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# **Vulnerability Scans**

## FortiSIEM 6.7.0

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## Change Log

Date	Change Description
04/17/2018	Initial version of the document.
03/25/2019	Revision 1: Removed "FortiSIEM Configuration" section.
08/19/2019	Revision 2: Updated the location of the image download site.
11/20/2019	Vulnerability Scans released for 5.2.6.
02/11/2020	Revision 3: Added the section Validating Vulnerability Scan Results.
03/30/2020	Revision 4: Release for 5.3.0. Added section for configuring Rapid7 for vulnerability scans.
03/23/2021	Revision 5: Release for 6.2.0.
07/06/2021	Revision 6: Release for 6.3.0.
08/26/2021	Revision 7: Release for 6.3.1.
10/15/2021	Revision 8: Release for 6.3.2.
12/22/2021	Revision 9: Release for 6.3.3.
01/18/2022	Revision 10: Release for 6.4.0.
05/09/2022	Revision 11: Release for 6.5.0.
07/26/2022	Revision 12: Release for 6.6.0.
09/12/2022	Revision 13: Release for 6.5.1.
09/14/2022	Revision 14: Release for 6.6.1.
09/19/2022	Revision 15: Release for 6.6.2.
01/03/2023	Revision 16: Release for 6.7.0.

## Running Vulnerability Scans against FortiSIEM

This document provides information about the configurations for running vulnerability scans against FortiSIEM.

- Qualys Configuration
- Nessus Configuration
- Rapid7 Configuration

## **Qualys Configuration**

Logon to Qualys Vulnerability Management and follow the steps below to run a Vulnerability scan:

### **Step 1: Configure Scan Profile**

- 1. Go to Scans > Option Profiles and click New > PCI Option Profile.
- 2. On the 'New PCI Option Profile' window, click the Scan tab.
- 3. Select 'Unix/Cisco' Authentication.
- 4. Click Save.

#### **Step 2: Setup Host Authentication**

- 1. Go to Scans > Authentication and click New > Unix Record.
- 2. On the 'New Unix Record' pop-up, add the login credentials.
- 3. Click the IPs tab and enter the Host IPs and click Create.

### Step 3: Add Host IPs to Scan

- 1. Go to Assets > Host Assets.
- 2. Click New > IP Tracked Hosts.
- 3. Enter the new Host IPs and click Add.

### Step 4: Launch Vulnerability Scan

- 1. Go to Scans > Scans tab.
- 2. Click New > Scans and select the Option Profile added in step #2.
- 3. Select Host IPs that added in step #2.
- 4. Click Launch to start the scan.

## **Nessus Configuration**

Logon to Tenable Nessus Scanner UI and follow the steps below to run a Vulnerability scan:

### **Step 1: Configure Scan and Host IP**

- 1. Go to Scans and click New Scan > Advanced Network Scan.
- 2. Under Settings tab, enter the information about the new scan including the FortiSIEM Host IP under Targets.
- 3. Click Save.

### **Step 2: Setup Host Authentication**

- 1. Go to Scans and select the Scan added in Step #1.
- 2. Click Configure.
- 3. Under the Credentials tab, click SSH and enter the FortiSIEM credentials.
- 4. Click Save.

### Step 3: Launch Vulnerability Scan

- 1. Go to Scans and select the Scan from Step #1.
- 2. Click the Launch icon to start the scan.

## **Rapid7 Configuration**

Logon to Rapid7 insightVM (Advanced Vulnerability Management Analytics and Reporting) and follow these steps to run a Vulnerability scan:

### Step 1: Install Rapid7 Insight Agent on FortiSIEM

- 1. Logon to Rapid7 insightVM (Advanced Vulnerability Management Analytics and Reporting).
- 2. Go to the Agent Management page, then select Add New > Agent.
- 3. Download the Rapid7 Linux Agent and copy it to FortiSIEM.
- 4. SSH to FortiSIEM and install Rapid7 Insight Agent with Token, for example: sudo ./agent\_installer.sh install\_start --token us:bf870020-ef0b-41de-9c9eda45237c214d

### Step 2: Validate FortiSIEM Vulnerability Scan Results

- 1. In the Rapid7 insightVM UI, go to the Agent Management page and check the recently installed Agent.
- 2. Go to the insightVM default dashboard.
- 3. In the Newly discovered Assets gadget, click Assets.
- 4. In the Assets list, click the FortiSIEM hostname.
- 5. On the Asset Details page, validate the list of vulnerabilities.

