

IBM Security QRadar Risk Manager
Version 7.3

Getting Started Guide

IBM

Note

Before you use this information and the product that it supports, read the information in “Notices” on page 23.

Product information

This document applies to IBM QRadar Security Intelligence Platform V7.3.0 and subsequent releases unless superseded by an updated version of this document.

© Copyright IBM Corporation 2012, 2017.

US Government Users Restricted Rights – Use, duplication or disclosure restricted by GSA ADP Schedule Contract with IBM Corp.

Contents

Introduction to IBM Security QRadar Risk Manager	v
Chapter 1. Get started with IBM Security QRadar Risk Manager.	1
Chapter 2. Deploy IBM Security QRadar Risk Manager.	3
Before you install.	3
Configure port access on firewalls	3
Identify network settings	4
Unsupported features in IBM Security QRadar Risk Manager	4
Supported web browsers	4
Enabling document mode and browser mode in Internet Explorer	5
Access the IBM Security QRadar Risk Manager user interface	5
Setting up a IBM Security QRadar Risk Manager appliance.	5
Adding IBM Security QRadar Risk Manager to IBM Security QRadar SIEM Console	6
Establishing communication	7
Adding the Risk Manager user role.	8
Chapter 3. Manage audits	9
Use case: Device configuration audit	9
Viewing device configuration history	9
Comparing device configurations for a single device	10
Comparing device configurations for different devices	11
Use case: View network paths in the topology.	11
Searching the topology	12
Chapter 4. Use case: Monitor policies	15
Use case: Assess assets that have suspicious configurations	15
Assessing devices that allow risky protocols	16
Use case: Assess assets with suspicious communication.	16
Finding assets that allow communication	16
Use case: Monitor policies for violations.	17
Configuring a question	17
Risk priority by vulnerability	18
Finding assets with specific vulnerabilities	18
Chapter 5. Use cases for simulations	19
Use case: Simulate attacks on network assets	19
Creating a simulation	19
Use case: Simulate the risk of network configuration changes.	20
Creating a topology model	20
Simulating an attack	20
Notices	23
Trademarks	24
Terms and conditions for product documentation.	25
IBM Online Privacy Statement	25
Index	27

Introduction to IBM Security QRadar Risk Manager

This information is intended for use with IBM® QRadar® Risk Manager. QRadar Risk Manager is an appliance used to monitor device configurations, simulate changes to your network environment, and prioritize risks and vulnerabilities in your network.

Intended audience

This guide is intended for network administrators that are responsible for installing and configuring QRadar Risk Manager systems in your network.

Technical documentation

To find IBM Security QRadar product documentation on the web, including all translated documentation, access the IBM Knowledge Center (<http://www.ibm.com/support/knowledgecenter/SS42VS/welcome>).

For information about how to access more technical documentation in the QRadar products library, see *Accessing IBM Security Documentation Technical Note* (www.ibm.com/support/docview.wss?rs=0&uid=swg21614644).

Contacting customer support

For information about contacting customer support, see the *Support and Download Technical Note* (<http://www.ibm.com/support/docview.wss?uid=swg21616144>).

Statement of good security practices

IT system security involves protecting systems and information through prevention, detection and response to improper access from within and outside your enterprise. Improper access can result in information being altered, destroyed, misappropriated or misused or can result in damage to or misuse of your systems, including for use in attacks on others. No IT system or product should be considered completely secure and no single product, service or security measure can be completely effective in preventing improper use or access. IBM systems, products and services are designed to be part of a lawful comprehensive security approach, which will necessarily involve additional operational procedures, and may require other systems, products or services to be most effective. IBM DOES NOT WARRANT THAT ANY SYSTEMS, PRODUCTS OR SERVICES ARE IMMUNE FROM, OR WILL MAKE YOUR ENTERPRISE IMMUNE FROM, THE MALICIOUS OR ILLEGAL CONDUCT OF ANY PARTY.

Please Note:

Use of this Program may implicate various laws or regulations, including those related to privacy, data protection, employment, and electronic communications and storage. IBM Security QRadar may be used only for lawful purposes and in a lawful manner. Customer agrees to use this Program pursuant to, and assumes all responsibility for complying with, applicable laws, regulations and policies. Licensee represents that it will obtain or has obtained any consents, permissions, or licenses required to enable its lawful use of IBM Security QRadar.

Chapter 1. Get started with IBM Security QRadar Risk Manager

IBM Security QRadar Risk Manager is a separately installed appliance. Use QRadar Risk Manager to monitor device configurations, simulating changes to your network environment, and prioritize risks and vulnerabilities in your network.

QRadar Risk Manager is accessed from the **Risks** tab on the IBM Security QRadar SIEM Console.

QRadar Risk Manager enhances QRadar SIEM by providing administrators with tools to complete the following tasks:

- Centralize risk management.
- Use a topology to view your network.
- Configure and monitor network devices.
- View connections between network devices.
- Search firewall rules.
- View existing rules and the event count for triggered rules.
- Search for devices and paths for your network devices.
- Monitor and audit your network to ensure compliance.
- Define, schedule, and run exploit simulations on your network.
- Search for vulnerabilities.

