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About this Guide

Thank you for your interest in Qualys Vulnerability Management, Detection, and Response (VMDR). Qualys VMDR expands the capabilities of the Qualys Cloud Platform to discover, assess, prioritize, and patch critical vulnerabilities in real time and across your global hybrid-IT landscape — all from a single solution.

About Qualys

Qualys, Inc. (NASDAQ: QLYS) is a pioneer and leading provider of cloud-based security and compliance solutions. The Qualys Cloud Platform and its integrated apps help businesses simplify security operations and lower the cost of compliance by delivering critical security intelligence on demand and automating the full spectrum of auditing, compliance and protection for IT systems and web applications.

Founded in 1999, Qualys has established strategic partnerships with leading managed service providers and consulting organizations including Accenture, BT, Cognizant Technology Solutions, Deutsche Telekom, Fujitsu, HCL, HP Enterprise, IBM, Infosys, NTT, Optiv, SecureWorks, Tata Communications, Verizon and Wipro. The company is also founding member of the Cloud Security Alliance (CSA). For more information, please visit www.qualys.com

Qualys Support

Qualys is committed to providing you with the most thorough support. Through online documentation, telephone help, and direct email support, Qualys ensures that your questions will be answered in the fastest time possible. We support you 7 days a week, 24 hours a day. Access support information at www.qualys.com/support/
About VMDR

Vulnerability Management, Detection and Response (VMDR) enables you to discover, assess, prioritize, and patch critical vulnerabilities and misconfigurations in real time and across your global hybrid-IT landscape all in one solution. This helps you reduce your total time to remediate and secure your environment faster.

It helps you get continuous vulnerability assessments with cloud agents, network level visibility using network scanners and multiple types of sensors' and leverages artificial intelligence to instantly assess and prioritize threats based on relevant context.

VMDR starts with asset discovery and inventory to make sure you have an accurate account of all devices in your environment.

We’ll help you get started quickly!

Know your Subscription Type

If you are a VM customer you can be upgraded to experience VMDR features and you can then choose to purchase VMDR to get additional features.

With this upgrade you get

- Asset inventory across environments like: Certificate, Cloud, Container, Mobile Devices
- Unlimited sensors to help you identify those assets: Virtual Passive Sensors, Cloud Agents, Mobile Agents, Container Sensors
- Search any asset in seconds using over 200+ searchable attributes
- Customizable dashboards and widgets with trending information

Once you upgrade to VMDR you’ll also get

- Security Configuration Assessment to start configuration assessment and identify security misconfigurations on your assets based on CIS benchmarks
- Threat-based Prioritization based on continuously updated Real-time threat indicators
- Real-time Alerting by email of critical vulnerabilities and changes to your external perimeter, etc.
- Detection of missing patches in context of the detected vulnerabilities
- Initiate deployment of missing patches from the Prioritization report directly

Note: Deployment of patches is available only for customers with the Patch Management add-on
How does it work?

With VMDR, you will be able to accomplish real time asset discovery and vulnerability information, prioritizing or short listing the vulnerabilities according to the threat intelligence and detecting and deploying right remedial patches at the click of a button.

Identify Assets

Start identifying assets by installing Cloud Agents or upgrading existing agents for VMDR. Assign tags to categorize and organize your assets. You can also use other methods such as Scanners, Passive Sensor, Cloud Inventory, Container Inventory, Mobile Device Inventory to build your inventory. To know more refer to Identify your Assets

Discover Vulnerabilities & Misconfigurations

Our always up-to-date signature database continuously discovers software vulnerabilities and identifies security misconfigurations. Get a complete view of your vulnerability posture from an asset and vulnerability point of view in the Vulnerabilities tab. To know more refer to Discover Vulnerabilities

Prioritize Threats

Run the VMDR Prioritization report to prioritize most critical risk based on vulnerabilities on your assets based on real-time threat indicators and identify what to remediate first. To know more refer to VMDR Prioritization Report

Detect & Deploy Missing Patches

Deploy the most relevant superseding patches depending on your prioritization report from the Patch Management app. To know more refer to Patch Management
Identify your Assets

Set up your Cloud Agents, scanners and sensors so as to continuously discover and build inventory of your IT assets that are on-prem, cloud, mobile, container, applications providing 100% real-time visibility.

