ArcSight Platform

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User's Guide for ArcSight Platform

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- Software Version number
- Document Release Date, which changes each time the document is updated
- Software Release Date, which indicates the release date of this version of the software

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Contents

Welcome to ArcSight

This *User's Guide* for ArcSight Platform provides concepts, use cases, and contextual help for following activities, depending on your role:

For...	Might want to..
You	• Manage your user profile
Administrator	• Create roles, assign them to users and groups • Ensure that your organization complies with data and security standards • Register and manage SmartConnectors • Manage your provider account • Manage your tenants • Configure SOAR settings • Create storage groups and set retention periods for stored data • Import event data from ArcSight Logger • Check the integrity of your data • Manage and monitor ArcSight infrastructure components
Analysts and Threat Hunters	• Review alerts based on key indicators such as alert category and most affected entities • Respond to alerts and manage cases • Create rules and lists to inform alerts • Search for events • Hunt for known threats and vulnerabilities with built-in reports • Analyze aggregated data with outlier analytics • Access the Reports Portal to create visuals and reports for analyzing data
SOC Manager	• Create reports to track SOAR activities • Learn about the lists and rules that your team can create to manage events
CISO	• Get a high-level view of alerts happening in your entire environment

About this Guide

This User's Guide provides concepts, use cases, and contextual help for many of the features in ArcSight Platform and ArcSight SIEM as a Service, including the common layer of services. For the most recent version of this guide, see links to the documentation sites in "Additional Documentation" on the next page below.

Intended Audience

This book provides information for individuals who need to search events and check for vulnerabilities; respond and manage incidents; create users, groups, and roles; create and run reports and dashboards, and use the ArcSight Dashboard. These individuals have experience using security and identity management products, as well as creating reports and dashboards. Some users might need experience in managing service provider contracts.

Additional Documentation

This documentation library includes the following resources, based on the product that you use:

ArcSight SIEM as a Service (SaaS)

- *ArcSight SIEM as a Service - Quick Start Guide for Administrators*, which provides an overview of the products deployed in this suite and their latest features or updates
- User Guides and Release Notes for the capabilities that deployed in your ArcSight SaaS environment
- Documentation site for ArcSight SIEM as a Service

ArcSight Platform (for installing on-premises, AWS, and Azure)

- *Release Notes for the ArcSight Platform 24.2*, which provides information about the latest release
- The Administrator's guide, which provides concepts, use cases, and guidance for installing, upgrade, managing, and maintaining the ArcSight Platform in your environment. See the guide corresponding to your deployment:
  - Administrator's Guide for the ArcSight Platform 24.2 - AWS Deployment
  - Administrator's Guide for the ArcSight Platform 24.2 - Azure Deployment
  - Administrator's Guide for the ArcSight Platform 24.2 - Google Cloud Deployment
  - Administrator's Guide for the ArcSight Platform 24.2 - Off-cloud Deployment
- *Technical Requirements for ArcSight Platform 24.2*, which provides information about the hardware and software requirements for installing ArcSight Platform and the deployed capabilities in your environment
- *ArcSight Platform Upgrade Paths*, which provides information about the paths to upgrade to the latest release from your current release

- *ArcSight Solutions and Compliance Insight Packages*, which provide a complete set of compliance and audit related packages and documentation
- Documentation site for ArcSight Platform where you can discover documentation for multiple ArcSight products

Contact Information

We want to hear your comments and suggestions about this book and the other documentation included with this product. You can use the comment on this topic link at the bottom of each page of the online documentation, or send an email to Documentation-Feedback@microfocus.com.

For specific product issues, contact Open Text Customer Care.

Understanding the ArcSight Platform

ArcSight is a combination of security, user, and entity behavior analytics solutions integrated together. The ArcSight Platform serves as the base platform where you deploy the ArcSight solutions, also called product capabilities, and use them.

The Platform enables you to visualize, identify, analyze, and respond to potential threats by incorporating intelligence from the multiple layers of security sources that might be installed in your security environment.

