Red Hat Insights 1-latest

Generating Vulnerability Service Reports with FedRAMP

Communicate the Exposure of RHEL Systems to CVE Security Vulnerabilities

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Legal Notice

Abstract

Generate vulnerability service reports with FedRAMP® to communicate the exposure of RHEL systems to CVE security vulnerabilities. Red Hat is committed to replacing problematic language in our code, documentation, and web properties. We are beginning with these four terms: master, slave, blacklist, and whitelist. Because of the enormity of this endeavor, these changes will be implemented gradually over several upcoming releases. For more details, see our CTO Chris Wright's message.

Table of Contents

CHAPTER 1. OVERVIEW OF INSIGHTS FOR RED HAT ENTERPRISE LINUX VULNERABILITY SERVICE REPORTING

The ability to convey the security exposure of your infrastructure to different stakeholders—DevOps team, security team, executive team—is vital. The vulnerability service enables you to download the following reports to analyze offline or share with others:

- **Executive Reports.** PDF summary and overview of the security vulnerability exposure your infrastructure, intended for executive audiences
- **CVE reports.** PDF report of selected, filtered CVEs to which your infrastructure is exposed, intended to highlight and share vulnerability data
- **Vulnerability data export.** Export of selected CVE data, based on filters you have in place when you perform the export, to a JSON or CSV file

CHAPTER 2. EXECUTIVE REPORTS

You can download a high-level executive report summarizing the security exposure of your infrastructure. Executive reports are two to three-page PDF files, designed for an executive audience, and include the following information:

On page 1

- Number of RHEL systems analyzed
- Number of individual CVEs to which your systems are currently exposed
- Number of security rules in your infrastructure
- List of CVEs that have advisories

On page 2

- Percentage of CVEs by severity (CVSS base score) range
- Number of CVEs published by 7, 30, and 90 day time frame
- Top three CVEs in your infrastructure, including security rules and known exploits

On page 3

- Security rule breakdown by severity
- Top 3 security rules, including severity and number of exposed systems

2.1. DOWNLOADING AN EXECUTIVE REPORT

Use the following steps to download an executive report:

Procedure

1. Navigate to the Security > Vulnerability > Reports tab and log in if necessary.
2. On the **Executive report** card, click **Download PDF**.
3. Click **Save File** and click **OK**.

Verification

1. Verify that the PDF file is in your **Downloads** folder or other specified location.

2.2. DOWNLOADING AN EXECUTIVE REPORT USING THE VULNERABILITY SERVICE API

You can download an executive report using the vulnerability service API.

- Request URL: https://console.openshiftusgov.com/api/vulnerability/v1/report/executive
- Curl:

```
curl -X GET "https://console.openshiftusgov.com/api/vulnerability/v1/report/executive" -H
"accept: application/vnd.api+json"
```

