

Tenable Core + Tenable Web App Scanning User Guide

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Table of Contents

welcome to Tenable Core + Tenable Web App Scanning	6
Get Started	7
Tenable Core Requirements	g
System Requirements	10
Access Requirements	12
Default Security Configuration Standards	14
Deploy or Install Tenable Core	19
Deploy Tenable Core in VMware	20
Deploy Tenable Core in Hyper-V	22
Deploy Tenable Core in Microsoft Azure	24
Deploy Tenable Core in Microsoft Azure via the Portal	25
Deploy Tenable Core in Microsoft Azure via the CLI	27
Deploy Tenable Core in the Amazon Marketplace	29
Install Tenable Core on Hardware	32
Edit the Network Configuration	34
Edit the Proxy Configuration	36
Disk Management	38
Add or Expand Disk Space	39
Manually Configure a Static IP Address	41
Create an Initial Administrator User Account	45
Create a Password for the Initial Administrator User Account	47
Link Tenable Core to Tenable Vulnerability Management	49
Log In to Tenable Core	50

Configure and Manage	51
View the Dashboard	54
Add a Server	55
Edit a Server	56
Delete a Server	57
Synchronize Accounts	58
Manage the System	59
Change Performance Profile	60
Restart Tenable Core	61
Shut Down Tenable Core	62
Edit Your Tenable Core Hostname	63
Edit Your Time Settings	64
View the System Log	65
Filter the System Log	66
Manage System Networking	67
Add a Bonded Interface	68
Add a Team of Interfaces	70
Add a Bridge Network	71
Add a VLAN	72
Manage System Storage	73
Rename a Filesystem	74
Delete a Filesystem	75
Manage User Accounts	76
Create New User Account	77

Edit a User Account	79
Delete a User Account	83
Manage Services	84
Create a Timer	87
Generate a Diagnostic Report	88
Access the Terminal	89
Manage Tenable Web App Scanning in Tenable Core	90
Configure a Proxy Server	92
Start, Stop, or Restart Your Application	93
Manage Updates	94
Configure Automatic Updates	95
Configure Your Automatic Update Schedule	96
Update On Demand	97
Update Tenable Core Offline	100
Manage Certificates	101
Manage the Server Certificate	102
Upload a Custom Server Certificate	103
Remove a Custom Server Certificate	106
Upload a Certificate for a Trusted Certificate Authority	107
Use Different Certificates for Tenable Core and Your Application	109
Application Data Backup and Restore	110
Configure a Remote Storage Host	114
Perform an On-Demand Backup	116
Change the Scheduled Backup Time	117

Restore a Backup	119
SNMP Agent Configuration	121
Configure an SNMP Agent via the User Interface	122
Configure an SNMP Agent via the CLI	125
Take a Virtual Machine Snapshot	126
FAQ	127

Welcome to Tenable Core + Tenable Web App Scanning

You can use the Tenable Core operating system to run an instance of Tenable Web App Scanning in your environment. After you deploy Tenable Core + Tenable Web App Scanning, you can monitor and manage your Tenable Web App Scanning processes through the secure Tenable Core platform.

To get started quickly with Tenable Core + Tenable Web App Scanning, see Get Started.

Features

- Secure, stable platform that reduces the time to your first scan.
- Provides automatic application installation and updates via Tenable public repositories.
- · Built on CentOS 7.
- Targets Center for Internet Security (CIS) standards for CentOS 7 with SELinux enabled. For more information, see Default Security Configuration Standards.
- Root access enabled on builds.

Other Tenable Core Configurations

To run a different Tenable application on Tenable Core, see:

- Tenable Core + Nessus
- Tenable Core + Nessus Network Monitor
- Tenable Core + Tenable Security Center
- Tenable Core + Tenable OT Security
- Tenable Core + Tenable OT Security Sensor

Note: Tenable does not recommend deploying multiple applications on a single instance of Tenable Core. If you want to deploy several applications on Tenable Core, deploy a unique instance for each application.

Get Started

Tenable recommends the following sequence to deploy and get started with Tenable Core + Tenable Web App Scanning.

To get started with Tenable Core:

- 1. Confirm that your environment meets the requirements in <u>Tenable Core Requirements</u>. If necessary, prepare to increase your disk space after you deploy.
- 2. <u>Deploy or install</u> Tenable Core + Tenable Web App Scanning.

Note: You can also deploy Tenable Core using the command-line interface (CLI). For more information, see <u>Deploy Tenable Core in Microsoft Azure via the CLI</u>.

- 3. (Optional) If you want to increase your disk space to accommodate your organization's data storage needs, do one of the following:
 - If you are deploying Tenable Core + Tenable Web App Scanning as a virtual machine or on hardware, see Disk Management.
 - If you are deploying Tenable Core + Tenable Web App Scanning in a cloud environment,
 refer to your cloud platform's documentation for information about increasing disk space.
- 4. (Optional) If Dynamic Host Configuration Protocol (DHCP) is not available on the network where you deployed Tenable Core, <u>configure an IP address</u> for your Tenable Core + Tenable Web App Scanning deployment.
- 5. (Optional) If necessary, log in as a wizard user and create an administrator account, as described in Create an Initial Administrator User Account.

Note: You must create an administrator account if you deployed Tenable Core + Tenable Web App Scanning via one of the following methods:

- · As a virtual machine
- On hardware

If you deployed Tenable Core + Tenable Web App Scanning in a cloud environment and you did not create a password during deployment, you must <u>create a password for your administrator account</u>.

6. Log In to Tenable Core with your new administrator credentials.

- C
- 7. (Optional) If you want to create more user accounts, see Create New User Account.
- 8. (Optional) If you want to configure Tenable Core to use a proxy server, see Configure a Proxy Server.
- 9. <u>Configure Tenable Web App Scanning</u> to meet the specifications you want for your application.
 - For more information about configuring and operating Tenable Web App Scanning, see the Tenable Web App Scanning User Guide.
- 10. Configure and manage Tenable Core. To access the application interface, see <u>Configure and Manage</u>.

Tenable Core Requirements

You can deploy Tenable Core + Tenable Web App Scanning on any system that meets the following Tenable Core and Tenable Web App Scanning environment requirements.

Note: Tenable does not recommend deploying multiple applications on a single instance of Tenable Core. If you want to deploy several applications on Tenable Core, deploy a unique instance for each application.

System Requirements

Access Requirements

Default Security Configuration Standards

System Requirements

To install and run Tenable Core + Tenable Web App Scanning, your system must meet the following hardware requirements established for Tenable Web App Scanning. For more information about Tenable Vulnerability Management requirements, see Tenable Vulnerability Management in the General Requirements User Guide.

Note: Tenable Support does not assist with issues related to your host operating system, even if you encounter them during installation or deployment.

Environment		Tenable Core File Format	More Information
Virtual Machine	VMware	.ova file	Deploy Tenable Core in VMware
	Microsoft Hyper-V	.zip file	Deploy Tenable Core in Hyper-
Cloud	Microsoft Azure	n/a	Deploy Tenable Core in Microsoft Azure
Cloud	Amazon Web Services (AWS)	n/a	Deploy Tenable Core in the Amazon Marketplace
Hardware		.iso image	Install Tenable Core on Hard- ware

Note: While you could use the packages to run Tenable Core in other environments, Tenable does not provide documentation for those procedures.

Tenable Web App Scanning Hardware Requirements

Note: Tenable does not recommend deploying multiple applications on a single instance of Tenable Core. If you want to deploy several applications on Tenable Core, deploy a unique instance for each application.

Scenario	Hardware Recommendations
Tenable Web App Scanning Scanning up to 4 concurrent	CPU: (4) 2 GHz cores



Access Requirements

Your Tenable Core + Tenable Web App Scanning deployment must meet the following requirements.

- Internet Requirements
- Port Requirements

Internet Requirements

You must have internet access to download Tenable Core files.

After you transfer a file to your machine, internet access requirements to deploy or update Tenable Core vary depending on your environment.

Environment		Tenable Core Format	Internet Requirement
Virtual	VMware	.ova file	You do not need internet access to
Machine	Microsoft Hyper- V	.zip file	deploy or update Tenable Core.
Cloud	Amazon Web Services (AWS)	n/a	Requires internet access to deploy or update Tenable Core.
Cloud	Microsoft Azure	n/a	
Hardware		.iso image	Requires internet access to install or update Tenable Core.

Tip: You do not need access to the internet when you install updates to Tenable Core + Tenable Web App Scanning via an offline .iso file. For more information, see Update Tenable Core Offline.

Port Requirements

Your Tenable Core deployment requires access to specific ports for inbound and outbound traffic.

Inbound Traffic



Allow inbound traffic to the following ports listed.

Note: Inbound traffic refers to traffic from users configuring Tenable Core, etc.

Port	Traffic
TCP 22	Inbound SSH connections.
TCP 8000	Inbound HTTPS communications to the Tenable Core interface.
TCP 8090	Inbound HTTPS communications for restoring backups.
	Inbound communications with the file upload server.

Outbound Traffic

Allow outbound traffic to the following ports listed.

Port	Traffic
TCP 22	Outbound SSH connections, including remote storage connections.
TCP 443	Outbound communications to the sensor.cloud.tenable.com server for system updates.
UDP 53	Outbound DNS communications for Tenable Web App Scanning and Tenable Core.

Default Security Configuration Standards

By default, Tenable Core applies security configurations based on the following Center for Internet Security (CIS) standards. For more information about CIS standards, see <u>cisecurity.org</u>.

Note: SELinux: is enabled by default on the Tenable Core operating system.

CIS Standards

CIS Benchmarks: Tenable has implemented the following parts of the CIS Level 1 Benchmark on the Tenable Core:

CIS Level 1 - 1.x

- CIS 1.1.1.* (Disable mounting of miscellaneous filesystems)
- CIS 1.1.21 (Ensure sticky bit is set on all world-writable directories)
- CIS 1.4.* (Bootloader adjustments)
 - CIS 1.4.1 Ensure permissions on bootloader config are configured
- CIS 1.7.1.* (Messaging/banners)
 - Ensure message of the day is configured properly
 - Ensure local login warning banner is configured properly
 - · Ensure remote login warning banner is configured properly
 - Ensure GDM login banner is configured banner message enabled
 - Ensure GDM login banner is configured banner message text

CIS Level 1 - 2.x

- CIS 2.2.* (disabled packages)
 - x11
 - avahi-server
 - CUPS

- nfs
- Rpc

CIS level 1 - 3.x

- CIS 3.1.* (packet redirects)
 - 3.1.2 Ensure packet redirect sending is disabled 'net.ipv4.conf.all.send_redirects = 0'
 - 3.1.2 Ensure packet redirect sending is disabled 'net.ipv4.conf.default.send_redirects = 0'
- CIS 3.2.* (ipv4, icmp, etc)
 - 3.2.1 Ensure source routed packets are not accepted 'net.ipv4.conf.all.accept_source_ route = 0'
 - 3.2.1 Ensure source routed packets are not accepted 'net.ipv4.conf.default.accept_ source_route = 0'
 - 3.2.2 Ensure ICMP redirects are not accepted 'net.ipv4.conf.all.accept_redirects = 0'
 - 3.2.2 Ensure ICMP redirects are not accepted 'net.ipv4.conf.default.accept_redirects = 0'
 - 3.2.3 Ensure secure ICMP redirects are not accepted 'net.ipv4.conf.all.secure_redirects = 0'
 - 3.2.3 Ensure secure ICMP redirects are not accepted 'net.ipv4.conf.default.secure_ redirects = 0'
 - 3.2.4 Ensure suspicious packets are logged 'net.ipv4.conf.all.log_martians = 1'
 - 3.2.4 Ensure suspicious packets are logged 'net.ipv4.conf.default.log_martians = 1'
 - 3.2.5 Ensure broadcast ICMP requests are ignored
 - 3.2.6 Ensure bogus ICMP responses are ignored
 - 3.2.7 Ensure Reverse Path Filtering is enabled 'net.ipv4.conf.all.rp_filter = 1'

- 3.2.7 Ensure Reverse Path Filtering is enabled 'net.ipv4.conf.default.rp_filter = 1'
- 3.2.8 Ensure TCP SYN Cookies is enabled
- CIS 3.3.* (IPv6)
 - 3.3.1 Ensure IPv6 router advertisements are not accepted
 - 3.3.2 Ensure IPv6 redirects are not accepted
- CIS 3.5.* (network protocols)
 - 3.5.1 Ensure DCCP is disabled
 - 3.5.2 Ensure SCTP is disabled
 - 3.5.3 Ensure RDS is disabled
 - 3.5.4 Ensure TIPC is disabled

CIS Level 1 - 4.x

- CIS 4.2.* (rsyslog)
 - 4.2.1.3 Ensure rsyslog default file permissions configured
 - 4.2.4 Ensure permissions on all logfiles are configured

CIS Level 1 - 5.x

- CIS 5.1.* (cron permissions)
 - 5.1.2 Ensure permissions on /etc/crontab are configured
 - 5.1.3 Ensure permissions on /etc/cron.hourly are configured
 - 5.1.4 Ensure permissions on /etc/cron.daily are configured
 - 5.1.5 Ensure permissions on /etc/cron.weekly are configured
 - 5.1.6 Ensure permissions on /etc/cron.monthly are configured
 - 5.1.7 Ensure permissions on /etc/cron.d are configured
 - 5.1.8 Ensure at/cron is restricted to authorized users at.allow