Centralized risk management and compliance for increased intelligence of information might involve the cooperation of many internal teams. As a next generation SIEM with an additional Risk Management appliance, we reduce the number of steps that are required from first-generation SIEM products. We provide network topology and risk assessment for assets that are managed in QRadar SIEM.

During the evaluation process, you consolidate your system, security, risk analysis, and network information through aggregation and correlation, providing complete visibility into your network environment. You also define a portal to your environment, which provides visibility and efficiency that you cannot achieve by using manual processes and other point product technologies.

Chapter 2. Deploy IBM Security QRadar Risk Manager

Your QRadar Risk Manager appliance is installed with the latest version of QRadar Risk Manager software.

You must install the QRadar Risk Manager evaluation appliance. The software requires activation and you must assign an IP address to the QRadar Risk Manager appliance.

The appliance is ready to accept information from your network devices.

For information about using QRadar Risk Manager, see the *IBM Security QRadar Risk Manager User Guide*.

To deploy QRadar Risk Manager in your environment, you must:

1. Ensure that the latest version of IBM Security QRadar SIEM is installed.
2. Ensure all pre-installation requirements are met.
3. Set-up and power on your QRadar Risk Manager appliance.
4. Install the QRadar Risk Manager plug-in on your IBM Security QRadar SIEM Console.
5. Establish communication between QRadar SIEM and the QRadar Risk Manager appliance.
6. Define user roles for your QRadar Risk Manager users.

Before you install

You must complete the installation process for an IBM Security QRadar SIEM Console before you install IBM Security QRadar Risk Manager. As a best practice, install QRadar SIEM and QRadar Risk Manager on the same network switch.

Before you install the QRadar Risk Manager evaluation appliance, ensure that you have:

- space for a two-unit appliance
- rack rails and shelving that are mounted

Optionally, you might want a USB keyboard and standard VGA monitor to access the QRadar SIEM Console.

Configure port access on firewalls

Firewalls between the IBM Security QRadar SIEM Console and IBM Security QRadar Risk Manager must allow traffic on certain ports.

Ensure that any firewall located between the QRadar SIEM Console and QRadar Risk Manager allows traffic on the following ports:

- Port 443 (HTTPS)
- Port 22 (SSH)
- Port 37 UDP (Time)

Identify network settings

You must gather information about your network settings before starting the installation process.

Gather the following information for your network settings:

- Host name
- IP address
- Network mask address
- Subnet mask
- Default gateway address
- Primary Domain Name System (DNS) server address
- Secondary DNS server (optional) address
- Public IP address for networks that use Network Address Translation (NAT) email server name
- Email server name
- Network Time Protocol (NTP) server (Console only) or time server name

Unsupported features in IBM Security QRadar Risk Manager

It is important to be aware of the features that are not supported by QRadar Risk Manager.

The following features are not supported in QRadar Risk Manager:

- High availability (HA)
- Dynamic Routing for Border Gateway Protocol (BGP)
- IPv6
- Non-contiguous network masks
- Load-balanced routes

Supported web browsers

For the features in IBM Security QRadar products to work properly, you must use a supported web browser.

The following table lists the supported versions of web browsers.

Table 1. Supported web browsers for QRadar products

Web browser	Supported versions
Mozilla Firefox	45.2 Extended Support Release
64-bit Microsoft Internet Explorer with Microsoft Edge mode enabled.	11.0
Google Chrome	54 and 55

Enabling document mode and browser mode in Internet Explorer

If you use Microsoft Internet Explorer to access IBM Security QRadar products, you must enable browser mode and document mode.

Procedure

1. In your Internet Explorer web browser, press F12 to open the Developer Tools window.
2. Click **Browser Mode** and select the version of your web browser.
3. Click **Document Mode**, and select the **Internet Explorer standards** for your Internet Explorer release.

Access the IBM Security QRadar Risk Manager user interface

IBM Security QRadar Risk Manager uses default login information for the URL, user name, and password.

You access QRadar Risk Manager through the IBM Security QRadar SIEM Console. Use the information in the following table when you log in to your QRadar Console.

Table 2. Default login information for QRadar Risk Manager

Login information	Default
URL	https://<IP address>, where <IP address> is the IP address of the QRadar Console.
User name	admin
Password	The password that is assigned to QRadar Risk Manager during the installation process.
License key	A default license key provides access to the system for 5 weeks.

Setting up a IBM Security QRadar Risk Manager appliance

You must connect the management interface and ensure that the power connections are plugged into the IBM Security QRadar Risk Manager appliance.

Before you begin

Read, understand, and obtain the prerequisites.

About this task

The QRadar Risk Manager evaluation appliance is a two-unit rack mount server. Rack rails and shelving are not provided with evaluation equipment.

The QRadar Risk Manager appliance includes four network interfaces. For this evaluation, use the network interface that is labeled ETH0 as the management interface. The other interfaces are monitoring interfaces. All of the interfaces are on the back panel of the QRadar Risk Manager appliance.

The power button is on the front panel.