CHAPTER 3. REPORTS BY CVES

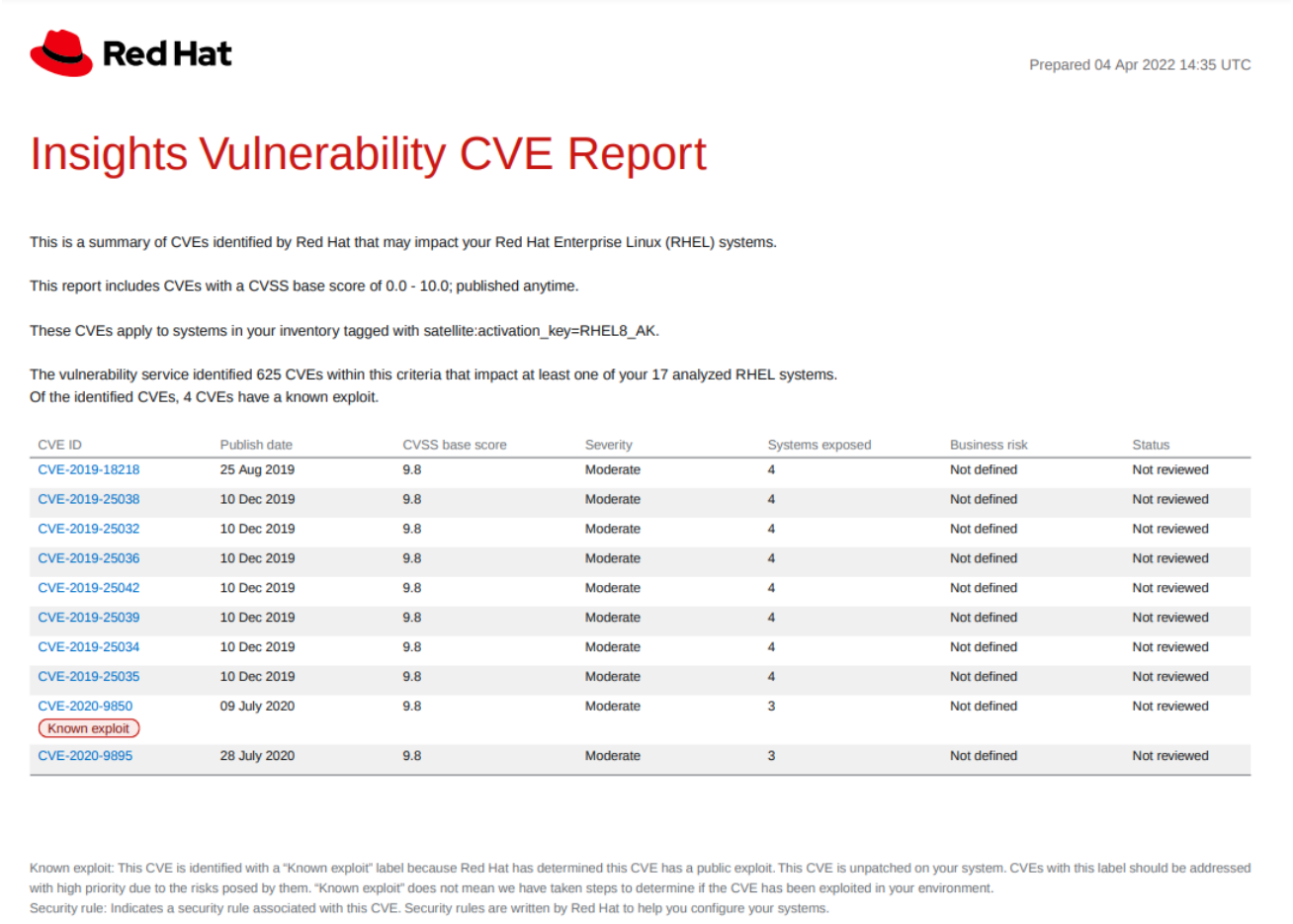
You can create PDF reports showing a filtered list of CVEs your systems are exposed to. Give each report a relevant name, apply filters, and add user notes to present focused data to specific stakeholders.

You can apply the following filters when setting up the PDF report:

- **Security rules.** Show only CVEs with the security rules label.
- **Known exploit.** Show only CVEs with the Known exploit label.
- **Severity.** Select one or more values: Critical, Important, Moderate, Low, or Unknown.
- **CVSS base score.** Select one or more ranges: All, 0.0-3.9, 4.0-7.9, 8.0-10.0, N/A (not applicable)
- **Business risk.** Select one or more values: High, Medium, Low, Not defined.
- **Status.** Select one or more values: Not reviewed, In review, On-hold, Scheduled for patch, Resolved, No action - risk accepted, Resolved via mitigation.
- **Publish date.** Select from All, Last 7 days, Last 30 days, Last 90 days, Last year, or More than 1 year ago.
- **Applies to OS.** Select the RHEL minor version(s) of systems to filter and view.
- **Tags.** Select groups of tagged systems. For more information about tags and system groups, see System tags and groups
- **Advisory.** Select whether to display only CVEs that have associated advisories (errata), only CVEs without advisories, or all CVEs.

The CVE report lists the CVEs, linking each to the respective CVE page in the Red Hat CVE database so you can learn more about it. The list is ordered primarily by the publish date of the CVE, with the most recently published CVEs at the top of the list.

Example of an Insights Vulnerability CVE report



Red Hat

Prepared 04 Apr 2022 14:35 UTC

Insights Vulnerability CVE Report

This is a summary of CVEs identified by Red Hat that may impact your Red Hat Enterprise Linux (RHEL) systems.

This report includes CVEs with a CVSS base score of 0.0 - 10.0; published anytime.

These CVEs apply to systems in your inventory tagged with satellite:activation_key=RHEL8_AK.

The vulnerability service identified 625 CVEs within this criteria that impact at least one of your 17 analyzed RHEL systems.
Of the identified CVEs, 4 CVEs have a known exploit.