The product capabilities might include the following:

- Real-time event monitoring and correlation with data from ArcSight Enterprise Security Manager (ESM)
- Analyzing end-user behavior with ArcSight Intelligence
- Performing deep-dive investigations with ArcSight Recon
- Responding to and mitigating cyberattacks with ArcSight SOAR
- Coordinating and managing data streams with Transformation Hub

This section further discusses the salient features, licensing, and Multi-tenancy aspects of the ArcSight Platform.

Understanding ArcSight Platform Features

The following are some of the features of the ArcSight Platform that you can take advantage of to understand how secure your organization is and take appropriate actions in ensuring its security.

- The Platform provides several ways to get a holistic view of the security health of your environment. You can analyze potential threats; monitor the rate of data ingestion to the ArcSight Database; explore risky elements and their behaviors within your organization; understand the overall risk in your organization, and more:
    - The **Dashboard Deck** provides quick access to a set of dashboards that focus on commonly known vulnerabilities that might threaten your environment. Most of the dashboards allow you to drill down to event details or other dashboards. These dashboards are part of the built-in Foundation content, which is available in the Reports Portal. The Dashboard Deck is available only when Multi-tenancy is enabled.
    - **Optics** help you gain insight into specific aspects of your environment by visualizing correlated events from ArcSight ESM, which you can filter and drill into. For example, a CISO might want a quick overview of alerts worldwide or review key security metrics based on alerts. A security analyst can quickly identify potential threats and take the necessary actions to mitigate risks.

      Depending on the your permissions, you can view tenant-specific data or a rolled-up view of data across multiple tenants. Optics are available only when Multi-tenancy is enabled.
    - In the **Reports Portal**, you can access built-in reports and dashboards for known threats, such as account hijacking and security misconfiguration. Administrators can add content from compliance packs covering standards such as PCI DSS and GDPR. You can also create your own dashboards and reports to visualize and report event data.
    - **ArcSight Dashboard** enables you to visualize, identify, and analyze potential threats by incorporating intelligence from the multiple layers of security sources that might be deployed in your security environment. The ArcSight Dashboard is available only when Multi-tenancy is disabled.
- The **Search** feature enables you to look for and investigate events that meet specified criteria so you can detect anomalies that point to security threats.
- The **Event Integrity Check** feature allows you to determine whether the events stored in the ArcSight Database are not tampered with and hence reliable when you are investigating incidents or hunting for threats based on those events.
- The **Outlier Analytics** feature helps you define and build models that aid in identifying anomalous behaviors in your organization.
- The **Respond** feature serves as a Security Orchestration Automation and Response (SOAR) platform that delivers an automated case response solution for repetitive security events and imparts a seamless security management experience by performing faster threat detection and remediation.

The Platform's Single Sign-On (SSO) function ensures that users can navigate among the features in the Platform or launch applications from the Platform without having to log in for each product solution.

Understanding Multi-tenancy in ArcSight

ArcSight Platform supports Multi-tenancy wherein you can create and manage multiple tenants in your environment. Multi-tenancy is applicable to both of the ArcSight license types: Enterprise and MSSP. You can enable Multi-tenancy in one of the following scenarios:

- New installation of ArcSight Platform with supported capabilities and with or without ArcSight ESM.
- Upgraded ArcSight Platform with supported capabilities and with or without ArcSight ESM.

After you enable Multi-tenancy, you must create a profile for the provider, and then onboard tenants. Before enabling Multi-tenancy, consider the following issues:

- After you enable Multi-tenancy, you cannot disable it or revert to single-tenancy mode.
- Multi-tenancy does not apply for a deployment of ArcSight Intelligence on the ArcSight Platform.

For more information setting up a multi-tenant environment, see "Setting Up Multi-tenancy" on page 160.

Setting Up Your Profile with ArcSight

Depending whether Multi-tenancy is enabled, select [your_ID] > Profile *or* Edit Profile.

You can manage your account settings and review your assigned roles, permissions, and groups. Also, configure your preferred default settings for product behavior.

Manage Your Account

Depending whether Multi-tenancy is enabled, select [your_ID] > Profile *or* Edit Profile > Account.

You can change your account settings. However, if your enterprise uses an external authentication method, you cannot change your password in ArcSight Platform.

Configure Your User Preferences

Depending whether Multi-tenancy is enabled, select [your_ID] > Profile *or* Edit Profile > Preferences.