- 5.1.8 Ensure at/cron is restricted to authorized users at.deny
- 5.1.8 Ensure at/cron is restricted to authorized users cron.allow
- CIS 5.3.* (password/pam)
 - 5.3.1 Ensure password creation requirements are configured dcredit
 - 5.3.1 Ensure password creation requirements are configured Icredit
 - 5.3.1 Ensure password creation requirements are configured minlen
 - 5.3.1 Ensure password creation requirements are configured ocredit
 - 5.3.1 Ensure password creation requirements are configured ucredit
 - 5.3.2 Lockout for failed password attempts password-auth 'auth [default=die] pam_fail-lock.so authfail audit deny=5 unlock_time=900'
 - 5.3.2 Lockout for failed password attempts password-auth 'auth [success=1 default-t=bad] pam_unix.so'
 - 5.3.2 Lockout for failed password attempts password-auth 'auth required pam_faillock.so preauth audit silent deny=5 unlock_time=900'
 - 5.3.2 Lockout for failed password attempts password-auth 'auth sufficient pam_faillock.so authsucc audit deny=5 unlock_time=900'
 - 5.3.2 Lockout for failed password attempts system-auth 'auth [default=die] pam_fail-lock.so authfail audit deny=5 unlock_time=900'
 - 5.3.2 Lockout for failed password attempts system-auth 'auth [success=1 default=bad] pam unix.so'
 - 5.3.2 Lockout for failed password attempts system-auth 'auth required pam_faillock.so preauth audit silent deny=5 unlock_time=900'
 - 5.3.2 Lockout for failed password attempts system-auth 'auth sufficient pam_faillock.so authsucc audit deny=5 unlock_time=900'
 - 5.3.3 Ensure password reuse is limited password-auth
 - 5.3.3 Ensure password reuse is limited system-auth

- CIS 5.4.* (user prefs)
 - 5.4.1.2 Ensure minimum days between password changes is 7 or more
 - 5.4.1.4 Ensure inactive password lock is 30 days or less
 - 5.4.4 Ensure default user umask is 027 or more restrictive /etc/bashrc
- CIS 5.6.* (wheel group)
 - 5.6 Ensure access to the su command is restricted pam_wheel.so
 - 5.6 Ensure access to the su command is restricted wheel group contains root

CIS Level 1 - 6.x

- CIS 6.1.* (misc conf permissions)
 - 6.1.6 Ensure permissions on /etc/passwd- are configured
 - 6.1.8 Ensure permissions on /etc/group- are configured

Deploy or Install Tenable Core

You can run Tenable Core + Tenable Web App Scanning in the following environments.

Note: Tenable Support does not assist with issues related to your host operating system, even if you encounter them during installation or deployment.

Environment		Tenable Core File Format	More Information
Virtual Machine	VMware	.ova file	Deploy Tenable Core in VMware
	Microsoft Hyper-V	.zip file	Deploy Tenable Core in Hyper-
Cloud	Microsoft Azure	n/a	Deploy Tenable Core in Microsoft Azure
Cloud	Amazon Web Services (AWS)	n/a	Deploy Tenable Core in the Amazon Marketplace
Hardware		.iso image	Install Tenable Core on Hard- ware

Note: While you could use the packages to run Tenable Core in other environments, Tenable does not provide documentation for those procedures.

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Deploy Tenable Core in VMware

To deploy Tenable Core + Tenable Web App Scanning as a VMware virtual machine, you must download the Tenable Core + Tenable Web App Scanning .ova file and deploy it on a hypervisor.

Before you begin:

- Confirm your environment will support your intended use of the instance, as described in <u>System Requirements</u>.
- Confirm your internet and port access will support your intended use of the instance, as described in Access Requirements.

VMware Version Support

VMware vCenter: Tenable supports versions 7 and 8. The SOAP API is supported on versions 7 and 8, and the REST API is supported on versions 7.0.3 and later.

VMware vSphere: Tenable supports versions 7 and 8. The SOAP API is supported on versions 7 and 8, and the REST API is not supported.

To deploy Tenable Core + Tenable Web App Scanning as a VMware virtual machine:

- 1. Download the **Tenable Core WAS VMware Image** file from the <u>Tenable Downloads</u> page.
- 2. Open your VMware virtual machine in the hypervisor.
- 3. Import the Tenable Core + Tenable Web App Scanning VMware .ova file from your computer to your virtual machine. For information about how to import a .ova file to your virtual machine, see <u>VMware documentation</u>.
- 4. In the setup prompt, configure the virtual machine to meet your organization's storage needs and requirements, and those described in System Requirements.
- 5. Launch your Tenable Core + Tenable Web App Scanning instance.

The virtual machine boot process appears in a terminal window.

Note: The boot process may take several minutes to complete.

When the virtual machine boot process finishes, the Tenable Core + Tenable Web App Scanning deployment is complete.



What to do next:

 Continue getting started with Tenable Core + Tenable Web App Scanning, as described in Get Started.

Deploy Tenable Core in Hyper-V

To deploy Tenable Core + Tenable Web App Scanning as a Microsoft Hyper-V virtual machine, you must download the Tenable Core + Tenable Web App Scanning .zip file and deploy it on the host where you want to launch Tenable Core + Tenable Web App Scanning.

Note: After you download the .zip file, you can use an external storage device to deploy it on another machine. You do not need internet access on the machine hosting Tenable Core.

Before you begin:

- Confirm your internet and port access will support your intended use of the instance, as described in Access Requirements.

To deploy Tenable Core + Tenable Web App Scanning as a Hyper-V virtual machine:

- 1. Download the **Tenable Core WAS VMware Image** file from the <u>Tenable Downloads</u> page.
- 2. Navigate to your Hyper-V Manager on the machine where you want to deploy Tenable Core + Tenable Web App Scanning.
- 3. Extract the .zip file you previously downloaded. Extracting may take a few minutes.
- 4. In your Hyper-V Manager, create a new virtual machine.
 - The Hyper-V Manager wizard appears.
- 5. In the setup wizard, adjust the virtual machine configurations to meet your organization's storage needs, and the requirements described in System Requirements.

Note: Tenable recommends that you select **Generation 1** when the Hyper-V Manager wizard prompts you during the configuration.

- 6. When prompted to Connect to a Virtual Hard Disk in the wizard, select **Use an existing virtual hard disk**.
- 7. Click **Browse** and select the .vhd file.

8. Click Finish.

The Hyper-V setup completes.

- 9. (Optional) If you want to increase the number of CPUs on your virtual machine:
 - a. In the Virtual Machines table, right-click the row for your machine and click Settings.
 The settings window appears.
 - b. In the **Hardware** section, click **Processor**.
 - c. Modify the settings as necessary.
 - d. Click Ok.
- In the Virtual Machines table, right-click the row for your machine and click Start or Connect.

The virtual machine load process appears in a console. The load process may take several minutes to complete.

What to do next:

 Continue getting started with Tenable Core + Tenable Web App Scanning, as described in Get Started.

Deploy Tenable Core in Microsoft Azure

It is typically simplest to create and configure Tenable Core + Tenable Web App Scanning using the Microsoft Azure portal, as described in <u>Deploy Tenable Core in Microsoft Azure via the Portal</u>.

In some cases, you may prefer to use the Microsoft Azure command line interface (CLI) to deploy Tenable Core in Azure, as described in Deploy Tenable Core in Microsoft Azure via the CLI.

Deploy Tenable Core in Microsoft Azure via the Portal

It is typically simplest to create and configure Tenable Core + Tenable Web App Scanning using the Microsoft Azure portal.

In some cases, you may prefer to use the Microsoft Azure command line interface (CLI) to deploy Tenable Core in Azure, as described in Deploy Tenable Core in Microsoft Azure via the CLI.

Before you begin:

- Confirm your environment will support your intended use of the instance, as described in <u>System Requirements</u>.
- Confirm your internet and port access will support your intended use of the instance, as described in Access Requirements.

To deploy a Tenable Core + Tenable Web App Scanning virtual machine via the Azure portal:

- 1. Log in to the Microsoft Azure portal. For more information, see the *Microsoft Azure Documentation*.
- 2. Create a new resource by searching for the **TenableCore WAS** template.
- 3. Configure all desired options.

Note: If you want Tenable Core + Tenable Web App Scanning to link automatically to Tenable Vulnerability Management on first boot, enter the following in the advanced settings using the custom data box:

```
#cloud-config
runcmd:
# Link WAS to tenable.io
-
- /usr/libexec/tenablecore/was_rest_client.py
- "--set-link"
- "--scanner-name"
- <The name of your scanner as you want it to appear in Tenable
Vulnerability Management>
- "--linkkey"
```

- 0
- <Your Tenable.io linking key>
- "--iohost"
- "https://cloud.tenable.com"
- 4. Start the virtual machine deployment.

Azure begins the virtual machine deployment. Azure displays a success message when finished.

What to do next:

Continue getting started with Tenable Core + Tenable Web App Scanning, as described in <u>Get</u>
 Started.

Deploy Tenable Core in Microsoft Azure via the CLI

It is typically simplest to create and configure Tenable Core + Tenable Web App Scanning using the Microsoft Azure portal, as described in <u>Deploy Tenable Core in Microsoft Azure via the Portal</u>.

In some cases, you may prefer to use the Microsoft Azure command line interface (CLI) to deploy Tenable Core in Azure.

Before you begin:

- Confirm your environment will support your intended use of the instance, as described in <u>System Requirements</u>.
- Confirm your internet and port access will support your intended use of the instance, as described in Access Requirements.

To deploy a Tenable Core + Tenable Web App Scanning virtual machine via the Azure CLI:

- 1. In a text editor, open a new file.
- 2. If you want Tenable Core + Tenable Web App Scanning to link automatically to Tenable Vulnerability Management on first boot, copy and paste the following configuration variables:

3. Save and close the configuration file.

- 4. Log in to the Azure CLI.
- 5. In the Azure CLI, run the az vm create command to deploy the file, using the following variables:

Tip: For more information about the Azure CLI, see the *Microsoft Azure CLI Documentation*.

The system deploys your Tenable Core + Tenable Web App Scanning virtual machine.

What to do next:

Continue getting started with Tenable Core + Tenable Web App Scanning, as described in <u>Get</u>
 Started.

Deploy Tenable Core in the Amazon Marketplace

When you deploy a Tenable Core + Tenable Web App Scanning virtual machine in Amazon Web Service (AWS) with cloud-init, you can configure your instance of Tenable Core + Tenable Web App Scanning and link it to Tenable Vulnerability Management during deployment.

You can use cloud-init to configure your virtual machine through the Amazon Marketplace or through the AWS command-line interface (CLI). To configure your virtual machine through the CLI, you must create a configuration file with data specifications for your virtual machine. For more information, see the *cloud-init Documentation* at *cloud-init.io*.

Before you begin:

- Confirm your environment will support your intended use of the instance, as described in <u>System Requirements</u>.
- Confirm your internet and port access will support your intended use of the instance, as described in Access Requirements.

To deploy Tenable Core + Tenable Web App Scanning using cloud-init via the Amazon Marketplace:

- 1. Log in to AWS. For information about how to log in to AWS, see the AWS Documentation.
- 2. Navigate to the Amazon Marketplace.
- 3. In the Amazon Marketplace search bar, type *Tenable Core + Tenable Web App Scanning Amazon Machine Image (AMI)*.
- 4. Click the result for **Tenable Core + Tenable Web App Scanning Amazon Machine Image** (AMI).

The Tenable Core + Tenable Web App Scanning AMI product overview page appears.

5. Click Continue to Subscribe.

A terms and conditions window appears.

- 6. Click **Accept Terms**.
- 7. Click Continue to Configuration.

The basic configurations page appears.

8. Select the region where you want to operate your Tenable Core + Tenable Web App Scanning instance.

Note: AWS automatically selects fulfillment and software versions for the AMI based on your region.

9. Click Continue to Launch.

The launch options page appears.

- 10. In the Choose Action drop-down box, select Launch through EC2.
- 11. Click Launch.

The configuration page appears.

- 12. Configure the options based on the specifications you want for your instance and the requirements described in Tenable Core Requirements. For information about configurations in AWS, see the AWS Documentation.
- 13. Click the **Configure Instance** tab.
- 14. In the **Advanced Settings** section, in the text box, paste the following configuration variables:

```
#cloud-config
runcmd:
# Link WAS to Tenable.io
-
- /usr/libexec/tenablecore/was_rest_client.py
- --set-link
- --scanner-name "<name>"
- --linkkey "<linking key>"
```

Note: You can add more configurations (e.g., password, new users, groups) to your instance by adding the configurations and values to the configuration file. For information on configuration options, see the *cloud-init Documentation* at https://cloudinit.readthedocs.io/en/latest/.

Tip: You can add additional configurations (e.g., password, new users, groups) to your instance by modifying the configurations and values in the configuration file. For more information, see the *cloud-init Documentation* at https://cloudinit.readthedocs.io/en/latest/.

15. Click Launch.

An SSH key pair window appears.

16. In the SSH key pair window, in the drop-down box, select the key pair option you want for your instance.

Caution: Do not select the option to proceed without a key pair. If you launch your Tenable Core + Tenable Web App Scanning instance without a key pair you cannot connect to the instance, and you cannot add an SSH key pair later.

Action	Steps
Choose existing key pair	 Select the file for the key pair you want to use. Select the I acknowledge that I have access to the select private key file check box.
Create a new key pair	 In the box, type a name for your private key file. Click the download button. The private key file downloads in your browser.

17. In the lower-left corner, click Launch Instances.

AWS deploys and launches your Tenable Core + Tenable Web App Scanning instance as a virtual machine in AWS.

- Q

Install Tenable Core on Hardware

You can install Tenable Core + Tenable Web App Scanning directly on hardware using an .iso image. When you install Tenable Core via an .iso image on your computer, Tenable Core replaces your existing operating system with the Tenable Core operating system.