Get Started with Cloud Agents

Start building your inventory by installing new cloud agents or by upgrading your existing cloud agents for VMDR.

VMDR requires the activation of a purpose-built engine for detecting missing patches for Cloud Agents. While this engine is extremely lightweight and efficient, activating Cloud Agents for VMDR will require a 20MB download and 100MB of free space on each host for these components.

Install new agents
Upgrade existing agents

Know the requirements

Here are the system requirements for installing and running Cloud Agents:

- Host must reach Qualys Cloud Platform (or Qualys Private Cloud Platform) over HTTPS port 443
- (Windows) Local administrator privileges on the host. Proxy configuration is supported.
- (Linux, Mac, AIX) Root privileges, non-root with sudo root delegation, or non-root with sufficient privileges. Proxy configuration is supported.
Install new agents

Navigate to the Welcome option in the Help menu to view the Welcome page. In the Identify Assets section click the Download Cloud Agent button.

Select an OS and download the agent installer to your local machine. Run the installer on each host from an elevated command prompt.

For example, click Windows and follow the agent installation instructions displayed on the page. We provide you with a default AI activation key for the agent installation. To add or manage your keys, go to Cloud Agent > Agent Management.
Upgrade existing agents

Navigate to the Welcome option in the Help menu to view the Welcome page. In the Identify Assets section click the Configure Agents for VMDR button.

Select the desired activation keys and click Upgrade. The selected activation keys will be upgraded for VMDR.

To know more download the Cloud Agent Getting Started Guide.
What are the other ways to find assets

You can also build your inventory for on-prem (devices and applications), mobile, endpoints, clouds, containers, OT and IoT assets using scanners, sensors, or connectors.

Navigate to the Welcome option in the Help menu to view the Welcome page. In the Identify Assets section select how you want to start configuring your inventory.

What’s next?

You will start viewing all your assets and vulnerability details in the Vulnerability tab in VMDR.
Discover Vulnerabilities

Once your inventory is built, you can view the vulnerability posture of your assets in the Vulnerability tab. You can search for vulnerabilities by vulnerability and by asset. All the assets and their associated vulnerability details that are identified by cloud agents, scanners and sensors are listed in the Vulnerabilities tab.

Switch between the Asset and Vulnerability view and drill down to a specific asset or vulnerability. From the Quick Action menu, click View Details to get more information.

In case the vulnerability is Qualys patchable and you have the Patch Management add on enabled in your subscription then you can view the Patch Now option in the details view, which helps you initiate the deployment workflow in Patch Management. In case you have a free version of Patch Management then you can only view the list of missing patches.

If you have the Security Configuration Assessment add-on then you can also do configuration assessment and identify security misconfigurations on your assets based on CIS benchmarks.
VMDR Prioritization Report

The VMDR Prioritization report allows you to automatically prioritize the riskiest vulnerabilities on your most critical assets – reducing potentially thousands of discovered vulnerabilities, to the few that matter.

The Prioritization report:

- Guides you to focus resources in the right area to first patch the highest risk vulnerabilities.

- Increases the security posture of your organization by identifying and remediating the vulnerabilities that are likely to get exploited in the wild by threat actors.

- Empowers security analysts to pick and choose the relevant threat indicators. For example, if an organization has financial data of users, they can prioritize vulnerabilities based on ‘High Data Loss’ indicator to first identify and remediate vulnerabilities that may result in data exfiltration, if exploited.

- Helps you identify the specific patch that fixes a particular vulnerability.