Procedure

1. Connect the management network interface to the port labeled ETH0.
2. Ensure that the dedicated power connections are plugged into the rear of the appliance.
3. Optional. To access the IBM Security QRadar SIEM Console, connect the USB keyboard and a standard VGA monitor.
4. If there is a front pane on the appliance, remove the pane by pushing in the tabs on either side and pull the pane away from the appliance.
5. Press the power button on the front to turn on the appliance.

Results

The appliance begins the boot process.

Adding IBM Security QRadar Risk Manager to IBM Security QRadar SIEM Console

You must add IBM Security QRadar Risk Manager as a managed host to IBM Security QRadar SIEM Console.

Before you begin

If you want to enable compression, then the minimum version for each managed host must be QRadar Console V7.1 or QRadar Risk Manager V7.1.

To add a managed host that is not NATed to your deployment where the Console is NATed, you must change the QRadar Console to a NATed host. You must change the console before you add the managed host to your deployment. For more information, see the *IBM Security QRadar Administration Guide*.

Procedure

1. Open your web browser.
2. Type the URL, `https://<IP Address>`, where `<IP Address>` is the IP address of the QRadar Console.
3. Type your user name and password.
4. Click the **Admin** tab.
5. In the System Configuration pane, click **System and License Management**.
6. In the System and License Management window, click **Deployment Actions**, and then select **Add Host**.
7. Enter values for the following parameters:

Option	Description
Host IP	The IP address of QRadar Risk Manager.
Host Password	The root password for the host.
Confirm Host Password	Confirmation for your password.
Encrypt Host Connections	Creates an SSH encryption tunnel for the host. To enable encryption between two managed hosts, each managed host must be running QRadar Console V7.1 or QRadar Risk Manager V7.1.

Option	Description
Encryption Compression	Enables data compression between 2 managed hosts.
Network Address Translation	To enable NAT for a managed host, the NATed network must be using static NAT translation. For more information, see the <i>IBM Security QRadar Administration Guide</i> .

8. If you select the **Network Address Translation** check box, then you must enter values for the NAT parameters:

Option	Description
NAT Group	The network that you want this managed host to use. If the managed host is on the same subnet as the QRadar Console, select the console of the NATed network. If the managed host is not on the same subnet as the QRadar Console, select the managed host of the NATed network.
Public IP	The public IP address of the managed host. The managed host uses this IP address to communicate with other managed hosts in different networks that use NAT.

9. Click **Add**. This process can take several minutes to complete. If your deployment includes changes, then you must deploy all changes.
10. From the **Admin** tab, click **Advanced > Deploy Full Configuration**.

What to do next

Clear your web browser cache and then log in to QRadar Console. The **Risks** tab is now available.

Establishing communication

You must establish communication between your IBM Security QRadar Risk Manager appliance and your IBM Security QRadar SIEM Console before you set up and configure QRadar Risk Manager.

About this task

The process to establish communications might take several minutes to complete. If you change the IP address of your QRadar Risk Manager appliance or need to connect QRadar Risk Manager to another QRadar SIEM console, you can use the **Risk Manager Settings** on the QRadar SIEM **Admin** tab.

Procedure

1. Open your web browser, and then clear the web browser cache.
2. Log in to QRadar SIEM. For information about the IP address, user name or root password, see *Accessing the IBM Security QRadar Risk Manager user interface*.
3. Click the **Risks** tab.

4. Type values for the following parameters:

Option	Description
IP/Host	The IP address or host name of the QRadar Risk Manager appliance
Root Password	The root password of the QRadar Risk Manager appliance.

5. Click **Save**.

What to do next

Define user roles.

Adding the Risk Manager user role

You must assign the Risk Manager user role to provide access to IBM Security QRadar Risk Manager.

About this task

By default, IBM Security QRadar SIEM provides a default administrative role, which provides access to everything in QRadar Risk Manager. A user that is assigned administrative privileges, including the default administrative role, cannot edit their own account. Another administrative user must make any required changes.

For information about creating and managing user roles, see the *IBM Security QRadar Administration Guide*.

Procedure

1. Click the **Admin** tab.
2. On the navigation menu, click **System Configuration**.
3. In the **User Management** pane, click **User Roles**.
4. In the left pane, select the user role that you want to edit.
5. Select the **Risk Manager** check box.
6. Click **Save**
7. Click **Close**.
8. On the **Admin** tab, click **Deploy Changes**.

Chapter 3. Manage audits

IBM Security QRadar Risk Manager helps to simplify the assessment of network security policies and compliance requirements by helping you answer questions.

Compliance auditing is a necessary and complex task for security administrators. QRadar Risk Manager helps you answer the following questions:

- How are my network devices configured?
- How are my network resources communicating?
- Where is my network vulnerable?

Use case: Device configuration audit

You can use the configuration information for network devices, which is captured by IBM Security QRadar Risk Manager, for audit compliance and to schedule configuration backups.

Configuration backups provide a centralized and automatic method of recording device changes for your audit compliance. Configuration backups archive configuration changes and provide a historical reference; you can capture a historical record or compare a configuration against another network device.

Configuration auditing in QRadar Risk Manager provides you with the following options:

- A historical record of your network device configurations.
- A normalized view, which displays device changes when you compare configurations.
- A tool to search for rules on your device.