Before you begin:

- Confirm your environment will support your intended use of the instance, as described in <u>System Requirements</u>.
- Confirm your internet and port access will support your intended use of the instance, as described in Access Requirements.

To install Tenable Core + Tenable Web App Scanning on hardware:

- 1. Download the Tenable Core WAS VMware Image file from the Tenable Downloads page.
- 2. Boot the .iso. For more information, see your environment documentation.

Caution: Booting the .iso replaces your existing operating system with the Tenable Core operating system.

Tip: To monitor the progress of the installation, select Install TenableCore using serial console from the boot menu. For more information about the Tenable OT Security serial console, see the *Tenable OT Security User Guide*.

The installer installs Tenable Core + Tenable Web App Scanning on your hardware.

3. The installation begins if there are no configuration errors.

For Tenable Core deployments with EL7 operating systems:

The Installation menu appears if there are configuration errors.

If you need to resolve configuration errors [!] with your 4) Installation source or 5) Software selection settings, see Edit the Network Configuration or Edit the Proxy Configuration.

Caution: Do not enter any other menus or modify any other settings.

The installation runs and the server restarts.



What to do next:

Continue getting started with Tenable Core + Tenable Web App Scanning, as described in <u>Get Started</u>.

Edit the Network Configuration

During installation, you may need to edit the network configuration settings. Perform this procedure to resolve errors [!] with your 4) Installation source and/or 5) Software selection settings.

Caution: Do not enter any other menus or modify any other settings.

To edit the network configuration:

- 1. From the **Installation** menu, press the **8** key.
- 2. Press the **Enter** key.

The **Network Configuration** menu appears.

- 3. Press the **2** key.
- 4. Press the **Enter** key.

The **Device Configuration** menu appears.

5. Review the 1) IPv4 address or "dhcp" for DHCP, 2) IPv4 netmask, 3) IPv4 gateway, and 6) Nameservers settings and, if necessary, edit them.

For example, you must edit these settings if you are installing Tenable Core on a static network without DHCP.

- 6. Check 8) Apply configuration in installer.
- 7. Press the **c** key until you return to the **Installation** menu.
- 8. Press the **r** key to refresh the menu.
- 9. Confirm that settings 1-7 show an [x]. If the settings all show an [x] proceed to step 11.
- 10. If 4) Installation source still shows a [!]:

Refresh the repository URL:

- a. Press the 4 key.
- b. Press the **Enter** key.

The **Installation Source** menu appears.

- c. Press the 3 key.
- d. Press the Enter key.

The Installation Source submenu appears.

- e. Press the 2 key.
- f. Press the **Enter** key.

The **Specify Repo Options** menu appears.

- g. Press the c key.
- h. Press the Enter key.

The system refreshes the repository URL and the Installation menu appears.

- 11. Press the \mathbf{r} key to refresh the menu.
- 12. Press the **c** key until you return to the **Installation** menu.

Edit the Proxy Configuration

During installation, you may need to edit the proxy configuration settings to identify the proxy you want to use for internet access.

Caution: Do not enter any other menus or modify any other settings.

To edit the proxy configuration:

- 1. From the **Installation** menu, press the **3** key.
- 2. Press the Enter key.

The **Proxy Configuration** menu appears.

3. Type the proxy you want to use. For example, https://username:password@192.0.2.221:3128.

Note: If your password includes a special character, the special character must be HTML URL encoded.

- 4. Press the Enter key.
- 5. If your proxy is a man-in-the-middle proxy that intercepts SSL traffic, a prompt appears.

In the prompt:

- 1. Type yes.
- 2. Press the **Enter** key.

The system temporarily disables SSL verification. The system automatically re-enables SSL verification after the installation completes.

The **Installation** menu appears.

- 6. Press the 4 key.
- 7. Press the **Enter** key.

The Installation Source menu appears.

- 8. Press the **3** key.
- 9. Press the **Enter** key.

The Installation Source submenu appears.

- 10. Press the 2 key.
- 11. Press the **Enter** key.

The **Specify Repo Options** menu appears.

- 12. Press the c key.
- 13. Press the **r** key, then the **Enter** key.
- 14. If necessary, continue pressing the **r** key, then the **Enter** key until **4) Installation source** no longer says (**Processing...**).

The system refreshes the repository URL.

Disk Management

You can use the Tenable Core interface to manage some aspects of your Tenable Core machine disk space. Tenable Core uses Linux logical volume management (LVM) for disk management.

Disk management via the Tenable Core interface assumes you understand basic LVM terminology:

- Volume group A group of one or more physical volumes.
- Physical volume A hard disk, hard disk partition, or RAID unit.
- Logical volume A block of space on the volume group sized to mirror several or all of your physical volumes.
- File system The file system on the logical volume.
- Mount point The location where you mounted the file system in your operating system.

For more information about these concepts, see general documentation for Linux.

Tenable Core Partitions

Tenable Core deploys with the following preconfigured partitions:

- /boot
- Swap
- /
- /var/log
- /opt

To add more storage space to Tenable Core (typically, in /opt), add a disk or expand a disk as described in Add or Expand Disk Space.

Add or Expand Disk Space

If you need more space in Tenable Core to meet the <u>requirements</u>, add space to your machine by expanding an existing disk or adding a new disk. For general information about Tenable Core disk management, see <u>Disk Management</u>.

Caution: You cannot reassign disk space after you have assigned the space to a file system.

To add or expand existing disk space on your Tenable Core machine:

- 1. Power down your machine, as instructed by your local administrator or the documentation for your local environment.
- 2. Add a new disk or expand an existing disk in your machine configuration, as instructed by your local administrator or the documentation for your local environment.
- Power up your machine, as instructed by your local administrator or the documentation for your local environment.
- 4. Log in to Tenable Core.

The **System** page appears.

5. In the left navigation bar, click **Storage**.

The **Storage** page appears.

6. In the **Filesystems** section, locate the file system with /opt as the **Mount Point** and note the file system **Name** (for example, /dev/vg0/00).

Tip: Typically, you want to add space to /opt. To add more storage space to a less common partition (for example, / or /var/log), locate the file system for that partition.

7. Click the row for the file system **Name** that includes your preferred partition as the **Mount Point**.

The Volume Group page appears.

8. In the **Physical Volumes** section, click the + button.

The **Add Disks** window appears.

- 9. Click the check box for the space you added.
- 10. Click Add.

The **Volume Group** page appears, updated to show the added space in the **Physical Volumes** section.

- 11. In the **Logical Volumes** section, expand the section for the file system **Name** that includes your preferred partition as the **Mount Point**.
- 12. Click Grow.

The Grow Logical Volume window appears.

- 13. Use the slider to increase the size of the file system to your desired size (typically, to the new maximum).
- 14. Click Grow.

The system expands the logical volume and the file system.

The Volume Group page appears, refreshed to reflect the new size.

Manually Configure a Static IP Address

If you deploy Tenable Core in an environment where DHCP is configured, Tenable Core automatically receives network configurations (including your IP address). If DHCP is not configured, you must manually configure a static IP address in Tenable Core.

For more information about the default NIC configuration in your environment, see <u>System Requirements</u>.

Before you begin:

- Deploy or install Tenable Core + Tenable Web App Scanning, as described in <u>Deploy or Install</u>
 Tenable Core.
- Contact your network administrator and obtain your network's netmask and the IP address for your Tenable Core + Tenable Web App Scanning deployment.

To configure a static IP address manually:

1. In the command-line interface (CLI) in Tenable Core, type the following to log in as a wizard user:

```
tenable-y3u1xwh1 login: wizard Password: admin
```

A prompt appears asking if you want to configure a static IP address.

2. Press the **y** key.

(Optional) If the prompt does not appear, in the command-line interface (CLI) in Tenable Core, run the following command to access the configuration user interface:

```
nmtui edit
```

The list of connections page appears.

- 3. Select the connection you want to configure.
- 4. Press Tab to select < Edit >.

5. Press Enter.

The **Edit Connection** window appears.

- 6. In the IPv4 Configuration row, press Tab to select < Automatic>.
- 7. Press Enter.
- 8. Select < Manual > from the drop-down box.
- 9. Press Enter.
- 10. Press **Tab** to select **<Show>**.
- 11. Press Enter.

More configuration fields appear.

Note: Type the value for each configuration field as four numbers separated by a period. Refer to the examples for each field.

12. In the **Addresses** field, type the IPv4 IP address for your Tenable Core + Tenable Web App Scanning deployment, followed by a forward slash and your netmask.

Example:

192.0.2.57

13. In the Gateway field, type your gateway IP address.

Example:

192.0.2.177

14. In the **DNS servers** field, type your DNS server IP address.

Example:

192.0.2.176

15. Press Tab to select < Add...>.

Note: Complete steps 12-15 only if you have more DNS server IP addresses to add. Repeat for each IP address.

16. Press Enter.

An empty box appears in the DNS servers row.

17. In the new row, type your second DNS server IP address.

Example:

192.0.2.8

- 18. Select the check the box in the Require IPv4 addressing for this connection row.
- 19. Press **Tab** to select **<OK>**.

The list of connections appears.

- 20. Press Tab to select < Quit>.
- 21. Press Enter.

If you log in with a wizard, a prompt appears asking if you want to create an administrator account.

To create an administrator account, see Create a First-Time User Account.

You are logged out of the wizard account.

- 22. Log into the CLI using the administrator account.
- 23. Restart the connection. In the command-line interface (CLI) in Tenable Core, run the following command:

\$ nmcli connection down "Wired connection 1" && nmcli connection up
"Wired connection 1"

Note: Restarting the connection enables the system to recognize your static IP address. You can reboot the system instead to trigger the response.

What to do next:



 Confirm that the Tenable Core nic1 MAC address matches the NIC MAC address in your VMware passive scanning configuration. If necessary, modify your VMware configuration to match your Tenable Core MAC address. For more information, see <u>System Requirements</u>.

Create an Initial Administrator User Account

The first time you access Tenable Core + Tenable Web App Scanning, you log in as a wizard user.

Then, you create an initial administrator account.

Tip: If you delay creating an initial administrator account, after a few minutes, the system locks you out of the wizard user account. Reboot Tenable Core to proceed with the initial administrator account creation.

Before you begin:

Deploy or install Tenable Core + Tenable Web App Scanning, as described in <u>Deploy or Install</u>
 Tenable Core.

To create an initial administrator user account:

1. Navigate to the URL for your Tenable Core virtual machine.

The login page appears.

- 2. In the **User name** field, type wizard.
- 3. In the Password field, type admin.
- 4. Click Log In.

The Create New Administrator window appears.

- 5. In the **Username** field, type the username you want to use for your administrator account.
- 6. In the **Password** field, type a new password for your administrator account.

Note: Your password must meet the following minimum requirements:

- Minimum 14 characters long
- · One capital letter
- One lowercase letter
- One numeric digit (0-9)
- One special character (~`!@#\$%^&*()+= -{}[]\|:;""?/<>,.)

Cannot be a palindrome (i.e., a word or phrased spelled the same backward and forward)

7. Click Create Account.

A confirmation window appears.

8. Click Finish Setup.

Tenable Core creates your user account.

9. Click Log Out.

Tenable Core logs you out.

What to do next:

- (Optional) If you want to log in again, see Log In to Tenable Core.
- (Optional) If you want to create another user account, see Create New User Account.

Note: Log in again to create a new user account.

Create a Password for the Initial Administrator User Account

If you deployed Tenable Core + Tenable Web App Scanning in a <u>cloud environment</u> and did not create a password during deployment, you cannot access the Tenable Core interface. Create a password for your administrator account via SSH to access the Tenable Core interface.

You do not need to create a password via SSH when deploying Tenable Core + Tenable Web App Scanning in any of the other supported environments.

Before you begin:

• Confirm you have an SSH client installed that can access your Tenable Core server.

To create a password for the initial administrator user account:

- 1. Open a connection to Tenable Core with your SSH client via one of the following methods:
 - If your SSH client uses a command-line interface (CLI), run the following command:

ssh <your administrator username>@<your Tenable Core hostname or
IP address>

If your SSH client uses a user interface, open the interface and follow the prompts to connect to Tenable Core via SSH.

Tenable Core connects to your SSH client.

Note: When prompted, provide your Tenable Core username via one of the following methods:

- If you deployed in Amazon Web Service (AWS), type ec2-user as your username.
- If you deployed in Microsoft Azure, type the username you configured during your deployment.
- 2. Run the sudo passwd command.

sudo passwd "\$USERNAME"

The SSH client prompts you to provide a password.

3. Type the password you want to use for your administrator account.

Note: Your password must meet the following minimum requirements:

- Minimum 14 characters long
- · One capital letter
- One lowercase letter
- One numeric digit (0-9)
- One special character (~`!@#\$%^&*()+=_-{}[]\|:;""?/<>,.)
- Cannot be a palindrome (i.e., a word or phrased spelled the same backward and forward)

4. Press Enter.

Tenable Core assigns the password to your administrator account.

5. Run the exit command to log out of Tenable Core.

What to do next:

 Continue getting started with Tenable Core + Tenable Web App Scanning, as described in <u>Get</u> Started.

Link Tenable Core to Tenable Vulnerability Management

After you deploy your instance of Tenable Core + Tenable Web App Scanning, you can configure your Tenable Web App Scanning Scanner to Tenable Vulnerability Management.

Before you begin:

- Log in to Tenable Core in a browser, as described in Log In to Tenable Core.
- (Optional) If you want to connect Tenable Core + Tenable Web App Scanning to Tenable Vulnerability Management via a proxy, configure a proxy connection to the internet, as described in Configure a Proxy Server.