- Reduces remediation time by detecting the patch to be deployed from the same platform in an integrated workflow, at the click of a button (if Patch Management app is enabled in your subscription).

Generating Prioritization Report

Using real-time threat intelligence, we help you detect and prioritize the vulnerabilities to remediate first, based on your environment. The report also indicates the most critical threats and prioritizes patching.

Before you start generating the prioritization report, ensure that you have gathered the vulnerability posture for the assets. You could build your asset inventory using Cloud Agents or other methods such as Scanners, Passive Sensor, Cloud Inventory, Container Inventory, Mobile Device Inventory. All the assets and their associated vulnerability details that are identified by cloud agents and sensors are listed in the Vulnerabilities tab. Refer to Identify your Assets

1. Go to Prioritization > Reports and click Create Report. If you are generating the report for the first time, click on the Prioritization tab.

2. Select the Asset tags to narrow down your prioritized list to vulnerabilities associated with the assets you select and then click Arrow button to proceed with VMDR prioritization report. to proceed ahead.

You need to select at least one asset tag before you proceed ahead.

3. Select the various filters for VMDR Prioritization report.
Age: Select the detection or vulnerability age tab and then select the time filters. By default, the detection age filter is selected. Your report includes vulnerabilities that match the selected age range.

Real-Time Threat Indicators: Select the Real-Time Threat Indicators (RTIs) that you’re interested in. Your report will include vulnerabilities that match “any” of the selected RTIs.

Attack Surface: Select these filters to remove vulnerabilities from the report that aren’t the highest priority so you can focus on what’s most critical to your organization.

4. Click Prioritize Now to enable the threat intelligence to prioritize the riskiest vulnerabilities on your network for the assets you selected.

Once you generate the report, you could proceed with patching the vulnerabilities (if Patch Management app is enabled in your subscription), export the report in the form of a widget to your dashboard or download the report in CSV format.
Reading the VMDR Prioritization Report

Using the VMDR Prioritization Report, you can detect which vulnerabilities to remediate first. The report contains of two sections: Summary and Details.

Summary

The Summary section of the VMDR Prioritization report displays the findings with the following three sections:

Prioritized Assets

Depending on the asset tags that you choose, the assets are identified for this report. Prioritized Assets is the count of assets out of the total assets with vulnerabilities that meet the combination of the detection age, RTIs, and attack vectors you selected.

In the above example, 8 assets matched the selected asset tags. Out of the 8 assets, 2 assets had vulnerabilities that met the combination of the selected detection age, RTIs, and attack surface.

Prioritized Vulnerabilities

The Prioritized Vulnerabilities section displays a summary of prioritized vulnerabilities that are detected on the assets.

**Instances**: The count indicates the total number of vulnerabilities that meet the combination of the detection age, RTIs, and attack surface you selected.

The count may include multiple occurrences of a single vulnerability (that is a single QID) detected on multiple assets.

In the above example, 154 vulnerabilities were detected on the 8 assets. Out of the 154 vulnerabilities, 8 vulnerabilities met the combination of the selected detection age, RTIs, and attack surface across the 2 assets.

**Unique**: The count of unique vulnerabilities (excluding duplicate QID instances) out of the vulnerability instances identified/detected.

In the above example, out of the 8 instances, 6 are unique vulnerabilities.
Available Patches
Count of the patches that are available with Qualys. Click Patch Now to initiate the process of patching the vulnerabilities. For more details refer to Patch Management.

Note: The Patch Now button is enabled only when Qualys can automatically patch the vulnerability and the Patch Management app is enabled in your subscription.

Details
The details section includes detailed information about prioritized vulnerabilities, patches and prioritized assets. Use the tabs to toggle between the three views. The Vulnerabilities, Patches, and Assets tabs offer advanced search capabilities using tokens.

Advanced Search
You can search with multiple criteria in a single go.
Start typing in the Search field and we’ll show you the properties you can search such as vulnerability severity, detection age, etc. Select the one you’re interested in.
Click the + sign for a combined Vulnerability and Asset search.