CVE ID	Publish date	CVSS base score	Severity	Systems exposed	Business risk	Status
CVE-2019-18218	25 Aug 2019	9.8	Moderate	4	Not defined	Not reviewed
CVE-2019-25038	10 Dec 2019	9.8	Moderate	4	Not defined	Not reviewed
CVE-2019-25032	10 Dec 2019	9.8	Moderate	4	Not defined	Not reviewed
CVE-2019-25036	10 Dec 2019	9.8	Moderate	4	Not defined	Not reviewed
CVE-2019-25042	10 Dec 2019	9.8	Moderate	4	Not defined	Not reviewed
CVE-2019-25039	10 Dec 2019	9.8	Moderate	4	Not defined	Not reviewed
CVE-2019-25034	10 Dec 2019	9.8	Moderate	4	Not defined	Not reviewed
CVE-2019-25035	10 Dec 2019	9.8	Moderate	4	Not defined	Not reviewed
CVE-2020-9850 Known exploit	09 July 2020	9.8	Moderate	3	Not defined	Not reviewed
CVE-2020-9895	28 July 2020	9.8	Moderate	3	Not defined	Not reviewed

Known exploit: This CVE is identified with a "Known exploit" label because Red Hat has determined this CVE has a public exploit. This CVE is unpatched on your system. CVEs with this label should be addressed with high priority due to the risks posed by them. "Known exploit" does not mean we have taken steps to determine if the CVE has been exploited in your environment.
Security rule: Indicates a security rule associated with this CVE. Security rules are written by Red Hat to help you configure your systems.

3.1. CREATING A PDF REPORT OF CVES

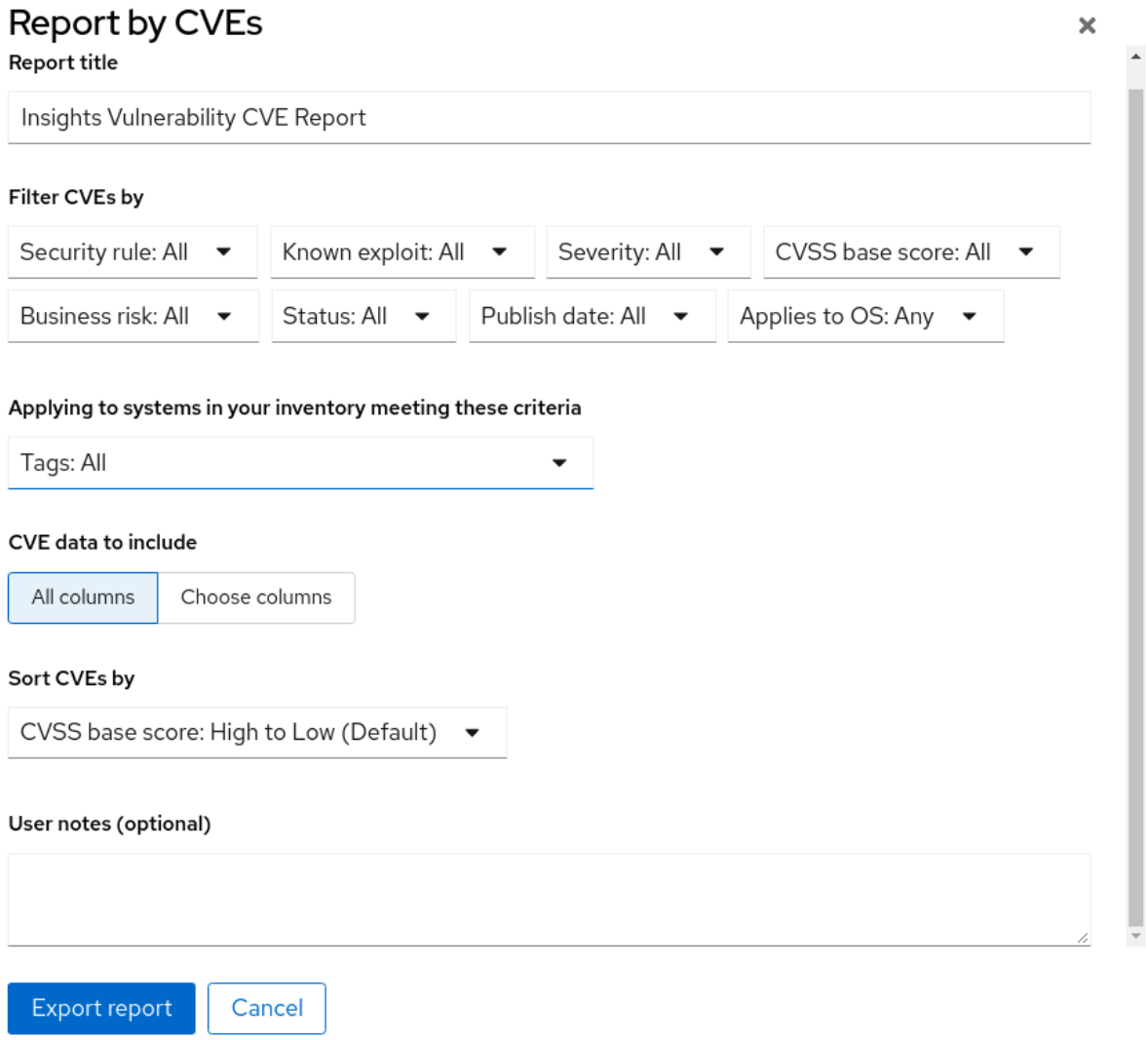
Use the following procedure to create a point-in-time snapshot of CVEs potentially affecting your systems.