To configure Tenable Web App Scanning in Tenable Core:

1. In the left navigation menu, click Web Application Scanner.

The **Tenable.io Link** pop-up window appears.

Tip: Click the **☑** icon next to the **Tenable.io Link URL**: option to reopen the window.

2. In the Link Key: box, type your Tenable Vulnerability Management linking key.

Note: To retrieve your Tenable Vulnerability Management linking key, log in to Tenable Vulnerability Management and navigate to **Scans>Agents**. On the **Linked Agents** tab, your linking key appears.

- 3. In the **Scanner Name:** box, type a name for your scanner as you want it to appear in Tenable Vulnerability Management.
- 4. In the **Tenable.io Host:** box, type **https://sensor.cloud.tenable.com**.
- 5. (Optional) If you configured a proxy for Tenable Core to connect to Tenable Vulnerability Management, select the **Connect Using Proxy:** check box.
- Click Activate Scanner.

A success message appears.

Your Web Application Scanner appears in the scanner list on Tenable Vulnerability Management. For more information, see <u>Web Application Scans</u> in the *Tenable Web App Scanning User Guide*.

Log In to Tenable Core

Log in to Tenable Core to configure and manage your Tenable Core + Tenable Web App Scanning instance in the Tenable Core interface.

Before you begin:

Deploy Tenable Core + Tenable Web App Scanning, as described in <u>Deploy or Install Tenable</u>
 Core.

Note: For information on inbound and outbound port requirements, see Access Requirements.

To log in to Tenable Core:

1. Navigate to the URL for your Tenable Core virtual machine.

The login page appears.

- 2. In the **User name** field, type your username.
- 3. In the **Password** field, type your password.
- 4. (EL7 deployments only) Select the Reuse my password for privileged tasks check box.

Note: You cannot configure or manage your instance of Tenable Core + Tenable Web App Scanning if you do not select the **Reuse my password for privileged tasks** check box.

5. Click Log in.

Tenable Core logs you in to the user interface.

Configure and Manage

You can use the Tenable Core user interface to configure and manage Tenable Core + Tenable Web App Scanning.

View the Dashboard

Add a Server

Edit a Server

Delete a Server

Synchronize Accounts

Manage the System

Change Performance Profile

Restart Tenable Core

Shut Down Tenable Core

Edit Your Tenable Core Hostname

Edit Your Time Settings

View the System Log

Filter the System Log

Manage System Networking

Add a Bonded Interface

Add a Team of Interfaces

Add a Bridge Network

Add a VLAN

Manage System Storage

Rename a Filesystem

Delete a Filesystem

Manage User Accounts

Create New User Account

Edit a User Account

Delete a User Account

Manage Services

Create a Timer

Generate a Diagnostic Report

Access the Terminal

Manage Tenable Web App Scanning in Tenable Core

Configure a Proxy Server

Start, Stop, or Restart Your Application

Manage Updates

Configure Automatic Updates

Update On Demand

Update Tenable Core Offline

Manage Certificates

Manage the Server Certificate

Upload a Certificate for a Trusted Certificate Authority

Use Different Certificates for Tenable Core and Your Application

Application Data Backup and Restore

Configure a Remote Storage Host

Perform an On-Demand Backup

Change the Scheduled Backup Time

Restore a Backup

SNMP Agent Configuration

Configure an SNMP Agent via the User Interface



Configure an SNMP Agent via the CLI

Take a Virtual Machine Snapshot

View the Dashboard

You can use the **Dashboard** page to view usage statistics and manage your attached servers.

To view the Tenable Core dashboard:

- Log in to Tenable Core via the user interface, as described in <u>Log In to Tenable Core</u>.
 The **System** page appears.
- 2. Hover over the left navigation bar and click **Overview**.

The **Overview** page appears.

You can:

Section	Action
Data graphs	View a graph of the CPU usage on your instance.
	 View a graph of the Memory usage on your instance.
	View a graph of the Network bandwidth usage on your instance.
	View a graph of the Disk I/O bandwidth usage on your instance.
	To change the time range for data displayed in the graph:
	1. In the top-right corner of the graph, click the drop-down box.
	2. Select a time range.
	The system refreshes the graph.
Servers table	Add a server, as described in Add a Server.
	Edit a server, as described in Edit a Server.
	 Delete a server, as described in <u>Delete a Server</u>.
	Synchronize user accounts, as described in <u>Synchronize Accounts</u> .
	 To view detailed information about a server, click a server row. For more information, see <u>System</u>.

Add a Server

To add a server:

Note: You can add as many servers to the Dashboard as you want.

1. Hover over the far-left navigation bar.

The left navigation plane appears.

2. Click Dashboard.

The **Dashboard** page appears.

3 Click the icon.

The Add Machine to Dashboard window appears.

- 4. In the Address field, type the IP address or hostname for the server you want to add.
- 5. In the **Color** field, click the color you want to represent the server.
- 6. Click Add.

A confirmation window appears.

Note: If Tenable Core cannot establish authentication, the Unknown Host window appears. Contact your administrator to confirm your server's name or IP address.

7. Click Connect.

A credentials window appears.

8. Type your credentials in the **User name** and **Password** fields.

Note: To synchronize your accounts so that your account information and passwords are the same across multiple servers, click the *synchronize accounts and passwords* link. Refer to <u>Synchronize</u> Accounts for more information.

9. Click Log In.

Tenable Core adds the server to your list of servers in the **Servers** table.

Note: If the server does not appear in the list right away, refresh the browser.

Edit a Server

To edit a server:

1. From the top bar in the **Servers** table, click the icon.

A pencil icon () and a trashcan icon () appear next to each server name.

2. Click the / icon.

The **Edit Server** window appears.

- 3. Do any of the following:
 - In the **Host Name** box, type the name you want for your server.
 - Update the server color:
 - In the Color box, click the color bar.

A color menu appears.

• Click the color you want to represent the server.

The server color changes.

4. Click Set.

Tenable Core updates your server information.

Delete a Server

To delete a server:

1. From the top bar in the **Servers** table, click the check mark icon.

A pencil icon and a trashcan icon appear next to each server name.

2. Click the trashcan icon.

The server disappears from the server list.

Synchronize Accounts

If you have multiple user accounts but do not want to manage credentials for each one, you can synchronize your accounts, which allows you to navigate seamlessly between accounts without providing a different username and password for each account.

Note: You can synchronize accounts while either adding or editing servers in the Dashboard.

To synchronize accounts:

While either adding or editing a server, click the Synchronize users link in the dialogue box.
 The SYNCHRONIZE USERS dialogue box appears with a list of your accounts.

Note: If you are adding a server, the linked text in the dialogue box is **synchronize accounts and passwords**.

- 2. Check the boxes next the accounts you want to synchronize.
- 3. Click **Synchronize**.

Manage the System

You can use the **System** page to view usage statistics and manage system settings.

To manage the Tenable Core system:

Log in to Tenable Core via the user interface, as described in <u>Log In to Tenable Core</u>.
 The **System** page appears.

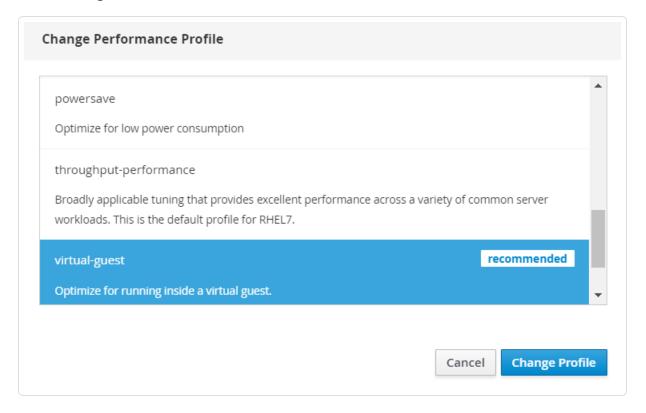
You can:

Section	Action
System details section	View summary information about your Tenable Core instance.
	 Change the performance profile for your instance, as described in <u>Change Performance Profile</u>.
	 Restart or shut down your instance, as described in <u>Restart Ten-able Core</u> and <u>Shut Down Tenable Core</u>.
	• Edit the hostname for your instance, as described in Edit Your Ten-able Core Hostname .
	 Edit the time and time zone settings for your instance, as described in <u>Edit Your Time Settings</u>.
Data graphs	View a graph of the CPU usage on your instance.
	View a graph of the Memory & Swap usage on your instance.
	View a graph of the Disk I/O bandwidth usage on your instance.
	 View a graph of the Network Traffic bandwidth usage on your instance.
	To change the time range for data displayed in the graphs:
	1. In the top-right corner of the graph, click the drop-down box.
	2. Select a time range.
	The system refreshes the graph.

Change Performance Profile

To change the performance profile for your Tenable Core instance:

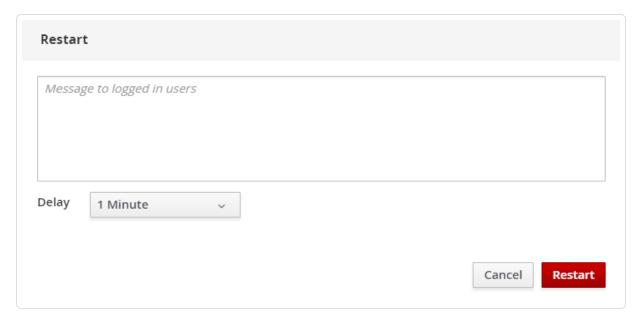
- Log in to Tenable Core via the user interface, as described in <u>Log In to Tenable Core</u>.
 The **System** page appears.
- 2. In the left navigation pane, click the **Overview** option.
 - The **Overview** page displays.
- 3. Click on the **edit** link next to the **Performance profile** option in the **Configuration** tile. A new window appears displaying **Performance Profile** options.
- 4. Select the desired **Performance Profile**. The recommended profile is labeled in the list.
- 5. Click **Change Profile** to confirm the new selection.



Restart Tenable Core

To restart your Tenable Core instance:

- Log in to Tenable Core via the user interface, as described in <u>Log In to Tenable Core</u>.
 The **System** page appears.
- 2. In the left navigation pane, click the **System** option.
 - The **System** page displays.
- Next to the Power Options item, click the Restart button or select it from the drop-down box.
 A new window appears.
- 4. Enter a message for the users in the text box.
- 5. Select the delay time from the drop-down menu. This is the time that the restart begins. Choose from one of the minute increments or enter a specific time. There is also an option to restart immediately with no delay.
- 6. Click the **Restart** button to initiate and save the updated information.



C

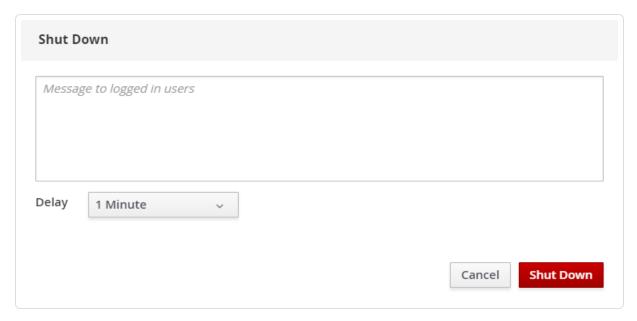
Shut Down Tenable Core

To shut down your Tenable Core instance:

- Log in to Tenable Core via the user interface, as described in <u>Log In to Tenable Core</u>.
 The **System** page appears.
- 2. In the left navigation pane, click the **System** option.
 - The **System** page displays.
- 3. Next to the **Power Options** item, click the arrow by **Restart** to display the drop-down menu. Select **Shut Down**.

A new window appears.

- 4. Enter a message for the users in the text box.
- 5. Select the delay time from the drop-down menu. This is the time that the shutdown begins. Choose from one of the minute increments or enter a specific time. There is also an option to Shut Down immediately with no delay.
- 6. Click **Shut Down** to initiate and save the updated information.



Edit Your Tenable Core Hostname

To edit the hostname for your Tenable Core instance:

- Log in to Tenable Core via the user interface, as described in <u>Log In to Tenable Core</u>.
 The **System** page appears.
- 2. In the left navigation pane, click the Overview option.

The **Overview** page displays.

3. Click the **edit** link next to the **Hostname** option in the **Configuration** tile.

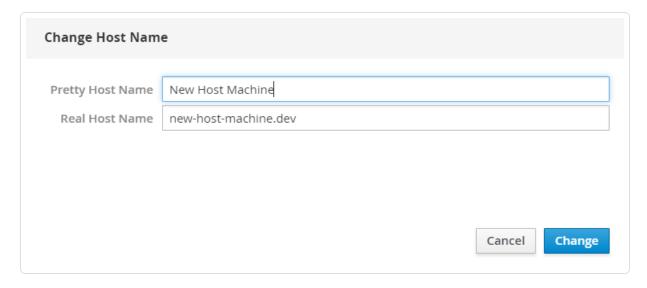
A new window appears with the options to enter or edit the **Pretty Host Name** and **Real Host Name**.

4. Enter the **Pretty Host Name** for the machine.

The **Real Host Name** updates as you enter the **Pretty Host Name**.

5. Click **Change** to update the name.

The new name displays next to the **Hostname** option.



Edit Your Time Settings

To edit the system time and time zone settings for your Tenable Core instance:

Log in to Tenable Core via the user interface, as described in <u>Log In to Tenable Core</u>.
 The **System** page appears.

2. In the left navigation pane, click the Overview option.

The **Overview** page displays.

3. Next to **System time**, click the link.

The Change System Time window appears.

4. In the **Time Zone** drop-down box, select your time zone.

Tip: Type the first few letters of the desired time zone to filter the list.