Start typing and we’ll show you the asset properties you can search like agentId, agent version, etc. Select the one you’re interested in.

Now, enter the value you want to match, and press Enter. Your matches will appear in respective tab.

Once you have your search results ready, you may want to organize them further into logical groupings. We offer several group by options such as detection age, vulnerability age severity and more.

You’ll see the number of unique groupings based on your selection and the number of vulnerabilities per group. Click on any grouping to update the search query and view the matching vulnerabilities.

**Export To Dashboard**

You can export the VMDR Prioritization report to dashboard in the form of a widget and continuously monitor the widget to check the vulnerabilities on the prioritized assets.

Here are the steps to export the report to your dashboard.

Note: The Export to Dashboard button is enabled only after you have generated the report.

1) On the VMDR Prioritization report, click Export to Dashboard.

2) Provide a name for the widget.
3) Select the Dashboard you want to add the widget to and then click Export. The widget is added to the dashboard.

**Download Reports (CSV format)**

You can save or save and download the VMDR prioritization report to your local system in a single click. On saving, the report is saved in the report list on Prioritization tab.

Here are the steps:

Note: The Save & Download button is enabled only after you have generated the VMDR Prioritization report.

1) On the VMDR Prioritization report, click Save & Download.
2) Provide a name and description (optional) for the report.
3) Select the details from vulnerabilities, patches, and assets that you want to include in the report.

**Vulnerabilities:** Including vulnerabilities provides you with two options:

- **Grouped (Unique):** Includes the list of unique vulnerabilities along with the count of assets, where the vulnerability was detected.
- **All Instances:** Includes the list of all vulnerabilities. For every vulnerability, we also include the list of all assets on which it was detected.

**Patches:** Includes the list of available patches

**Assets:** Includes the list of assets on which the vulnerabilities were detected.

4) Choose the report format: CSV or PDF for your report.

Note: Including All instances related vulnerability data in the report supports only CSV format.

5) If required, you can change timezones for dates included in report using the Select Timezone option. By default, the browser’s time zone is used to report dates in the report.

6) Click Save or Save & Download.

On clicking Save, the VMDR prioritization report is saved to the reports list. On clicking Save & Download, the VMDR Prioritization report is saved to the report list and downloaded to your local system.

Note: The report file you download can include maximum 5000 records of the online report for each category: vulnerability, assets, and patches.
Patch Management

In the VMDR Prioritization report you can view the assets and vulnerabilities that can be patched by Qualys. You can initiate the patching process and patch the vulnerabilities directly from the report.

Note: Deployment of patches is available directly from the VMDR Prioritization report only for customers with the Patch Management add-on.

Patch Vulnerabilities from VMDR Report

The Summary section of the VMDR Prioritization report displays findings with the following three sections:

The Available Patches widget shows the count of the patches that are available with Qualys. Click Patch Now to initiate the process of patching the vulnerabilities.

Note: The Patch Now button is enabled only when Qualys can automatically patch the vulnerability and the Patch Management app is enabled in your subscription.

To initiate the patching process click the Patch Now button and choose to perform one of the 3 actions:

Add to New Job - Opens the wizard to create a new job in the Patch Management app. Follow the instructions in the wizard and initiate the patching process by creating a new job.

Add to Existing Job - Displays the list of existing jobs in the Patch Management app. Choose from one of the existing jobs (disabled state) and click Add. You can add maximum 200 patches to a single job. You cannot add patches to OnDemand or run-once (non recurring) jobs, once they are enabled.
**View Missing Patches** - Displays the list of missing patches for the prioritized assets and vulnerabilities. In case you have a free version of Patch Management then you can only view the list of missing patches. You will need to upgrade to the paid version of Patch Management app to initiate deployment job workflows from the Patch Now option.

For more information, refer to the **Patch Management User Guide**.