ If you plan to take checkpoints of this virtual machine, select a location that has enough free space. Checkpoints include virtual machine data and may require a large amount of space.	

Image - Specify Name and Location

Step 7. On the Specify Generation page, Choose Generation 2, then click Next.

Specify Generation

Before You Begin	Choose the generation of this virtual machine.	
Specify Name and Location	O Generation 1	
Specify Generation Assign Memory Configure Networking Connect Virtual Hard Disk Installation Options Summary	 This virtual machine generation supports 32-bit and 64-bit guest operating systems and provides virtual hardware which has been available in all previous versions of Hyper-V. Generation 2 This virtual machine generation provides support for newer virtualization features, has UEFI-based firmware, and requires a supported 64-bit guest operating system. Once a virtual machine has been created, you cannot change its generation. 	7
	< Previous Next > Finish Cancel	

Image - Choose Generation 2

Step 8. Assign memory as recommended in <u>Supported Virtual Appliance Models and AsyncOS Releases for</u> <u>Hyper-V Deployments</u>.

Step 9. To have a better performance, uncheck **Use Dynamic Memory for this virtual machine**, then click **Next**.

🖳 New Virtual Machine Wizard



Image - Assign Memory

Step 10. Choose your desired Virtual Switch, then click Next.

🖳 New Virtual Machine Wizar	4 X	~
💴 Configure Ne	tworking	
Before You Begin Specify Name and Location	Each new virtual machine includes a network adapter. You can configure the network adapter to use a virtual switch, or it can remain disconnected.	10
Assian Memory		
Configure Networking		
Connect Virtual Hard Disk		
Installation Options		
Summary		
	< Previous Next > Finish Cancel	

Image - Choose the Virtual Switch

Step 11. Extract the Virtual Disk Image file that you have downloaded previously.

D Tip: To extract a .tgz file you can use 7zip application.

Step 12. Copy the extracted files to the path you would like to host the virtual machine disk.

Step 13. Choose Use an Existing Virtual Hard Disk, then select the path to the virtual disk file (.vhdx).

۰

Connect Virtual Hard Disk

Before You Begin Specify Name and Location Specify Generation Assign Memory	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 VHDX dynamically expanding virtual hard disk.
Configure Networking Connect Virtual Hard Disk	Name: WSA15.2.vhdx
	Location: C:\ProgramData\Microsoft\Windows\Virtual Hard Disks\ Browse
Summary	Size: 127 GB (Maximum: 64 TB)
	 Use an existing virtual hard disk Use this option to attach an existing virtual hard disk, either VHD or VHDX format. Location: C:\ProgramData\Microsoft\Windows\Virtual Hard Disks\ Browse
	<previous next=""> Finish Cancel</previous>

Image - Use an Existing Virtual Hard Disk

Step 14. Click Next.

Step 15. Review the Configuration summary, then click Finish.

Note: Wait for the Virtual Machine to get ready before Starting the VM. You must modify the settings.

Step 16. Right-click on the virtual Machine name, then select Settings.



Step 17. From the left menu ,choose Security.

Step 18. Uncheck Enable Secure Boot.

WSA15.2 ~	· • • 0
Add Hardware	Security
Firmware Boot from Hard Drive Security Secure Boot disabled	Use Secure Boot to help prevent unauthorized code from running at boot time (recommended).
Memory 4096 MB Processor	Template: Microsoft Windows
Virtual processor SCSI Controller Hard Drive coeus-15-2-0-164-S100V-disk	Encryption Support Encryption Support Enable Trusted Platform Module A Trusted Platform Module (TPM) is a special purpose microprocessor which
Petwork Adapter Default Switch Management	provides cryptographic services to a compute platform. Encrypt state and virtual machine migration traffic
WSA15.2	machine. If not already present, selecting one of these options will generate a KP that allows running the virtual machine on this host.
Checkpoints Standard Smart Paging File Location	Specify additional protection options for the virtual machine.
Automatic Start Action Restart if previously running Automatic Stop Action	This affects additional settings.
Save	

Image - Disable the Secure Boot

Step 19. From the settings window, choose Processor.

Step 20. Increase the number of processors as recommended in <u>Supported Virtual Appliance Models and</u> <u>AsyncOS Releases for Hyper-V Deployments</u>



Image - Increase the Number of Processors

Step 21. From the settings window, choose Add Hardware.

Step 22. Select "Network Adapter" and click Add.



Image - Add Network Adapters

Step 23. Select the virtual switch.



Image - Select the Virtual Switch

Step 24. Repeat Steps 21 to 23 until you have a total of five network interfaces.

Caution: Even if you do not plan to use all five interfaces on the SWA, it is still necessary to add them to the virtual machine. Failing to do so can result in unexpected behavior.

Step 25. Apply.

Step 26. Start the virtual Machine.

W Tip: To setup the SWA kindly visit: <u>Configure Secure Web Appliance Initial Setup</u>

Related Information

- User Guide for AsyncOS 15.2 for Cisco Secure Web Appliance
- Cisco Secure Email and Web Virtual Appliance Installation Guide

- <u>Configure Secure Web Appliance Initial Setup</u>
- <u>Configure Custom URL Categories in Secure Web Appliance Cisco</u>
- <u>Use Secure Web Appliance Best Practices</u>
- <u>Configure Firewall for Secure Web Appliance</u>
- <u>Configure Decryption Certificate in Secure Web Appliance</u>
- <u>Configure and Troubleshoot SNMP in SWA</u>
- <u>Configure SCP Push Logs in Secure Web Appliance with Microsoft Server</u>
- Enable Specific YouTube Channel/Video and Block Rest of YouTube in SWA
- <u>Understand HTTPS Accesslog Format in Secure Web Appliance</u>
- <u>Access Secure Web Appliance Logs</u>
- Bypass Authentication in Secure Web Appliance
- Block Traffic in Secure Web Appliance
- Bypass Microsoft Updates Traffic in Secure Web Appliance