5. In the **Set Time** drop-down box, select your preferred method for time synchronization.

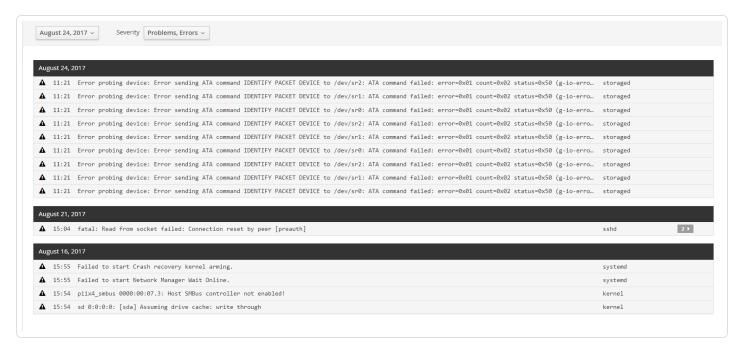
Tip: By default, Tenable Core is set to Automatically using NTP.

6. Click Change.

Tenable Core saves the change.

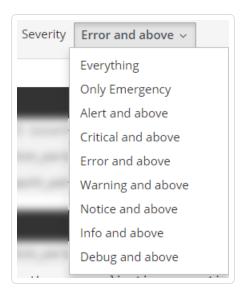
View the System Log

You can use the **System Log** page to view errors encountered in the system. The system log lists, categorizes, and stores system issues that have occurred within the last seven days. Click on an individual entry (row) to get additional information.

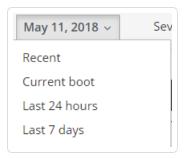


Filter the System Log

Several log type filters are available. The **Everything** option is selected by default. Select another option using the drop-down menu at the top of the page. The logs are listed with the most recent entry displayed first. Previous days are divided into sections with the corresponding date displayed in the header.



Filter the logs using the drop-down menu. Click on the date to display the filter options for the logs.



Manage System Networking

You can use the **Networking** page to view real-time system network traffic information, interface connection options, and logs.

To manage Tenable Core system networking:

- Log in to Tenable Core via the user interface, as described in <u>Log In to Tenable Core</u>.
 The **System** page appears.
- 2. In the left navigation bar, click Networking.

The **Networking** page appears.

You can:

Section	Action
Graphs	 View a graph of the Sending (outbound) network traffic on your instance. View a graph of the Receiving (inbound) network traffic on your instance.
Firewall sec- tion	View Firewall rules.Add Zones.Add Allowed Services.
Interfaces table	 Aggregate multiple network interfaces into a single-bonded interface, as described in <u>Add a Bonded Interface</u>. Add a team of interfaces, as described in <u>Add a Team of Interfaces</u>. Add a bridge to create a single aggregate network from multiple communication networks, as described in <u>Add a Bridge Network</u>. Add a VLAN, as described in <u>Add a VLAN</u>.
Networking Logs table	View a log of activity for the system network.

Add a Bonded Interface

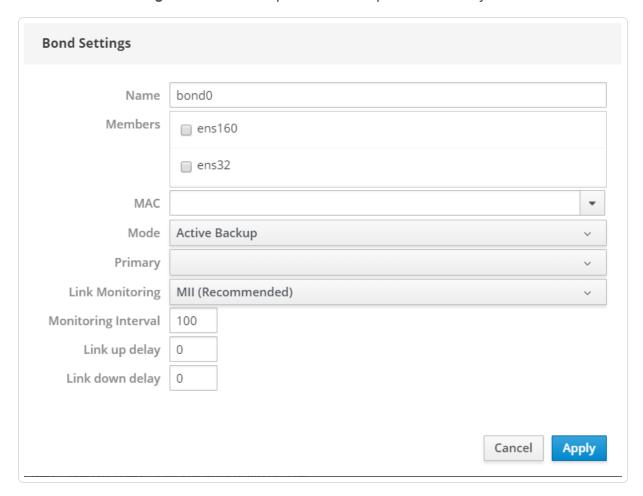
You can add a bond to aggregate multiple network interfaces into a single-bonded interface.

To add a bonded interface to Tenable Core:

- 1. In the left navigation pane, click the **Networking** option. The **Networking** page displays.
- 2. In the **Interfaces** heading, click the **Add Bond** button on the **Interfaces** section. A new window appears.
- 3. Enter a Name for the bond.
- 4. Select the members (interfaces) to bond to in the **Members** section.
- 5. Select an option for MAC.
- 6. Select the Mode.
- 7. Select a Primary.
- 8. Select the type of Link Monitoring. Labeled in the drop-down list is the recommended type.



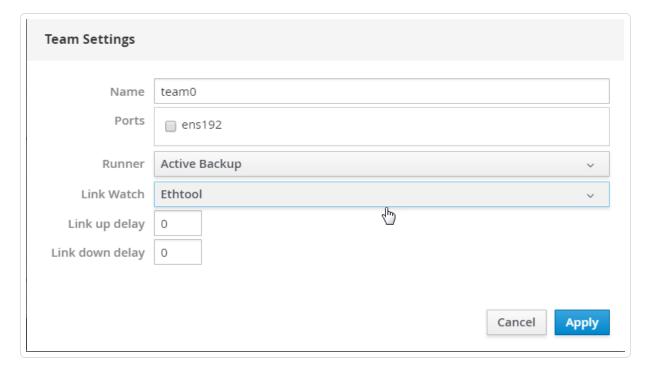
9. Enter the Monitoring Intervals with options to link up or down delay increments.



Add a Team of Interfaces

To add a team of interfaces to Tenable Core:

- 1. In the left navigation pane, click the **Networking** option. The **Networking** page displays.
- 2. In the **Interfaces** heading, click the **Add Team** button on the **Interfaces** section. A new window appears.
- 3. Enter the **Team Name**.
- 4. Select the **Ports** needed for the new team.
- 5. Select the **Runner** and **Link Watch** from the drop-down list.
- 6. Enter the Link up and Link down delay increments.

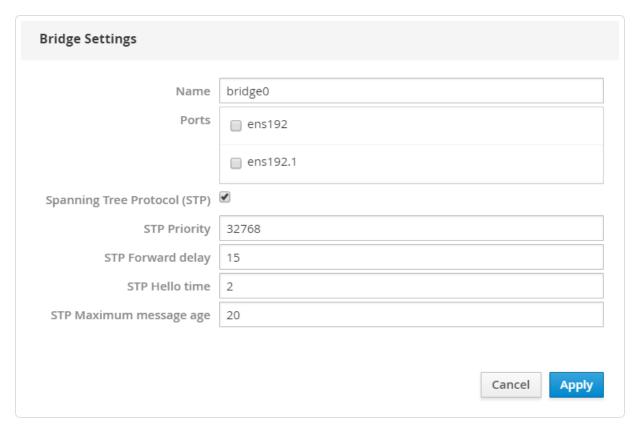


Add a Bridge Network

You can add a bridge to create a single aggregate network from multiple communication networks.

To add a bridge network to Tenable Core:

- 1. In the left navigation pane, click the **Networking** option. The **Networking** page displays.
- 2. In the **Interfaces** heading, click the **Add Bridge** button on the **Interfaces** section. A new window appears.
- 3. Enter a Name for the bridge.
- 4. Select the **Ports** that you want to connect to the bridge.
- 5. Click the box next to **Spanning Tree Protocol (STP)** to get more STP options.
- 6. Click **Apply** to add the new bridge.



Add a VLAN

To add a VLAN to Tenable Core:

- 1. Click the Add VLAN button on the Interfaces section. A new window appears.
- 2. Select the **Parent** from the drop-down list.
- 3. Enter the VLAN Id and name.
- 4. Click **Apply** to add the **VLAN**.
- 5. The new **VLAN** displays in the **Interface** list.



Manage System Storage

You can use the **Storage** page to view real-time system storage graphs, filesystem information, and logs. For more information, see <u>Disk Management</u>.

To manage Tenable Core storage:

- Log in to Tenable Core via the user interface, as described in <u>Log In to Tenable Core</u>.
 The **System** page appears.
- 2. In the left navigation bar, click **Storage**.

The **Storage** page appears.

You can:

Section	Action
Graphs	 View a graph of the Reading storage activity on your instance. View a graph of the Writing storage activity on your instance.
Filesystems table	 View information about each filesystem. Click a row to view more details about the filesystem. Rename a filesystem, as described in Rename a Filesystem. Delete a filesystem, as described in Delete a Filesystem.

Rename a Filesystem

To rename a filesystem in Tenable Core:

1. In the left navigation pane, click **Storage**.

The **Storage** page appears.

2. In the File Systems section, click on the individual file in the file systems list.

The details page appears.

3. Click the **Rename** button in the upper right section of the window.

A new window appears.

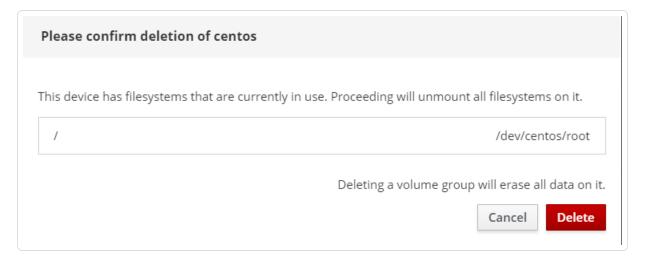
- 4. Enter the new name for the File System.
- 5. Click Create.

The new name appears on the page.

Delete a Filesystem

To delete a filesystem in Tenable Core:

- 1. In the left navigation pane, click the **Storage** option. The **Storage** page displays.
- 2. In the **File System** section, click the individual file in the files systems list. The details page appears.
- 3. Click the red **Delete** button in the system heading.
- 4. Confirm that you want to delete the **File System**.



Caution: Deleting a volume group erases all data on it.

Manage User Accounts

You can use the **Accounts** page to manage user accounts for your Tenable Core instance.

To manage Tenable Core user accounts:

- Log in to Tenable Core via the user interface, as described in <u>Log In to Tenable Core</u>.
 The **System** page appears.
- 2. In the left navigation bar, click **Accounts**.

The **Accounts** page appears.

Do any of the following:

- Create a new user account, as described in Create New User Account.
- Edit a user account, as described in Edit a User Account.
- Delete a user account, as described in **Delete a User Account**.

Create New User Account

Required User Role: Administrator

You can create a new user account from the **Accounts** page.

To create a new user account:

- 1. Log in to Tenable Core, as described in Log In to Tenable Core.
- 2. In the left navigation bar, click **Accounts**.

The **Accounts** page appears.

3. Click Create New Account.

The Create New Account window appears.

- 4. In the **Full Name** box, type the user's full name.
- 5. In the **User Name** box, type a username for the user account.
- 6. In the **Password** box, type a password for the user account.

Note: Your password must meet the following minimum requirements:

- Minimum 14 characters long
- · One capital letter
- One lowercase letter
- One numeric digit (0-9)
- One special character (~`!@#\$%^&*()+=_-{}[]\|:;""?/<>,.)
- Cannot be a palindrome (i.e., a word or phrased spelled the same backward and forward)
- 7. In the **Confirm** box, retype the password.
- 8. Click Create.

Tenable Core creates the new account and displays it on the Accounts page.

What to do next:



- (Optional) If you want to configure the user account, see <u>Edit a User Account</u>.
- (Optional) If you want to delete the user account, see <u>Delete a User Account</u>.

Edit a User Account

Required User Role: Administrator

You can edit a user account configuration, including the user's full name, password, roles, access, and public SSH keys.

Before you begin:

To edit a user account:

- 1. Log in to Tenable Core, as described in Log In to Tenable Core.
- 2. In the left navigation bar, click **Accounts**.

The **Accounts** page appears.

3. Click the user account you want to edit.

The account page for the user account appears.

4. On the user account page, you can:

Section	Action
Full Name	Type a name for the user account.
Roles	 To grant the user account administrator access, select the Server Administrator check box. To remove administrator access from the user account, clear the Server Administrator check box.
Access	 To lock the user account, select the Lock Account check box to lock the user account. To unlock the user account, clear the Lock Account check box to unlock the user account. To configure the account to remain unlocked indefinitely: Note: If you do not configure the account to remain unlocked indef-



initely, Tenable Core automatically locks the account on the set expiration date.

1. Click Never lock account.

The **Account Expiration** window appears.

- 2. Select the Never lock account option.
- 3. Click Change.

Tenable Core sets the account to remain unlocked indefinitely.

- Select an expiration date for the account:
 - 1. Click Never lock account.

The **Account Expiration** window appears.

- 2. Select the Lock account on option.
- 3. Click the box next to the **Lock account on** option.

A calendar drop-down box appears.

- 4. In the calendar drop-down box, select the date when you want the account to age out.
- 5. Click Change.

Tenable Core sets the expiration date for the user account.

Password

- To set a new user account password:
 - 1. Click Set Password.

The **Set Password** window appears.

2. In the **New Password** box, type the password you want to use for the account.

Note: Your password must meet the following minimum

requirements:

- Minimum 14 characters long
- · One capital letter
- One lowercase letter
- One numeric digit (0-9)
- One special character (~`!@#\$%^&*()+=_-{} []\|:;""?/<>,.)
- Cannot be a palindrome (i.e., a word or phrased spelled the same backward and forward)
- 3. Click Set.

Tenable Core updates the user account password.

- To force a user to change their user account password:
 - 1. Click Force Change.

The Force password change window appears.

2. Click Reset.

Tenable Core disables the password for the user account. The user must change the password on the next log in attempt.

 Configure the user account password to remain active indefinitely:

Note: If you do not configure the password to remain active indefinitely, Tenable Core automatically ages out the password on the set expiration date.