## Validating Vulnerability Scan Results

The following sections describe how to validate vunerability scan results:

- Find the CVE Information in the RedHat Database
- Validate Redhat Fixed Vulnerabilities in FortiSIEM

## Find the CVE Information in the RedHat Database

- 1. Log in to the Vulnerability scanner.
- 2. Run a Vulnerability scan against FortiSIEM. See Running Vulnerability Scans against FortiSIEM.
- 3. In the Vulnerability results, check for the CVE number on each vulnerability and search the noted CVE number in the Redhat database.

	Updates > Red Hat CVE Database			
	Security Advisories	Red Hat CVE Database	Security L	abs
VE-	2009-3560 🐵 <b>GO</b>	Image: All Image	Filter By Year	All 🔻
			_	
	CVE \$	Synopsis	Impact \$	Publish Date

- 4. Click the CVE number in the search results to get detailed information.
- 5. Check the Affected Packages State in the Redhat CVE report for Red Hat Enterprise Linux 6 platform (note that CentOS 6 is the same as RHEL 6).
- 6. In the above example CVE-2009-3560, Red Hat Enterprise Linux 6 platform is Not affected. See the following table of affected package states.

Affected Package States

Platform	Package	State
Red Hat Enterprise Linux 7	expat	Not affected
Red Hat Enterprise Linux 6	expat	Not affected
Red Hat Enterprise Linux 6	compat-epat1	Not affected
Red Hat Enterprise Linux 5	xmlrpc-c	Will not fix

- 7. The Redhat database can return the following types of results:
  - Not affected Vulnerability scanner reported a false alarm.
  - Will not fix Redhat will not fix these vulnerabilities either due to a low CVSS score, or the platform might have reached end of support.
  - Fixed/Patch available Redhat has already provided a fix for these vulnerabilities.
- 8. You can ignore vulnerabilities that are reported as **Not affected**. You will need to create a vulnerability exception for CVEs that are marked as **Will not fix** by Redhat. For **Fixed** vulnerabilities, follow the instructions in Validate Redhat Fixed vulnerabilities in FortiSIEM.

## Validate Redhat Fixed Vulnerabilities in FortiSIEM

- 1. From the Vulnerability scanner report, find a CVE number on vulnerability and search for the number in the Redhat database.
- 2. Perform the following steps if Redhat provides a patch (Security Errata):
  - a. SSH to the FortiSIEM instances and the check installed packages. Example: search for CVE-2017-9798 in the Redhat database.

Security	Updates > Red Hat CVE Databa			-11/11
Security Advisories		Red Hat CVE Database	Security	Labs
CVE-	2017-9798 🛞 co	Important       Important       Important	Filter By Year	All 👻
	CVE \$	Synopsis	Impact $\ \ \diamondsuit$	Publish Date 🗸 🗸
U	CVE-2017-9798	A use-after-free flaw was found in the way httpd handled invalid and previously unregistered HTTP methods specified in the Limit directive used in an.htaccess file. A remote attacker could possibly use this flaw to disclose portions of the server memory, or cause httpd child process to crash.	Moderate	17 Sep 2017

b. Click CVE-2017-9798 and check the Redhat security errata for Red Hat Enterprise Linux 6. See the following table.

#### Red Hat Security Errata

Platform	Errata	Release Date
Red Hat JBoss Enterprise Application Platform 6.4	RHSA-2017:3239	2017-11-16
Red Hat Software Collections for Red Hat Enterprise Linux 6 (httpd24-httpd)	RHSA-2017:3018	2017-10-24
Red Hat Enterprise Linux Extended Update Support 6.7 (httpd)	RHSA-2017:3195	2017-11-13
Red Hat Enterprise Linux Extended Update Support 7.2 (httpd)	RHSA-2017:3193	2017-11-13
Red Hat JBoss Web Server	RHSA-2017:3114	2017-11-02
Red Hat JBoss Enterprise Web Server 2 for RHEL 7 Server	RHSA-2017:3113	2017-11-02

Platform	Errata	Release Date
Red Hat JBoss Enterprise Web Server 2 for RHEL 6 Server (httpd)	RHSA-2017:3113	2017-11-02
Red Hat Enterprise Linux 6 (httpd)	RHSA-2017:2972	2017-10-19

c. Click the RHSA-2017:2972 link, open the Updated Packages tab, and note the packages that are updated.