Some deployed capabilities enable you to configure preferences for commonly used settings. For example, if you regularly use the same fieldset for a Search, you can specify that set as your preferred default.

Configure Search Preferences

To reduce the time required to create and manage searches, configure Search to use your preferred settings. You can always override your preferences as needed when you create a search.

Default Fieldset

Specifies the fieldset that you regularly use for a search. The default value is *Base Event Fields*.

Default View

Specifies whether you want the Events Table to display results in the Grid View or Raw View. The default value is *Grid View*.

Time Zone

Instructs Search to adjust the timestamp for events to the chosen time zone:

- Browser
- Database
- Custom

To specify the type of timestamp that you want to use, modify the preference for Base Searches On.

Date / Time Format

Specifies the format of dates and times that you want Search to use. The default is *MM/DD/YYY HH:MM:S*.

For example, you might want to use the same format that you have already configured for your browser. Alternatively, you might prefer a format like *YYYY/MM/DD HH:MM:SS*.

Default Time Setting

Specifies the time range within which you want Search to find events. The default is *Last 30 minutes*.

- Dynamic

  If you prefer to use a dynamic time range, you must also specify the Start and End times. For example, specify $Now - 30m and $Now respectively.
- Static

  If you use different time settings for each search that you create, you might want to select this option for your preference. The default is the preset value of *Last 30 minutes*.
- Preset

  If you prefer to use a preset time range, you must also specify a preset value. For example, Last 24 hours.

Base Searches On

Specifies the timestamp associated with the events that you want to find:

- Normalized Event Time
- Device Receipt Time
- Database Receipt Time

Default is *Normalized Event Time*.

Search Expires in

Specifies how often you want saved searches to expire, and thus tell the system remove them. The default value is *7 days*, but you can specify a value between 1 and 365. Additionally, your System Admin might specify a different range.

You may override the system's set expiration value, provided you have the permissions to do so. If you have the *Never Expire Search Results* permission, you can choose for a search to never expire. Keep in mind, the expiration time will reset when you access the search. Resetting the expiration time includes actions like creating or editing a search, resuming or re-running a search, or saving a search and changing its settings.

Session Search Expires In

Specifies how often you want session searches to expire, and thus be removed from the system. You can specify a value between 1 and 120 hours. However, your System Administrator might limit the available range. When you create or edit a search, you can override this default setting.

The expiration time for a fixed-time search resets whenever you change or run the search. For a real-time search, the session search expires once the specified expiration time is reached. You may reset the expiration time by running the search again or by modifying the query or criteria. However, you cannot reset the expiration clock once the search has expired.

When you edit a scheduled search, the value for Search expires in is the one specified when the scheduled search was created, Additionally, the unit of time cannot be changed. For example, if you create a scheduled search with the expiration time set to 10 days and then later change the unit of time to weeks, the value of 10 will still represent days.

To override the default expiration time, change the Search expires in setting for a particular session search. The Never Expire Session for Real-time Searches permission does not interfere with session expiration time for real-time searches.

Maximum Results for a Search

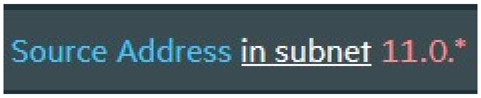
Specifies the maximum number of events (the search results limit) that the search will return. You can specify a value between 1000 and 10 million. The default is *300,000*. When creating a search, you can override this preference.

Your admin can configure a system-level setting that controls the maximum number of searches (with a limit of 10 million) for all instances of ArcSight. If you enter a value outside of the system-level setting, you will receive an error message indicating that your preferred default cannot exceed the system setting.

For information about global search limits, see Understand Search Limits.

Highlight Query Syntax

Specifies whether you want Search to use color to differentiate the syntax terms from the operators and functions within the query. For example, in the figure below, Search displays the variable *Source Address* in blue, the value *11.0.** in red, and the operator *in subnet* in white.



Source Address in subnet 11.0.*

Specify Your Default Dashboards for the Reports Portal

You can specify the default dashboards that display when you enter the Reports Portal. You can choose from any of the content available within the Repository. Alternatively, if you have the *Design Reports* permission, you can create dashboards that you or others might want to include in their default dashboard.