1. Click Never expire password.

The **Password Expiration** window appears.

2. Select the **Never expire password** option.



3. Click Change.

Tenable Core sets the password to remain active indefinitely.

- Select an expiration date for the user account password:
 - 1. Click Never expire password.

The **Password Expiration** window appears.

- 2. Select the **Require password change every** [blank] **days** option.
- 3. In the Require password change every [blank] days section, type the number of days that you want to pass between password expiration dates (for example, type 90 if you want the password to age out every 90 days).
- 4. Click Change.

Tenable Core sets the expiration date for the user account password.

Authorized Public SSH Keys

- To add a public SSH key to the user account:
 - 1. In the Authorized Public SSH Keys table, click the icon.

The **Add public key** window appears.

- 2. In the text box, type or paste your public SSH key.
- 3. Click Add key.

Tenable Core adds the SSH key to the user account.

- To remove a public SSH key:
 - 1. In the **Authorized Public SSH Keys** table, next to the key you want to remove, click the icon.

Tenable Core removes the SSH key from your account.

Delete a User Account

Required User Role: Administrator

You can delete a user account from the **Accounts** page.

To delete a new user account:

- 1. Log in to Tenable Core in a browser, as described in Log In to Tenable Core.
- 2. In the left navigation bar, click **Accounts**.

The **Accounts** page appears.

3. Click the user account you want to delete.

The account page for the user account appears.

4. In the upper-right corner, click **Delete**.

The delete window for the user account appears.

5. (Optional), if you want to delete files attached to the user account, select the **Delete Files** check box.

Note: This file deletion is permanent. If you do not delete them, the files remain attached to the Tenable Core instance, along with their existing access permissions. Users who were previously granted access can still access the files.

6. Click Delete.

Tenable Core delete the user account.

Manage Services

You can use the **Services** page to view information about targets, system services, sockets, timers, and paths.

To manage Tenable Core services:

- Log in to Tenable Core via the user interface, as described in <u>Log In to Tenable Core</u>.
 The **System** page appears.
- 2. In the left navigation bar, click Services.

The **Services** page appears.

You can:

Tab	Action
Targets	1. Click Stop, Start, Restart, or Reload.
	Note: Restarting a service completely stops and restarts the service. Reloading a service only reloads the service's configuration files.
	The system changes the status of the service.
System Services	View a list of system services.
	Click a row to view detailed information about a service.
	To change the status of a service:
	1. Click a row.
	The service details page appears.
	2. Click Stop, Start, Restart, or Reload.
	Note : Restarting a service completely stops and restarts the service. Reloading a service only reloads the service's configuration files.
	The system changes the status of the service.



Sockets View a list of socket services. Click a row to view detailed information about a service. To change the status of a service: 1. Click a row. The service details page appears. 2. Click Stop, Start, Restart, or Reload. Note: Restarting a service completely stops and restarts the service. Reloading a service only reloads the service's configuration files. The system changes the status of the service. **Timers** · View a list of timer services. Click a row to view detailed information about a service. Create a new timer, as described in <u>Create a Timer</u>. To change the status of a service: 1. Click a row. The service details page appears. 2. Click Stop, Start, Restart, or Reload. Note: Restarting a service completely stops and restarts the service. Reloading a service only reloads the service's configuration files. The system changes the status of the service. **Paths** View a list of path services. Click a row to view detailed information about a service. To change the status of a service:



1. Click a row.

The service details page appears.

2. Click Stop, Start, Restart, or Reload.

Note: Restarting a service completely stops and restarts the service. Reloading a service only reloads the service's configuration files.

The system changes the status of the service.

Create a Timer

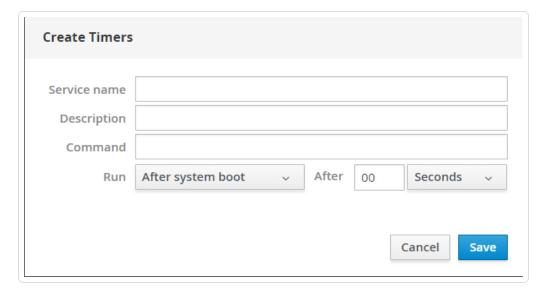
To create a timer:

- 1. In the left navigation pane, click the **Services** option. The **Services** page displays.
- 2. In the **Services** page heading, click the **Create Timers** button.

A new window appears.

- 3. Enter the Service Name, Description, Command, and Run information.
- 4. Click Save.

The new timer displays in the enabled section of the list.



Generate a Diagnostic Report

You can use diagnostic reports to assist with troubleshooting Tenable Core.

To generate a diagnostic report for troubleshooting:

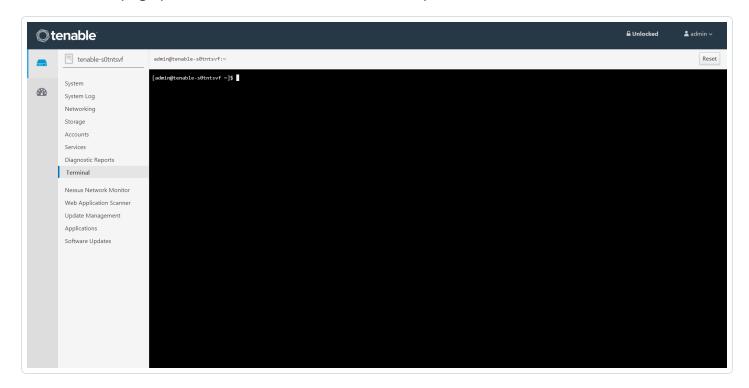
- Log in to Tenable Core via the user interface, as described in <u>Log In to Tenable Core</u>.
 The **System** page appears.
- 2. In the left navigation bar, click Diagnostic Reports.

The **Diagnostic Reports** page appears.

- 3. Click the Create Report button.
- 4. A new window with a status bar appears as the report generates.
- 5. When the report is complete, the status displays **Done**.
- 6. Click the **Download Report** button to save and print the report.

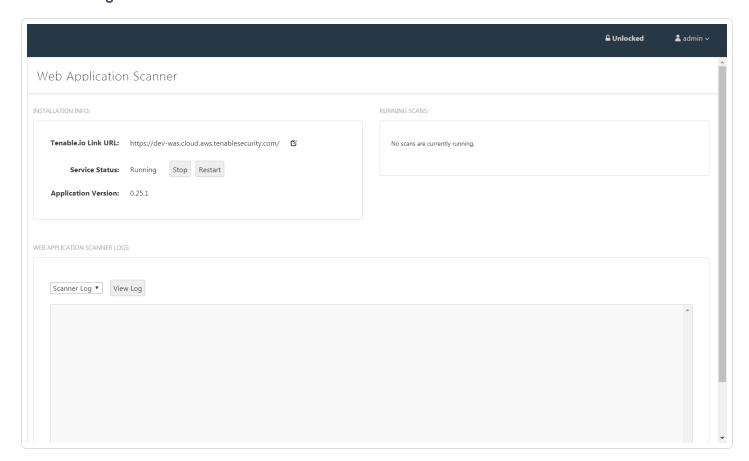
Access the Terminal

The **Terminal** page provides a console to access a user-specific command-line interface.



Manage Tenable Web App Scanning in Tenable Core

The Tenable Web App Scanning Scanner provides information for different management features. The page is divided into three sections: **Installation Info**, **Running Scans**, and **Web Application Scanner Logs**.



Installation Info

The **Installation Info** section contains information for the **Tenable.io URL**, **Service Status**, and **Version Number**. You can stop, start, and restart the system in this section.

Running Scans

The **Running Scans** section provides information for scans that are currently running in the Tenable Web App Scanning Scanner. You can cancel scans currently running in this section by checking the box next to the scan and clicking the **Cancel Selected Scan(s)** button.

Web Application Scanner Logs



The **Web Application Scanner Logs** section provides a log of the scans that have run on the scanner. Click the **View Log** button to display the **Web Application Scanner Logs**.

Configure a Proxy Server

If your organization configured a proxy server to conceal your IP address, share an internet connection on your local network, or control internet access on your network, set the proxy configuration in Tenable Core.

Note: This proxy configuration only applies to updates and Tenable Core + Tenable Web App Scanning connections. The proxy configuration for the application updates itself needs to be completed from the application user interface.

Before you begin:

• Log in to Tenable Core in a browser, as described in Log In to Tenable Core.

To configure a proxy server:

1. In the left navigation bar, click **Update Management**.

The **Updates** page appears.

- 2. In the **Proxy Host** box, type the hostname and port for your proxy server in the format *host-name:port* (for example, https://192.0.2.1:2345).
- 3. (Optional) In the **Proxy Username** box, type a username for your proxy server.
- 4. (Optional) In the **Proxy Password** box, type a password for the proxy.
- 5. Click Save Proxy.

The system initiates your proxy configuration.

Start, Stop, or Restart Your Application

To start, stop, or restart your application via the user interface:

- Log in to Tenable Core via the user interface, as described in <u>Log In to Tenable Core</u>.
 The **System** page appears.
- In the left navigation bar, click Tenable Web App Scanning.
 The application page appears.
- 3. In the **Installation Info** section, click **Start**, **Stop**, or **Restart**.

To start, stop, or restart your application via the CLI:

- Log in to Tenable Core via the Terminal page or command line interface (CLI).
 The command line appears.
- 2. To change the status of your application, do one of the following:
 - To start, run the following command:
 pkexec systemctl start nessus-was-scanner.services
 - To stop, run the following command:
 pkexec systemctl stop nessus-was-scanner.services
 - To restart, run the following command:
 pkexec systemctl restart nessus-was-scanner.services
 The command runs.

Manage Updates

You can use the **Updates Management** page to manage your Tenable Core and application updates.

If your deployment is online, Tenable recommends:

- Configuring automatic updates. For more information, see Configure Automatic Updates.
- Performing on-demand updates, as needed. For more information, see <u>Update On Demand</u>.

If your deployment is offline, you can perform offline updates. For more information, see <u>Update Tenable Core Offline</u>.

Configure Automatic Updates

By default, Tenable Core has automatic updates enabled.

If you deploy Tenable Core in an online environment, Tenable recommends keeping automatic updates enabled. When performing an automatic update, Tenable Core retrieves and installs:

- The latest version of Tenable Web App Scanning.
- The latest version of host operating system included in Tenable Core.
- The latest version of any additional packages required by Tenable Core.
- The latest version of any additional host operating system packages you installed.

Note: Automatic updates described here only apply to the Tenable Core operating system. For information on Tenable Security Center feed updates, see the <u>Tenable Security Center user guide</u>.

To configure automatic updates:

- Log in to Tenable Core via the user interface, as described in <u>Log In to Tenable Core</u>.
 The **System** page appears.
- 2. In the left navigation pane, click **Update Management**.

The **Update Management** page appears.

- 3. In the AUTOMATIC UPDATES section, click the Edit link in the Unit State row.
 - The **Services** details page appears, displaying the details for the **Scheduled System Updates** service.
- 4. Confirm that you have set **Unit State** to enabled (set to enabled by default).
- 5. Review the schedule for the automatic updates and modify, if needed, as described in <u>Configure Your Automatic Update Schedule</u>.

Configure Your Automatic Update Schedule

By default, Tenable Core has automatic updates set to enabled.

If you deploy Tenable Core in an online environment, Tenable recommends keeping automatic updates enabled.

To configure the schedule for your automatic updates:

1. Log in to Tenable Core via the user interface, as described in Log In to Tenable Core.

The **System** page appears.

2. In the left navigation pane, click Update Management.

The **Update Management** page appears.

3. In the AUTOMATIC UPDATES section, click the link in Timer Config Line.

The **Edit Timer Configuration** window appears.

4. Modify the schedule.

Note: If you set both a **Day of week** and a **Day of month**, the system only performs updates on days when those two parameters are true. For example, if you set **Wednesday** as the **Day of week** and **8** as the **Day of month**, Tenable Core performs automatic updates only on the 8th of the month if it is a Wednesday.

Tip: Tenable Core uses Eastern Time as your default time zone, unless you modify it as described in Edit Your Time Settings.

5. Click Save.

Tenable Core modifies the schedule for automatic updates.

Update On Demand

If you deploy Tenable Core in an online environment, you can perform updates on demand. When updating on demand, Tenable Core retrieves and installs the following:

- The latest version of Tenable Web App Scanning.
- The latest version of host operating system included in Tenable Core.
- The latest version of any additional packages required by Tenable Core.
- The latest version of any additional host operating system packages you installed.

Before you begin (Tenable Core deployments with EL7 operating systems):

- Configure for Update Checks:
 - 1. Navigate to the **Updates Management** page.
 - 2. Click Configure when this pop-up appears:



Confirmation of the upgrade success appears:



To update on demand (Tenable Core deployments with EL7 operating systems):

1. Log in to Tenable Core via the user interface, as described in Log In to Tenable Core.

The **System** page appears.

2. In the left navigation pane, click **Software Updates**.

The **Software Updates** page appears.

3. Click Check for Updates.

The page refreshes and displays available updates.

4. If updates are available, click **Install all updates**.

Tenable Core confirms the updates are successfully completed.

What to do next (Tenable Core deployments with EL7 operating systems):

- 1. If the update included any of the following packages, restart Tenable Core as described in Restart Tenable Core.
 - kernel
 - glibc
 - linux-firmware
 - systemd
- 2. After manually updating, a pop-up screen appears directing you to restart:





3. Restart your system.

Update Tenable Core Offline

Tenable recommends applying all offline updates, in order, to your offline Tenable Core machine. Do not skip offline updates.

For information about the contents of individual offline update files, see the <u>Tenable Core Release</u> Notes.