The configuration information for your devices is collected from device backups in Configuration Source Management. Each time QRadar Risk Manager backs up your device list, it archives a copy of your device configuration to provide a historical reference. The more often you schedule Configuration Source Management, the more configuration records you have for comparison and for historical reference.

Viewing device configuration history

You can view the configuration history of a network device.

About this task

You can view history information for network devices that were backed up. This information is accessible from the **History** pane on the **Configuration Monitor** page. The history pane provides information about a network device configuration and the date that the device configuration was last backed up using Configuration Source Management.

The configuration displays the type of files that are stored for your network device in IBM Security QRadar Risk Manager. The common configuration types are:

- **Standard-Element-Document (SED)**, which are XML data files that contain information about your network device. Individual SED files are viewed in their

raw XML format. If an SED is compared to another SED file, then the view is normalized to display the rule differences.

- **Config**, which are configuration files that are provided by certain network devices. These files depend on the device manufacturer. A configuration file can be viewed by double-clicking the configuration file.

Note: Depending on your device, several other configuration files might be displayed. Double-clicking these files displays the contents in plain text. The plain text view supports the find (Ctrl +f), paste (Ctrl+v), and copy (Ctrl+C) functions from the web browser window.

Procedure

1. Click the **Risks** tab.
2. On the navigation menu, click **Configuration Monitor**.
3. Double-click a configuration to view the detailed device information.
4. Click **History**.
5. On the **History** pane, select a configuration.
6. Click **View Selected**.

Comparing device configurations for a single device

You can compare device configurations for a single device.

About this task

If the files that you compare are Standard-Element-Documents (SEDs), then you can view the rule differences between the configuration files.

When you compare normalized configurations, the color of the text indicates the following rules:

- Green dotted outline indicates a rule or configuration that was added to the device.
- Red dashed outline indicates a rule or configuration that was deleted from the device.
- Yellow solid outline indicates a rule or configuration that was modified on the device.

Procedure

1. Click the **Risks** tab.
2. On the navigation menu, click **Configuration Monitor**.
3. Double-click any device to view the detailed configuration information.
4. Click **History** to view the history for this device.
5. Select a primary configuration.
6. Press the Ctrl key and select a second configuration for comparison.
7. On the **History** pane, click **Compare Selected**.
8. Optional. To view the raw configuration differences, click **View Raw Comparison**. If the comparison is for a configuration file or another backup type, then the raw comparison is displayed.

Comparing device configurations for different devices

You can compare configurations for different devices. If the files that you compare are Standard-Element-Documents (SEDs), then you can view the rule differences between the configuration files.

About this task

When you compare normalized configurations, the color of the text indicates the following rules:

- Green dotted outline indicates a rule or configuration that was added to the device.
- Red dashed outline indicates a rule or configuration that was deleted from the device.
- Yellow solid outline indicates a rule or configuration that was modified on the device.

Procedure

1. Click the **Risks** tab.
2. On the navigation menu, click **Configuration Monitor**.
3. Double-click any device to view the detailed configuration information.
4. Click **History** to view the history for this device.
5. Select a primary configuration.
6. Click **Mark for Comparison**.
7. From the navigation menu, select **All Devices** to return to the device list.
8. Double-click the device to compare and click **History**.
9. Select another configuration backup to compare with the marked configuration.
10. Click **Compare with Marked**.
11. Optional. To view the raw configuration differences, click **View Raw Comparison**. If the comparison is for a configuration file or another backup type, then the raw comparison is displayed.

Use case: View network paths in the topology

The topology in IBM Security QRadar Risk Manager displays a graphical representation of your network devices.

A topology path search can determine how your network devices are communicating and the network path that they use to communicate. Path searching allows QRadar Risk Manager to visibly display the path between a source and destination, along with the ports, protocols, and rules.

You can view how devices communicate, which is important on secured or restricted access assets.

Key features include:

- Ability to view communications between devices on your network.
- Use filters to search the topology for network devices.
- Quick access to view device rules and configuration.
- Ability to view events that are generated from a path search.

Searching the topology

Topology search is used to filter your network topology view, and zone in on network paths, hosts, subnets, and other network elements. Investigate various elements of your network infrastructure by using topology search.

About this task

A path search is used to filter the topology model. A path search includes all network subnets that contain the source IP addresses or CIDR ranges and subnets that contain destination IP addresses or CIDR ranges that are also allowed to communicate by using the configured protocol and port. The search examines your existing topology model and includes the devices that are involved in the communication path between the source and destination and detailed connection information.