Prerequisites

- You must be logged in to Red Hat Hybrid Cloud Console .

Procedure

1. Navigate to the Security > Vulnerability > Reports page in the Insights for Red Hat Enterprise Linux application.
2. On the **Report by CVEs** card, click **Create report**.
3. Make selections as needed in the pop-up card:



a. Optionally, customize the report title.

b. Under **Filter CVEs by**, click each filter dropdown and select a value.

c. Select **Tags** to only include systems in a tagged group of systems.

d. Under CVE data to include, **Choose columns** is activated by default, allowing you to deselect columns you do not want to include. Leave all boxes checked, or click **All columns** to show everything.

e. Optionally add notes to give the report context for the intended audience.

4. Click **Export report** and allow the application a minute to generate the report.

5. Select to open or save the PDF file, if your OS asks, and click **OK**.

CHAPTER 4. EXPORTING VULNERABILITY DATA AS JSON, CSV, OR PDF FILE

The vulnerability service enables you to export data for CVEs on systems in your RHEL infrastructure. After applying filters in the vulnerability service to view a specific set of CVEs or systems, you can export data based on those criteria.

These reports are accessible through the Red Hat Insights for Red Hat Enterprise Linux application and can be exported and downloaded as .csv, .json, or PDF files.

4.1. EXPORTING CVE DATA FROM THE VULNERABILITY SERVICE

Perform the following steps to export select data from the vulnerability service.

Procedure

1. Navigate to the Security > Vulnerability > CVEs page and log in if necessary.
2. Apply filters and use the sorting functionality at the top of each column to locate specific CVEs.
3. Above the list of CVEs and to the right of the Filters menu, click the **Export** icon,  , and select **Export to JSON**, **Export to CSV**, or **Export as PDF** based on your download preferences.
4. Select a download location and click **Save**.

CHAPTER 5. ENABLING NOTIFICATIONS AND INTEGRATIONS

You can enable the notifications service on Red Hat Hybrid Cloud Console to send notifications whenever a vulnerability event is triggered. For example, you can configure the notifications service to automatically send an email message whenever a security issue affects systems in your installation, or to send an email digest of all the vulnerability events that take place each day. Using the notifications service frees you from having to continually check the Red Hat Insights for RHEL dashboard for event-triggered notifications.

In addition to sending email messages, you can configure the notifications service to send event data in other ways:

- Using an authenticated client to query Red Hat Insights APIs for event data
- Using webhooks to send events to third-party applications that accept inbound requests
- Integrating notifications with applications such as Splunk to route event notifications to the application dashboard

A Notifications Administrator sets up behavior groups for events in the notifications service. Behavior groups specify the delivery method for each notification and whether the notifications are sent to all users, or just to Organization Administrators.

An Organization Administrator creates a User access group with the Notifications Administrator role, and then adds account members to the group.

Users who receive email notifications from events may set their user preferences so that they receive individual emails for each event, or a daily digest of events.

Additional resources

- For more information about how to set up notifications and integrations for Vulnerability events, see *Configuring notifications on the Red Hat Hybrid Cloud Console with FedRAMP* and *Integrating the Red Hat Hybrid Cloud Console with third-party applications* .

CHAPTER 6. REFERENCE MATERIALS

To learn more about the vulnerability service, or other Red Hat Insights for Red Hat Enterprise Linux services and capabilities, the following resources might also be of interest:

- *Assessing and Monitoring Security Vulnerabilities on RHEL Systems*
- Automation Toolkit > Remediations
- Red Hat Insights for Red Hat Enterprise Linux Documentation
- Red Hat Insights for Red Hat Enterprise Linux Product Support page

PROVIDING FEEDBACK ON RED HAT DOCUMENTATION

We appreciate and prioritize your feedback regarding our documentation. Provide as much detail as possible, so that your request can be quickly addressed.

Prerequisites

- You are logged in to the Red Hat Customer Portal.

Procedure

To provide feedback, perform the following steps:

1. Click the following link: Create Issue
2. Describe the issue or enhancement in the **Summary** text box.
3. Provide details about the issue or requested enhancement in the **Description** text box.
4. Type your name in the **Reporter** text box.
5. Click the **Create** button.

This action creates a documentation ticket and routes it to the appropriate documentation team. Thank you for taking the time to provide feedback.