Note: Service pack (SP) updates to Tenable OT Security may not be available for an online update in Tenable's repositories. Complete an offline update by downloading the latest installation ISO and performing the offline update procedure if you wish to update your version.

To upload a Tenable Core offline update .iso file:

- 1. Navigate to the Tenable Core Offline Update ISO section of the Tenable Downloads page.
- 2. Click and download the offline update .iso file.
- 3. Rename the offline update .iso file as tenable-offline-updates.iso.
- 4. Upload the file via scp. For example:

scp local-iso-file.iso user@host:/srv/tenablecore/offlineiso/tenableoffline-updates.iso

Note: The target line may vary; however, the destination must be the following path: /srv/tenablecore/offlineiso/tenable-offline-updates.iso

After the upload, updates apply automatically at the configured time. You can also install updates manually.

Note: Once you upload the .iso file, no further action is needed. However, you can make subsequent updates by replacing the existing .iso file if desired.

Manage Certificates

From the **SSL/TLS Security Certificates** page, you can manage the certificates used by Tenable Core and your application.

Manage the Server Certificate

Upload a Certificate for a Trusted Certificate Authority

Use Different Certificates for Tenable Core and Your Application

Manage the Server Certificate

When you first deploy Tenable Core, Tenable provides a default server certificate for accessing the Tenable Core and application interfaces.

Tip: By default, Tenable Core uses the same certificates for Tenable Core as well as Tenable Web App Scanning. To use a different server certificate for Tenable Web App Scanning, see <u>Use Different Certificates for Tenable Core and Your Application</u>.

Note: The default certificate is not signed by a recognized certificate authority (CA). If your browser reports that the Tenable Core or application server certificate is untrusted, Tenable recommends uploading a custom server certificate signed by a trusted certificate authority (CA) for Tenable Core and application use. For more information, see Upload a Custom Server Certificate. Alternatively, you can download the Tenable-provided CA certificate (cacert.pem) for your server certificate and upload it to your browser.

If you upload a custom server certificate signed by a custom CA, you must also provide certificates in the chain to validate your custom server certificate.

For more information, see:

- Upload a Custom Server Certificate
- Remove a Custom Server Certificate

Upload a Custom Server Certificate

If you do not want to use the Tenable-provided server certificate, you can upload a custom server certificate to Tenable Core. For more information, see Manage the Server Certificate.

You cannot upload multiple custom server certificates to Tenable Core. Uploading a new file replaces the existing file.

Tip: By default, Tenable Core uses the same certificates for Tenable Core as well as Tenable Web App Scanning. To use a different server certificate for your application, see <u>Use Different Certificates for Tenable Core and Your Application</u>.

Before you begin:

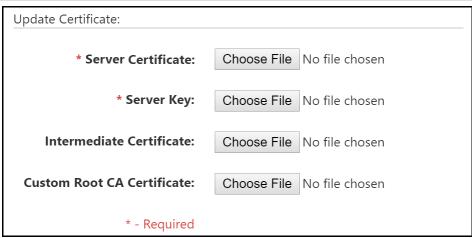
- Confirm your custom server certificate and key files use the *.der, *.pem, or *.crt extension.
- Move the custom server certificate and key files to a location accessible from your browser.

To upload a custom server certificate for Tenable Core:

- Log in to Tenable Core via the user interface, as described in <u>Log In to Tenable Core</u>.
 The **System** page appears.
- 2. In the left navigation pane, click SSL/TLS Certificates.

The SSL/TLS Certificates page appears.

- 3. Click the **System Certificate** tab.
- 4. Locate the **Update Certificate** section in the **SERVER CERTIFICATES** section.



- 5. Provide your Server Certificate.
 - a. Click Choose File.

The upload window appears.

b. Browse to and select the file.

Tenable Core loads the file.

- 6. Provide your **Server Key**.
 - a. Click Choose File.

The upload window appears.

b. Browse to and select the file.

Tenable Core loads the file.

- 7. (Optional) If your custom server certificate is signed by a custom CA that requires an intermediate certificate to validate the custom server certificate, provide your **Intermediate Certificate**.
 - a. Click Choose File.

The upload window appears.

b. Browse to and select the file.

Tenable Core loads the file.

- 8. (Optional) If your custom server certificate is signed by a custom CA, upload your **Custom** Root CA Certificate.
 - a. Click Choose File.

The upload window appears.

b. Browse to and select the file.

Tenable Core loads the file.

9. Click Install Server Certificates.

Tenable Core uploads the files. A success message appears to confirm the upload succeeded.

10. In the left navigation pane, click Services.

The **Services** page appears.

11. Restart the Cockpit service, as described in Manage Services.

The Cockpit service restarts and enables the new certificate.

Remove a Custom Server Certificate

If you no longer want to use your custom server certificate for Tenable Core, you can remove the certificate and revert to using a Tenable-provided server certificate. For more information, see Manage the Server Certificate.

To remove a custom server certificate and revert to the Tenable-provided default certificate:

- Log in to Tenable Core via the user interface, as described in <u>Log In to Tenable Core</u>.
 The **System** page appears.
- 2. In the left navigation pane, click **SSL/TLS Certificates**.

The SSL/TLS Certificates page appears.

- 3. Click the **System Certificate** tab.
- 4. In the SERVER CERTIFICATES section, in the Update Certificate section, click Reset Server Certificates.

A confirmation window appears.

5. Click Reset.

A success message appears to confirm the reset succeeded.

Upload a Certificate for a Trusted Certificate Authority

You can upload a trusted certificate authority (CA) certificate for any of the following purposes:

You want to use certificate authentication for user accounts on Tenable Web App Scanning.

You do not need to upload a trusted CA certificate for any other reasons. You can upload any number of trusted CA certificates to Tenable Core.

Note: By default, Tenable Core uses the same certificates for Tenable Core as well as Tenable Web App Scanning. To decouple the certificates used for your Tenable Core system and your application, see Use Different Certificates for Tenable Core and Your Application.

If you decouple the certificates, Tenable Core disregards the custom CA certificate configuration on the **System Certificate** tab. Tenable Core does not use custom CA certificates for reasons other than the application use.

To view details about an existing certificate, click to expand the **Filename** section for a certificate. To remove an existing certificate, select the certificate and click the **Delete** button.

Before you begin:

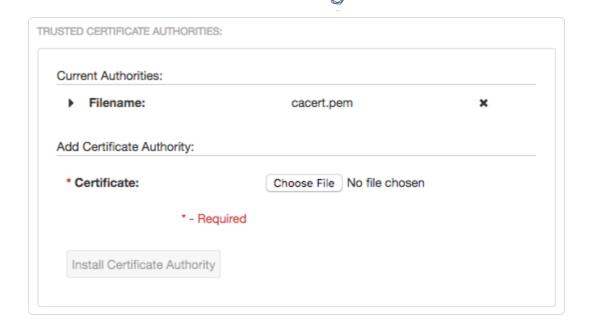
- Confirm the trusted CA certificate is in .der, .pem, or .crt format.
- Move the trusted CA certificate to a location accessible from your Tenable Core server.

Upload a trusted CA certificate:

- Log in to Tenable Core via the user interface, as described in <u>Log In to Tenable Core</u>.
 The **System** page appears.
- 2. In the left navigation pane, click SSL/TLS Certificates.

The SSL/TLS Certificates page appears.

- 3. Click the System Certificate tab.
- 4. In the TRUSTED CERTIFICATE AUTHORITIES section, in the Add Certificate Authority section, next to Certificate, click Choose File.



The upload window appears.

5. Browse to and select the certificate file.

Tenable Core uploads the certificate file.

6. Click Install Certificate Authority.

A success message appears to confirm the upload succeeded.

Use Different Certificates for Tenable Core and Your Application

By default, Tenable Core uses the same certificates for Tenable Core as well as Tenable Web App Scanning. If needed, you can decouple your system and application certificates and customize them independently.

Before you begin:

Upload a custom server certificate for Tenable Core, as described in <u>Upload a Custom Server</u>
 Certificate.

To decouple and customize your application certificates:

- Log in to Tenable Core via the user interface, as described in <u>Log In to Tenable Core</u>.
 The **System** page appears.
- 2. In the left navigation pane, click SSL/TLS Certificates.

The SSL/TLS Certificates page appears.

3. Click the application tab.

The application tab appears.

4. Clear the Reuse System Certificate check box.

The application tab refreshes to display the settings in edit mode.

- Remain on the application tab and configure the settings for your application-specific server certificate, as described in <u>Upload a Custom Server Certificate</u>.
- Remain on the application tab and configure the settings for one or more custom certificate
 authority (CA) certificate, as described in <u>Upload a Certificate for a Trusted Certificate Authority</u>.

Note: If you upload a custom CA certificate on the application tab, Tenable Core disregards the custom CA certificate configuration on the **System Certificate** tab. Tenable Core does not use custom CA certificates for reasons other than the application use described in <u>Upload a Certificate for a Trusted Certificate Authority</u>.

Application Data Backup and Restore

Backup and restore requires a connection to a remote storage host. When Tenable Core begins a scheduled or on-demand backup, your files are stored temporarily in /op-

t/tenablecore/backup/spool before being sent to the configured remote storage host.

Later, you can restore your backup data by uploading your backup file to Tenable Core.

For more information, see:

- Configure a Remote Storage Host
- Perform an On-Demand Backup
- Change the Scheduled Backup Time
- Restore a Backup

If you want to enable or disable a scheduled backup, click **Scheduled backups can be configured Here**.

Note: During a backup or a restore, Tenable Core stops the Tenable Web App Scanning application service. You cannot use Tenable Web App Scanning or the Tenable Web App Scanning interface during this time.

After the backup or restore completes, your services restart and Tenable Web App Scanning resumes normal function.

Tip: A virtual machine snapshot backs up the entire virtual machine (application-installed files, application data, OS files, and configurations.) To take a snapshot of your virtual machine, see Take a Snapshot.

Remote Storage Host Requirements

The location where you store your backups must:

- Have rsync installed.
- Have an SSH server installed and running.
- Have sufficient storage space to hold your application's backup data. While application data size, and file compression varies, you could safely size your remote storage host by doubling



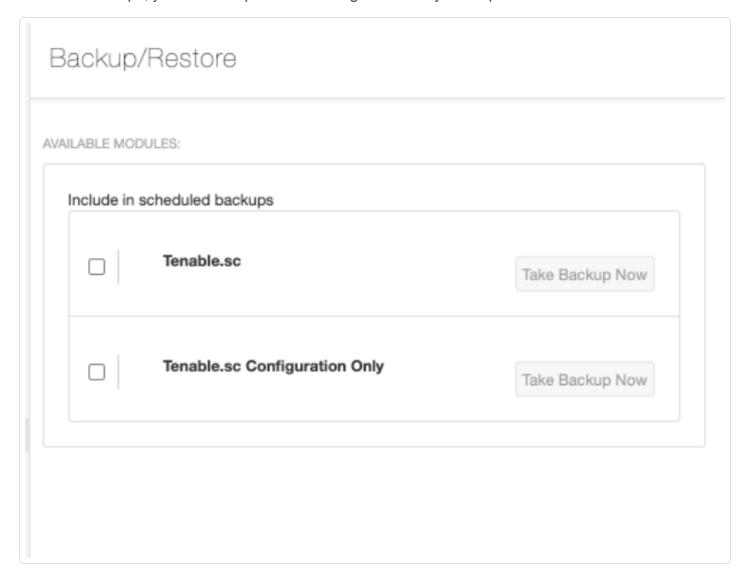
the disk space currently in use on your application.

• Have a user with write permissions to manage the remote storage host location.

Note: Tenable Core does not manage your remote storage system. If you have concerns about space on your remote storage system, remove backup files manually when you no longer need them.

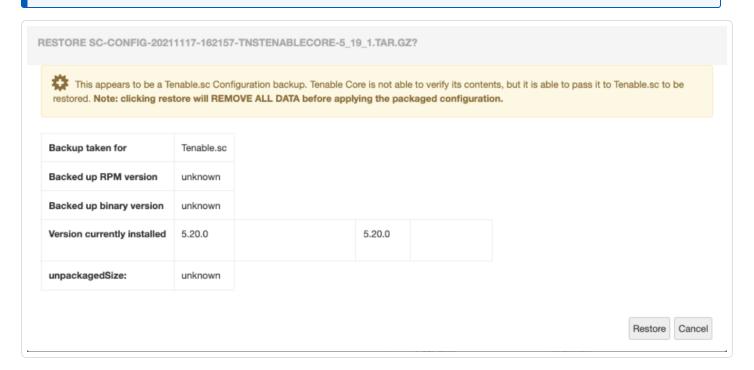
Configuration-only Backups

Tenable recommends performing regular backups of your Tenable Core configuration in addition to your Tenable Core + Tenable Security Center data. You can restore a configuration backup to resume normal Tenable Core operation quickly as part of your disaster recovery plan. Along with standard backups, you can also perform a configuration-only backup:





Note: Tenable Core + Tenable Security Center configuration-only backups don't include any of their data.



Caution: Restoring a Tenable Core + Tenable Security Center configuration-only backup erases all data before performing the restore.

For more information on Tenable Security Center configuration backups, see <u>Backup and Restore</u> in the Tenable Security Center documentation.

Tenable Core configuration backups do not include configurations for managed Tenable Core + Tenable Security Center instances, such as scans, scan policies, or credentials. Perform a separate backup for each Tenable Core + Tenable Security Center instance.

Configuration-only backups do not include data (such as vulnerability data, trend data, licenses, or secure connection settings). When your repositories contain new vulnerability data, you can use your dashboards, reports, and analysis tools to assess your network.