Procedure

1. Click the **Risks** tab.
2. On the navigation menu, click **Topology**.
3. From the **Search** list box, select **New Search**.
4. In the **Search Criteria** pane, select **Path**.
5. In the **Source IP/CIDR** field, type the IP address or CIDR range on which you want to filter the topology model. Separate multiple entries by using a comma.
6. In the **Destination IP/CIDR** field, type the destination IP address or CIDR range on which you want to filter the topology model. Separate multiple entries by using a comma.
7. Optional: From the **Protocol** list, select the protocol that you want to use to filter the topology model.
8. Optional: In the **Destination Port** field, type the destination port on which you want to filter the topology model. Separate multiple ports by using a comma.
9. Optional: Select a protocol from the **Protocol** menu.
10. Optional: Type a destination port.
11. Optional: Click **Select Applications**.
 - a. From the **Device Adapter** menu, select the device adapter type.
 - b. Type a partial or full search term or leave the **Application Name** field empty, and then click **Search**.
 - c. Select any of the displayed applications in the **Search Results** field, and click **Add** to add your selections to the **Selected Items** box.
 - d. Click **OK**.
12. Optional: Click **Select Vulnerabilities**.
 - a. From the **Search By** menu, select the vulnerability category.
 - b. In the **Field** beside the **Search By** menu, enter the ID number of the vulnerability.
 - c. Click **Search**.
 - d. Select any of the displayed vulnerabilities in the **Search Results** field, and then click **Add** to add your selections to the **Selected Items** box.
 - e. Click **Save**.

If your topology includes an Intrusion Prevention System (IPS), the vulnerabilities search option is displayed. For more information, see the *IBM Security QRadar Risk Manager User Guide*.

13. Optional: Click **Select Users/Groups**.
 - a. Type a partial or full search term or leave the **User/Group Name** field empty, and then click **Search**.
 - b. Select the user or group name in the **Search Results** field, and then click **Add** to add your selections to the **Selected Items** box.
 - c. Click **OK**, and then click **Search**.
14. Click **Search** to view the results.

Chapter 4. Use case: Monitor policies

Policy auditing and change control are fundamental processes that allow administrators and security professionals to control access and communications between critical business assets.

The criteria for policy monitoring can include monitoring of assets and communications for the following scenarios:

- Does my network contain assets with risky configurations for PCI Section 1 audits?
- Do my assets allow communications using risky protocols for PCI Section 10 audits?
- How do I know when a policy change puts my network in violation?
- How do I view vulnerabilities for hardened or high risk assets?

Use Policy Monitor to define tests that are based on the risk indicators, and then restrict the test results to filter the query for specific results, violations, protocols, or vulnerabilities.

IBM Security QRadar Risk Manager includes several Policy Monitor questions that are grouped by PCI category. For example, PCI 1, PCI 6, and PCI 10 questions. Questions can be created for assets or devices and rules to expose network security risk. After a question about an asset or a device/rule is submitted to Policy Monitor, the returned results specify the level of risk. You can approve results that are returned from assets or define how you want the system to respond to unapproved results.

Policy Monitor provides the following key features:

- Predefined Policy Monitor questions to assist with workflow.
- Determines if users used forbidden protocols to communicate.
- Assessing if users on specific networks can communicate to forbidden networks or assets.
- Assessing if firewall rules meet corporate policy.
- Continuous monitoring of policies that generate offenses or alerts to administrators.
- Prioritizing vulnerabilities by assessing which systems can be compromised as a result of device configuration.
- Help identifying compliance issues.

Use case: Assess assets that have suspicious configurations

Organizations use corporate security policies to define risks and the communications that are allowed between assets and networks. To assist with compliance and corporate policy breaches, organizations use Policy Monitor to assess and monitor risks that might be unknown.

PCI compliance dictates that you identify devices that contain cardholder data, then diagram, verify communications, and monitor firewall configurations to protect assets that contain sensitive data. Policy Monitor provides methods for quickly meeting these requirements and allows administrators to adhere to

corporate policies. Common methods of reducing risk include identifying and monitoring assets that communicate with unsecured protocols. These are protocols such as routers, firewalls, or switches that allow FTP or telnet connections. Use Policy Monitor to identify assets in your topology with risky configurations.

PCI section 1 questions might include the following criteria:

- Assets that allow banned protocols.
- Assets that allow risky protocols.
- Assets that allow out-of-policy applications across the network.
- Assets that allow out-of-policy applications to networks that contain protected assets.

Assessing devices that allow risky protocols

Use Policy Monitor to assess devices that allow risky protocols.

About this task

IBM Security QRadar Risk Manager evaluates a question and displays the results of any assets, in your topology, that match the test question. Security professionals, administrators, or auditors in your network can approve communications that are not risky to specific assets. They can also create offenses for the behavior.

Procedure

1. Click the **Risks** tab.
2. On the navigation menu, click **Policy Monitor**.
3. From the Group list box, select **PCI 1**.
4. Select the test question **Assess any devices (i.e. firewalls) that allow risky protocols (i.e. telnet and FTP traffic - port 21 & 23 respectively) from the internet to the DMZ**.
5. Click **Submit Question**.

Use case: Assess assets with suspicious communication

Use Policy Monitor to identify PCI section 10 compliance by tracking, logging, and displaying access to network assets.

IBM Security QRadar Risk Manager can help to identify PCI section 10 compliance by identifying assets in the topology that allow questionable or risky communications. QRadar Risk Manager can examine these assets for actual communications or possible communications. Actual communications display assets that used your question criteria to communicate. Possible communications display assets that can use your question criteria to communicate.