HSA-201	7:2972 - Security Advisor	<b>Y</b> Issued: 2017-10-19 Updated: 2017-10-19
Overview	Updated Packages	
Note: More r	recent versions of these packages may	be available. Click a package name for more details.
Red Hat En	terprise Linux Server 6	
SRPM		
httpd-2.2.15	-60.el6_9.6.src.rpm	SHA-256: 328aeab280eebb9d347ce5431f9e8d8a36b3c1e0054738ee8738518e5ab45438
x86_64		
httpd-2.2.15	-60.el6_9.6.x86_64.rpm	SHA-256: 04c4625a8a3ac4e4dffb6acb0287dc7339db8cb703d5e860c981a301a67f17fb
httpd-debug	info-2.2.15-60.el6_9.6.i686.rpm	SHA-256: 7c93c4de01bc9e4e5141bdc670fle98ed23c941a3b6ccbed421cbe3e3a69ef9b
httpd-debug	info-2.2.15-60.el6_9.6.x86_64.rpm	SHA-256: 84e32f93b8c2c8703dfdcafbcd50f599795e97bef8a6ecea677005f93b7285c9

**d.** SSH to the FortiSIEM instance and find installed **httpd** packages (based on the example) by running the <code>rpm -qa | grep -i httpd command:</code>

SHA-256: 21c9886a4038da0e61e438bee715b4fd7691aea65267bdeb596d2238213d1af6

[root@sp176 ~]# rpm -qa   grep -i httpd	J
httpd-2.2.15-69.el6.centos.x86_64	
httpd-tools-2.2.15-69.el6.centos.x86_64	

httpd-devel-2.2.15-60.el6\_9.6.i686.rpm

e. Check the installed httpd package change log to find the CVE-2017-9798 fixes by running the rpm -q -- changelog httpd | less command:

```
* Tue Jun 19 2018 Johnny Hughes <johnny@centos.org> - 2.2.15-69

    Roll in centOS Branding

* Mon Feb 19 2018 Luboš Uhliarik <luhliari@redhat.com> - 2.2.15-69
- Resolves: #1471383 - httpd.worker abort()s with misc/apr_reslist.c:159:
reslist_cleanup: Assertion `rl->ntotal == 0' failed
* Wed Jan 17 2018 Luboš Uhliarik <luhliari@redhat.com> - 2.2.15-68
- Resolves: #1450298 - when ProxyErrorOverride is On, modcluster
  return 503 status code on subsequent requests (2)
* Tue Sep 19 2017 Luboš Uhliarik <luhliari@redhat.com> - 2.2.15-67
- Resolves: #1493060 - CVE-2017-9798 httpd: various flaws
∗ Wed Jul 26 2017 Luboš Uhliarik <luhliari@redhat.com> — 2.2.15-66
— Resolves: #1463194 — CVE-2017-3167 httpd: ap_get_basic_auth_pw()
  authentication bypass
- Resolves: #1463197 - CVE-2017-3169 httpd: mod_ssl NULL pointer dereference

    Resolves: #1463207 - CVE-2017-7679 httpd: mod_mime buffer overread
    Resolves: #1470748 - CVE-2017-9788 httpd: Uninitialized memory reflection

  in mod_auth_digest
* Fri Jul 07 2017 Luboš Uhliarik <luhliari@redhat.com> - 2.2.15-65
- Related: #1412974 - CVE-2016-8743 httpd: Apache HTTP Request Parsing
  Whitespace Defects
* Thu Jun 29 2017 Luboš Uhliarik <luhliari@redhat.com> - 2.2.15-64
– Resolves: #1463205 – CVE-2017-7668 httpd: ap_find_token() buffer overread
```

f. In the above example, the CVE-2017-9798 patch is already available in FortiSIEM.

## Mitigating Found Vulnerabilities

If the CVE number does not exist in the changelog, then follow these steps to perform a FortiSIEM OS update:

- 1. If the CVE number is not included in the changelog list or the installed package is an older version, perform a FortiSIEM OS update. See FortiSIEM OS Update Lifecycle.
- 2. After the FortiSIEM OS update, repeat Step #2 in the previous section, Validate Redhat Fixed Vulnerabilities in FortiSIEM.
- 3. Contact FortiSIEM support if the CVE number is not listed in the changelog after the OS update.



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