Note: After you restore a configuration backup, Tenable recommends performing discovery scans to re-populate your repositories with vulnerability data. For more information, see *Scanning Overview* in the <u>Tenable</u> Security Center documentation.

Configuration-only backup requirements:



Restore a backup file to a Tenable Core + Tenable Security Center running the same version.
 For example, you cannot restore a backup file created on version 5.20.0 to a Tenable Core + Tenable Security Center running a later version.

Note: For best performance after restoring a configuration backup, ensure the hostname associated with the configuration backup file matches the hostname on the receiving Tenable Core + Tenable Security Center.

Configurations Included in a Configuration-only Backup

For a complete list of configurations included in a configuration-only backup for Tenable Core + Tenable Security Center, see <u>Configurations Included in a Configuration Backup</u> in the Tenable Security Center documentation.

Configure a Remote Storage Host

Before you back up application data, you must establish a remote storage host with SSH key authentication and configure that host in Tenable Core.

Before you begin:

- Confirm your SSH private key for authenticating to the remote storage host is in OpenSSH key format.
- Prepare your remote storage host environment, as described in the <u>Remote Storage Host</u> Requirements.
- Confirm that you can log in to your remote storage host using SSH key authentication.

Note: There are several ways to create your own SSH private key. These are not Tenable-specific processes. Consult your system administrator.

To configure your remote storage host:

- Log in to Tenable Core via the user interface, as described in <u>Log In to Tenable Core</u>.
 The **System** page appears.
- 2. In the left navigation bar, click **Remote Storage**.

The Remote Storage Configuration page appears.

- 3. In the **Remote Host** box, type the hostname for the remote storage host where you want to store your backup files.
- 4. In the **Remote Path:** box, type the location on the remote host where you want to store your backup files.
- 5. In the **User** box, type the username for a user on the remote host with edit permissions for the remote path location.
- 6. In the **SSH private key** box, paste the SSH private key for authenticating to the remote storage host.
- 7. Click Save Configuration.

What to do next:



- Perform a backup, as described in Perform a Backup on Demand.
- (Optional) Change your automatic backup schedule, as described in Change Your Automatic
 Backup Schedule.
- (Optional) Restore a backup, as described in Restore a Backup.

Perform an On-Demand Backup

Perform a backup of your application data anytime between scheduled backups. For more information about scheduled backups, see <u>Change the Scheduled Backup Time</u>.

Note: During a backup or a restore, Tenable Core stops the Tenable Web App Scanning application service. You cannot use Tenable Web App Scanning or the Tenable Web App Scanning interface during this time.

After the backup or restore completes, your services restart and Tenable Web App Scanning resumes normal function.

Before you begin:

Configure your remote storage host, as described in <u>Configure Remote Storage Host</u>.

To perform an on-demand backup:

- Log in to Tenable Core via the user interface, as described in <u>Log In to Tenable Core</u>.
 The **System** page appears.
- 2. In the left navigation bar, click **Backup/Restore**.

The Backup/Restore page appears.

- 3. In the **AVAILABLE MODULES** section, select the box next to the application you want to back up.
- 4. Click **Take Backup Now**.

The **BACKUP IN PROGRESS** window appears. The window disappears after the system completes the backup.

What to do next:

(Optional) Restore the backup, as described in <u>Restore a Backup</u>.

Change the Scheduled Backup Time

By default, Tenable Core backs up your applications daily at 2:30 AM local time. You can edit your schedule preferences in Tenable Core to change the time and frequency of your scheduled backups.

For more information about managing your time preferences, see Edit Your Time Settings.

Note: Tenable Core cannot perform a backup (scheduled or on-demand) until you configure a remote storage host on your computer. For more information, see Configure a Remote Storage Host.

To change the scheduled backup time:

- Log in to Tenable Core via the user interface, as described in <u>Log In to Tenable Core</u>.
 The **System** page appears.
- 2. In the left navigation bar, click **Backup/Restore**.

The **Backup/Restore** page appears.

- 3. In the AUTOMATIC BACKUPS table, locate the Timer Config Line row.
- 4. Click Edit.

The **EDIT TIMER CONFIGURATION** window appears.

5. On the **EDIT TIMER CONFIGURATION** window, update the configuration based on your desired backup frequency:

Note: If you specify a day of the week and a day of the month for your scheduled backups, Tenable Core performs the backups only when those values overlap. For example, if you specify *Monday* and 15, Tenable Core performs your backups only on Mondays that fall on the 15th day of the month.

Frequency	Configuration
Daily	• In the Day of Week and Day of Month boxes, type an asterisk (*).
	 In the Hour box, type the hour when you want Tenable Core to perform a backup as an integer between 0 and 23.
	In the Minute box, type the minute when you want Tenable Core

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	to perform a backup as an integer between 0 and 59.
Weekly	 In the Day of Week box, type the day of the week when you want Tenable Core to perform a backup (for example, <i>Monday</i> or <i>Mon</i>). In the Day of Month box, type an asterisk (*). In the Hour box, type the hour you want Tenable Core to perform a backup as an integer between 0 and 23.
	 In the Minute box, type the minute you want Tenable Core to perform a backup as an integer between 0 and 59.
Monthly	 In the Day of Week box, type an asterisk (*). In the Day of Month box, type the day of the month when you Tenable Core to perform a backup as an integer (for example, 15).
	 In the Hour box, type the hour you want Tenable Core to perform a backup as an integer between 0 and 23.
	 In the Minute box, type the minute you want Tenable Core to perform a backup as an integer between 0 and 59.

6. Click Save.

Your scheduled backup time updates.

What to do next:

- (Optional) Perform an on-demand backup, as described in Perform a Backup On Demand.
- (Optional) Restore the backup, as described in Restore a Backup.

Restore a Backup

You can restore a backup to return an application to a prior state.

Note: During a backup or a restore, Tenable Core stops the Tenable Web App Scanning application service. You cannot use Tenable Web App Scanning or the Tenable Web App Scanning interface during this time.

After the backup or restore completes, your services restart and Tenable Web App Scanning resumes normal function.

Before you begin:

 Check your firewall settings and confirm that your computer can access port 8090 on Tenable Core, as described in <u>Access Requirements</u>.

To restore an application backup:

Log in to Tenable Core via the user interface, as described in <u>Log In to Tenable Core</u>.

The **System** page appears.

2. In the left navigation bar, click Backup/Restore.

The **Backup/Restore** page appears.

3. In the UPLOAD AND RESTORE section, click Choose a file.

Your file manager appears.

- 4. Select the desired backup file.
- 5. Click Open.

A details window for the backup appears.

- 6. If prompted, confirm that you want to upgrade or downgrade your current Tenable Core application version to match the application version from your backup file.
 - Click Install Correct Version.

A confirmation window appears.

b. Click Replace.

Tenable Core installs the correct version of your application.

The restore window appears.

7. Click Restore.

The system restores your backup to Tenable Core.

Note: Do not log out of Tenable Core or close your browser until after the **Uploading the archive** task is complete. If you end your session early, the restore fails.

When the restore finishes, a success message appears.

Tip: If the restore attempt fails, an error message appears with details and remediation instructions. Resolve the errors and click **Retry**.

SNMP Agent Configuration

If your organization uses a Simple Network Monitoring Protocol (SNMP) network management station (NMS) for device monitoring, you can install a net-snmp agent onto Tenable Core to report device data to your NMS.

You can use the user interface to configure common SNMPv2 or SNMPv3 settings. To configure other advanced or uncommon SNMP settings, use the CLI.

- Configure an SNMP Agent via the User Interface
- Configure an SNMP Agent via the CLI

To stop, start, restart, or reload the SNMP service in Tenable Core, or to view SNMP logs, see <u>Manage Services</u>.

Configure an SNMP Agent via the User Interface

Required User Role: Administrator with Reuse my password for privileged tasks enabled

If your organization uses a Simple Network Monitoring Protocol (SNMP) network management station (NMS) for device monitoring, you can install a net-snmp agent onto Tenable Core to report device data to your NMS.

You can use the user interface to configure common SNMPv2c or SNMPv3 settings. To configure other advanced or uncommon SNMP settings, use the CLI as described in Configure an SNMP
Agent via the CLI.

To install and configure an SNMP agent on Tenable Core via the user interface:

- Log in to Tenable Core via the user interface, as described in <u>Log In to Tenable Core</u>.
 The **System** page appears.
- 2. In the left navigation bar, click **SNMP**.

If you already installed an SNMP agent on Tenable Core, the **SNMP** page appears. If you do not have an SNMP agent installed on Tenable Core, the **Install SNMP Packages** window appears.

3. (Optional) In the **Install SNMP Packages** window, click **Install SNMP** to install the SNMP service.

Tenable Core installs the SNMP service and opens inbound ports 161 and 162 on Tenable Core.

The **SNMP** page appears.

4. In the **SNMP common setup** section, configure the contact properties you want to appear on your NMS for this instance of Tenable Core.

Option	Description
Contact	A name, email address, or other identifier for the person you want to list as the contact for questions about this instance of Tenable Core.

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Location	A geographic, organizational, or other location descriptor for the person you want to list as the contact for questions about this instance of Tenable Core.

5. If you want to grant an SNMPv2c NMS access to Tenable Core, in the **SNMPv2c access control setup** section, configure one or both of the settings:

Option	Description
read-only access community name	Specifies the read-only community string for the SNMPv2c NMS.
read-write access community name	Specifies the read-write community string for the SNMPv2c NMS.

6. If you want to grant an SNMPv3 NMS read-only access to Tenable Core, in the **SNMPv3** access control setup section, configure the settings:

Option	Description
Read-only Hash algorithm	Specifies the read-only hash algorithm for the SNMPv3 NMS.
Read-only access user- name	Specifies the username and password for an account on the SNMPv3 NMS.
Read-only access user password	

7. If you want to grant an SNMPv3 NMS read-write access to Tenable Core, in the **SNMPv3** access control setup section, configure the settings:

Option	Description
Read-write Hash algorithm	Specifies the read-write hash algorithm for the SNMPv3 NMS that you want to grant read-write access on Tenable Core.
Read-write	Specifies the username and password for an account on the

access username	SNMPv3 NMS.
Read-write	
access user pass-	
word	

8. Click **Save Configuration**.

Tenable Core saves your SNMP configuration.

Configure an SNMP Agent via the CLI

Required User Role: Root user

If your organization uses a Simple Network Monitoring Protocol (SNMP) network management station (NMS) for device monitoring, you can install a net-snmp agent onto Tenable Core to report device data to your NMS.

To install and configure an SNMP agent on Tenable Core via the CLI:

- 1. Prepare the net-snmp agent configuration file and add it to Tenable Core, as described in the *Net-SNMP Documentation*.
- 2. Log in to Tenable Core via the **Terminal** page or command line interface (CLI).

The command line appears.

3. In the /etc/snmp/ directory, open the snmpd.local.conf file.

The file opens.

- 4. Locate the **IncludeFile** line in the file.
- 5. Comment out the **IncludeFile** line to instruct Tenable Core to ignore all current and future configurations on the **SNMP** page of the Tenable Core user interface.

Tenable Core ignores SNMP configurations in the Tenable Core user interface.

Take a Virtual Machine Snapshot

You can take a snapshot to back up your entire machine, including application-installed files, application data, OS files, and configurations.

Before you begin:

• Stop your instance of Tenable Core + Tenable Web App Scanning, as described in <u>Start, Stop</u> and Restart Tenable Core.

To take a snapshot of Tenable Core:

1. Take a snapshot, as described in the documentation for your environment.

When are Tenable Core offline update ISOs released?

Tenable Core releases offline updates throughout the year on a quarterly basis, within two weeks after the end of a quarter.

Can I skip offline updates?

FAQ

Tenable recommends that you apply updates in order. Tenable does not test, or support, skipping updates. If you have an old version of Tenable Core, it is best to back up the data and restore it on a newer version of Tenable Core.

Does Tenable provide old Tenable Core ISOs?

The <u>downloads page</u> has the current ISO and images from the last four quarters. Tenable does not provide any ISOs older than what is available on the downloads page. If you are looking for an older ISO to downgrade one of the products, you can follow the Tenable Core <u>documentation</u>.

How can I find out what updates are in an offline Tenable Core ISO?

The <u>release notes</u> for offline ISOs have a section for package updates that are present in the ISO.

How long does it take for a Tenable software update to be available in Tenable Core?

Tenable Core holds a new version of Tenable Nessus until the general availability (GA) date in Tenable Vulnerability Management. This is usually a week after the stand-alone Tenable Nessus GA. Releases for other products on Tenable Core usually occur within 24 hours of the GA date.

How can I disable or reenable automatic updates?

Automatic update configuration is in Tenable Core documentation.

Can I use a local repository for software updates?

Tenable Core does not support this feature. Tenable encourages you to submit a feature request.

How long will Tenable Core support RHEL/CentOS 7?

Tenable Core bases off of CentOS 7 and support ends when RHEL 7 support officially ends.

Why is Tenable Security Center down every morning?

Tenable Core shuts down Tenable Security Center if you have automatic updates enabled while detecting an updated version. If the update fails for any reason, or stalls because a service is not stopping, Tenable Security Center remains down pending user intervention. Automatic backups can also shut down Tenable Security Center, and if a problem occurs, it may not properly restart.

Does Tenable support X software that I installed on my Tenable Core instance?

You can install any software you wish on Tenable Core instances. Tenable does not support the additional software, but fully supports Tenable Core and the installed product in that situation. Tenable reserves the right to require that you remove the additional software if it is impacting an issue you are having, and requesting support for.

How do I reset my administrator password in Tenable Core?

The process to reset your password is in this Tenable Community Knowledge Article.