PCI section 10 questions can include the following criteria:

- Assets that allow incoming questions to internal networks.
- Assets that communicate from untrusted locations to trusted locations.
- Assets that communicate from a VPN to trusted locations.
- Assets that allow unencrypted out-of-policy protocols within a trusted location.

Finding assets that allow communication

You can find assets that allow communication from the Internet.

About this task

IBM Security QRadar Risk Manager evaluates the question and displays the results of any internal assets that allow inbound connections from the Internet. Security professionals, administrators, or auditors in your network can approve communications to assets that don't represent risk in your network. As more events are generated, you can create offenses in IBM Security QRadar SIEM to monitor this type of risky communication.

Procedure

1. Click the **Risks** tab.
2. On the navigation menu, click **Policy Monitor**.
3. From the Group list, select **PCI 10**.
4. Select the test question **Assess any inbound connections from the internet to anywhere on the internal network**.
5. Click **Submit Question**.

Use case: Monitor policies for violations

IBM Security QRadar Risk Manager can continuously monitor any predefined or user-generated question in Policy Monitor. You can use monitor mode to generate events in QRadar Risk Manager.

When you select a question to be monitored, QRadar Risk Manager analyzes the question against your topology every hour to determine if an asset or rule change generates an unapproved result. If QRadar Risk Manager detects an unapproved result, an offense can be generated to alert you about a deviation in your defined policy. In monitor mode, QRadar Risk Manager can simultaneously monitor the results of 10 questions.

Question monitoring provides the following key features:

- Monitor for rule or asset changes hourly for unapproved results.
- Use your high and low-level event categories to categorize unapproved results.
- Generating offenses, emails, syslog messages, or dashboard notifications on unapproved results.
- Use event viewing, correlation, event reporting, custom rules, and dashboards in QRadar SIEM.

Configuring a question

You can use Policy Monitor to configure a question to be monitored.

Procedure

1. Click the **Risks** tab.
2. On the navigation menu, click **Policy Monitor**.
3. Select the question that you want to monitor.
4. Click **Monitor**.
5. Configure any of the options that you require to monitor your question.
6. Click **Save Monitor**.

Results

Monitoring is enabled for the question and events or offenses are generated based on your monitoring criteria.

Risk priority by vulnerability

Vulnerabilities that are detected on your assets can be prioritized by their network location or a connection to another device that is vulnerable.

IBM Security QRadar Risk Manager uses asset information and vulnerability information in policy monitor. This information is used to determine whether your assets are susceptible to input type attacks, such as; SQL injection, hidden fields, and *clickjacking*.

Vulnerability asset questions can include the following criteria:

- Assets with new vulnerabilities reported after a specific date.
- Assets with specific vulnerabilities or CVSS score.
- Assets with a specific classification of vulnerability, such as input manipulation or denial of service.

Finding assets with specific vulnerabilities

IBM Security QRadar Risk Manager evaluates a question and displays the results of assets that contain your vulnerability.

About this task

Security professionals, administrators, or auditors can identify assets in your network that contain known SQL injection vulnerabilities. They can promptly patch any assets that are connected to a protected network. As more events are generated, you can create events or offenses in IBM Security QRadar SIEM to monitor assets that contain SQL injection vulnerabilities.

Procedure

1. Click the **Risks** tab.
2. On the navigation menu, click **Policy Monitor**.
3. From the **Group** list, select **Vulnerability**.
4. Select the test question **Assess assets with SQL injection vulnerabilities on specific localnet(s) (i.e. protected server network)**.
5. Click **Submit Question**.

Chapter 5. Use cases for simulations

Use case: Simulate attacks on network assets

You can use a simulation to test your network for vulnerabilities from various sources.

You can use attack simulations to audit device configurations in your network.

Simulations provide the following key features:

- Simulations display the theoretical path permutations an attack can take against your network.
- Simulations display how attacks can propagate through your network devices to spread to other assets.
- Simulations allow monitoring to detect new exposure sites.

Creating a simulation

You can create a simulation for an network attack on an SSH protocol.

Procedure

1. Click the **Risks** tab.
2. On the navigation menu, select **Simulation > Simulations**.
3. From the **Actions** list, select **New**.
4. Type a name for the simulation.
5. Select **Current Topology**.
6. Select the **Use Connection Data** check box.
7. From the **Where do you want the simulation to begin** list, select an origin for the simulation.
8. Add the simulation attack, **Attack targets one of the following open ports using protocols**.
9. For this simulation, click **open ports**, and then add port 22.
10. Click **protocols**, and then select **TCP**. SSH uses TCP.
11. Click **OK**.
12. Click **Save Simulation**.
13. From the **Actions** list, select **Run Simulation**. The results column contains a list with the date the simulation was run and a link to view the results.
14. Click **View Results**.

Results

A list of assets containing SSH vulnerabilities is displayed in the results, allowing network administrators to approve SSH connections that are allowed or expected in your network. The communications that are not approved can be monitored for events or offenses.

The results that are displayed provide your network administrators or security professionals with a visual representation of the attack path and the connections that the attack could take in your network. For example, the first step provides a

list of the directly connected assets affected by the simulation. The second step lists assets in your network that can communicate to first level assets in your simulation.

The information provided in the attack allows you to strengthen and test your network against thousands of possible attack scenarios.

Use case: Simulate the risk of network configuration changes

You can use a topology model to define virtual network models based on your existing network. You can create a network model that is based on a series of modifications that can be combined and configured.

You can use a topology model to determine the effect of configuration changes on your network using a simulation.

Topology models provide the following key functionality:

- Create virtual topologies for testing network changes.
- Simulate attacks against virtual networks.
- Lower risk and exposure to protected assets through testing.
- Virtual network segments allow you to confine and test sensitive portions of your network or assets.

To simulate a network configuration change:

1. Create a topology model.
2. Simulate an attack against the topology model.

Creating a topology model

You can create a topology model to test network changes and simulate attacks.

Procedure

1. Click the **Risks** tab.
2. On the navigation menu, select **Simulations > Topology Models**.
3. From the **Actions** list, select **New**.
4. Type a name for the model.
5. Select any modifications you want to apply to the topology.
6. Configure the tests added to the **Configure model as follows** pane.
7. Click **Save Model**.

What to do next

Create a simulation for your new topology model.

Simulating an attack

You can simulate an attack on ports and protocols.

Procedure

1. Click the **Risks** tab.
2. On the navigation menu, select **Simulation > Simulations**.
3. From the **Actions** list box, select **New**.
4. Type a name for the simulation.

5. Select a topology model that you created.
6. From the **Where do you want the simulation to begin** list, select an origin for the simulation.
7. Add the simulation attack, **Attack targets one of the following open ports using protocols**.
8. For this simulation, click **open ports**, and then add port 22.
9. Click **protocols**, and then select TCP. SSH uses TCP.
10. Click **OK**.
11. Click **Save Simulation**.
12. From the **Actions** list, select **Run Simulation**. The results column contains a list box with the date the simulation was run and a link to view the results.
13. Click **View Results**.

Notices

This information was developed for products and services offered in the U.S.A.

IBM may not offer the products, services, or features discussed in this document in other countries. Consult your local IBM representative for information on the products and services currently available in your area. Any reference to an IBM product, program, or service is not intended to state or imply that only that IBM product, program, or service may be used. Any functionally equivalent product, program, or service that does not infringe any IBM intellectual property right may be used instead. However, it is the user's responsibility to evaluate and verify the operation of any non-IBM product, program, or service.

IBM may have patents or pending patent applications covering subject matter described in this document. The furnishing of this document does not grant you any license to these patents. You can send license inquiries, in writing, to:

IBM Director of Licensing
IBM Corporation
North Castle Drive
Armonk, NY 10504-1785 U.S.A.

For license inquiries regarding double-byte character set (DBCS) information, contact the IBM Intellectual Property Department in your country or send inquiries, in writing, to:

Intellectual Property Licensing
Legal and Intellectual Property Law
IBM Japan Ltd.
19-21, Nihonbashi-Hakozakicho, Chuo-ku
Tokyo 103-8510, Japan

INTERNATIONAL BUSINESS MACHINES CORPORATION PROVIDES THIS PUBLICATION "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF NON-INFRINGEMENT, MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. Some jurisdictions do not allow disclaimer of express or implied warranties in certain transactions, therefore, this statement may not apply to you.

This information could include technical inaccuracies or typographical errors. Changes are periodically made to the information herein; these changes will be incorporated in new editions of the publication. IBM may make improvements and/or changes in the product(s) and/or the program(s) described in this publication at any time without notice.

Any references in this information to non-IBM websites are provided for convenience only and do not in any manner serve as an endorsement of those websites. The materials at those websites are not part of the materials for this IBM product and use of those websites is at your own risk.

IBM may use or distribute any of the information you provide in any way it believes appropriate without incurring any obligation to you.

Licensees of this program who wish to have information about it for the purpose of enabling: (i) the exchange of information between independently created programs and other programs (including this one) and (ii) the mutual use of the information which has been exchanged, should contact:

IBM Director of Licensing
IBM Corporation
North Castle Drive, MD-NC119
Armonk, NY 10504-1785
US

Such information may be available, subject to appropriate terms and conditions, including in some cases, payment of a fee.

The licensed program described in this document and all licensed material available for it are provided by IBM under terms of the IBM Customer Agreement, IBM International Program License Agreement or any equivalent agreement between us.

The performance data and client examples cited are presented for illustrative purposes only. Actual performance results may vary depending on specific configurations and operating conditions..

Information concerning non-IBM products was obtained from the suppliers of those products, their published announcements or other publicly available sources. IBM has not tested those products and cannot confirm the accuracy of performance, compatibility or any other claims related to non-IBM products. Questions on the capabilities of non-IBM products should be addressed to the suppliers of those products.

Statements regarding IBM's future direction or intent are subject to change or withdrawal without notice, and represent goals and objectives only.

All IBM prices shown are IBM's suggested retail prices, are current and are subject to change without notice. Dealer prices may vary.

This information contains examples of data and reports used in daily business operations. To illustrate them as completely as possible, the examples include the names of individuals, companies, brands, and products. All of these names are fictitious and any similarity to actual people or business enterprises is entirely coincidental.

Trademarks

IBM, the IBM logo, and [ibm.com](http://www.ibm.com)[®] are trademarks or registered trademarks of International Business Machines Corp., registered in many jurisdictions worldwide. Other product and service names might be trademarks of IBM or other companies. A current list of IBM trademarks is available on the Web at "Copyright and trademark information" at www.ibm.com/legal/copytrade.shtml.

Microsoft, Windows, Windows NT, and the Windows logo are trademarks of Microsoft Corporation in the United States, other countries, or both.

Terms and conditions for product documentation

Permissions for the use of these publications are granted subject to the following terms and conditions.

Applicability

These terms and conditions are in addition to any terms of use for the IBM website.

Personal use

You may reproduce these publications for your personal, noncommercial use provided that all proprietary notices are preserved. You may not distribute, display or make derivative work of these publications, or any portion thereof, without the express consent of IBM.

Commercial use

You may reproduce, distribute and display these publications solely within your enterprise provided that all proprietary notices are preserved. You may not make derivative works of these publications, or reproduce, distribute or display these publications or any portion thereof outside your enterprise, without the express consent of IBM.

Rights

Except as expressly granted in this permission, no other permissions, licenses or rights are granted, either express or implied, to the publications or any information, data, software or other intellectual property contained therein.

IBM reserves the right to withdraw the permissions granted herein whenever, in its discretion, the use of the publications is detrimental to its interest or, as determined by IBM, the above instructions are not being properly followed.

You may not download, export or re-export this information except in full compliance with all applicable laws and regulations, including all United States export laws and regulations.

IBM MAKES NO GUARANTEE ABOUT THE CONTENT OF THESE PUBLICATIONS. THE PUBLICATIONS ARE PROVIDED "AS-IS" AND WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO IMPLIED WARRANTIES OF MERCHANTABILITY, NON-INFRINGEMENT, AND FITNESS FOR A PARTICULAR PURPOSE.

IBM Online Privacy Statement

IBM Software products, including software as a service solutions, ("Software Offerings") may use cookies or other technologies to collect product usage information, to help improve the end user experience, to tailor interactions with the end user or for other purposes. In many cases no personally identifiable information is collected by the Software Offerings. Some of our Software Offerings can help enable you to collect personally identifiable information. If this Software Offering uses cookies to collect personally identifiable information, specific information about this offering's use of cookies is set forth below.

Depending upon the configurations deployed, this Software Offering may use session cookies that collect each user's session id for purposes of session management and authentication. These cookies can be disabled, but disabling them will also eliminate the functionality they enable.

If the configurations deployed for this Software Offering provide you as customer the ability to collect personally identifiable information from end users via cookies and other technologies, you should seek your own legal advice about any laws applicable to such data collection, including any requirements for notice and consent.

For more information about the use of various technologies, including cookies, for these purposes, See IBM's Privacy Policy at <http://www.ibm.com/privacy> and IBM's Online Privacy Statement at <http://www.ibm.com/privacy/details> the section entitled "Cookies, Web Beacons and Other Technologies" and the "IBM Software Products and Software-as-a-Service Privacy Statement" at <http://www.ibm.com/software/info/product-privacy>.

Index

A

- add Risk Manager 6
- appliance 3, 5
- appliance set up 5
- assess devices 16
- assets 15, 16, 17
- audit 1, 15
- audit compliance 9

B

- backup 9
- browser mode
 - Internet Explorer web browser 5

C

- change control 15
- compliance 15
- configuration backups 9
- configuration comparison 10, 11
- Configuration Monitor 9
- configurations:suspicious 15
- connecting to the QRadar console 7
- customer support v

D

- default log in information 5
- deployment 3
- device backup history 9
- device configuration: multiple 11
- device configuration: single 10
- document mode
 - Internet Explorer web browser 5
- documentation online v
- dynamic routing 4

F

- firewall configuration 3

G

- gateway address 4

H

- high availability (HA) 4
- historical record 9
- history 9
- hostname 7

I

- introduction v
- IP address 4, 7

- IPv6 4

K

- keyboard 3

L

- log in information 5

M

- managed host 6
- monitor 3
- monitor mode 17
- monitor network devices 1

N

- network administrator v
- network configuration 20
- network information 4
- network mask address 4
- network path 11
- non-contiguous network masks 4
- NTP server 4

O

- open port 20

P

- password 5
- PCI section 1 15, 16
- PCI section 10 17
- Policy Monitor 15
- port 22 3
- port 37 3
- port 443 3
- port requirements 3
- prerequisites 3
- protocol 19
- protocols 20
- protocols:risky 16

Q

- question:configuring 17

R

- rack rails 3
- risk assessment 15
- risk management 1
- risks for networks 20
- roles 8

- root password 7

S

- search 12
- setting-up 3
- simulation 20
- simulation creation 19
- SSH simulation 19
- subnet mask 4
- suspicious communication 16

T

- technical documentation v
- topology 1, 12
- topology model 20

U

- unsupported features 4
- user name 5
- user role for Risk Manager 8

V

- violations 17
- vulnerability 15

W

- web browser support 3



Printed in USA