For example, in the Reports Portal, you might want a ready access to dashboards that you use regularly. So you add the OWASP Missing Security Patches Overview and Foundation Denial of Service Activity dashboards.

1. To access the Reports Portal, perform one of the following actions:
   - If Multi-tenancy is disabled, select Reports > Portal > Portal Dashboards.
   - If Multi-tenancy is enabled, select Dashboard & Reports > Reports > Portal > Portal Dashboards.
2. Specify a name for your default dashboard.
3. (Optional) Enter a description for your dashboard portal.
4. Select one of the available dashboards.

   You can specify only one dashboard at this time. However, once you are in the Reports Portal, you can add more dashboards. Each dashboard appears as a tab in the page.
5. (Conditional) To create a dashboard, select Compose Dashboard.
6. Click OK.
7. (Conditional) If you chose to create a dashboard, continue adding the items that you want to include. For additional instructions, select "Create a Simple Dashboard" on page 472.

Review Your Roles and Permissions

Depending whether Multi-tenancy is enabled, select [your_ID] > Profile *or* Edit Profile > Roles & Permissions.

You can review the roles assigned to your account, and the permissions associated with each role.

Review Your Group Assignments

Depending whether Multi-tenancy is enabled, select [your_ID] > Profile *or* Edit Profile > Groups.

You can review the account groups to which you belong, as well as the manager of the group.

What Admins Need to Know

ArcSight Platform helps you maintain and configure the components and features available with the application.

Accessing ArcMC

Available only with ArcSight capabilities. Not available in the ArcSight SaaS environment.

Select ARCMC.

ArcSight Management Center (ArcMC) enables you to manage and monitor ArcSight infrastructure components, particularly useful when you have a large deployment ArcSight connectors. From the **ArcMC dashboards**, you can view the health and status of the components that ArcMC manages. The **Bulk Operations** feature allows you to modify the properties of, ensure the security of, gather log information about, and restart managed components.

Accessing Bulk Operations

Available only with ArcSight capabilities. Not available in the ArcSight SaaS environment.

Select ARCMC > Bulk Operations.

Bulk Operations enables you to view and manage collectors, hosts and locations of hosts, and Transformation Hubs. You can modify the properties of, ensure the security of, gather log information about, and restart managed components.

Accessing ArcMC Dashboards

Available only with ArcSight capabilities. Not available in the ArcSight SaaS environment.

Select ARCMC > Dashboards.

The dashboards enable you to view the health and status of the components that ArcMC manages.

Ensuring Compliance with Data and Security Standards

Requires the Log Management and Compliance service in ArcSight SIEM as a Service or the ArcSight Recon capability.

We provide **Compliance Packs** that contain reports and dashboards to help you comply with a broad set of legal and governmental regulations that require your enterprise to organize and manage sensitive data and institute a strong IT governance program. Designed around industry best practices, these packages provide a comprehensive method for assessing and monitoring internal controls, such as access control changes, administrative activity, log-in monitoring, and change and risk management. The packages automatically map these technical checks to the relevant standard using policy and risk-relevant operational context so you can focus on key services and business processes and address critical audit points.

You must purchase, then import each Compliance Pack to the Reports Portal repository. For more information about the packs, see the ArcSight Solutions and Compliance Insight Package documentation site.

- "Ensuring Compliance with GDPR Standards" below
- "Ensuring Compliance with IT Governance" on page 56
- Ensuring Compliance with NERC
- "Ensuring Compliance with PCI DSS" on page 88
- "Ensuring Compliance with SOX Standards" on page 126

Ensuring Compliance with GDPR Standards

Requires the Log Management and Compliance service in ArcSight SIEM as a Service or the ArcSight Recon capability.

In the Reports Portal, select Repository > Standard Content > GDPR.

The European Union (EU) adopted the General Data Protection Regulation (GDPR) to ensure that businesses and organizations protect individuals’ data privacy and security. If your enterprise processes the personal data of EU citizens or residents or offers goods and services to such individuals, then you must comply with the GDPR. The regulation sets out standards for any action, automatic or manual, that processes a person’s data. These standards include requiring that data controllers and data processors – the individuals in your enterprise or third-party organizations who control, manage, or make decisions about data processing – must be able to demonstrate that they are GDPR compliant.

To help you comply or prove compliance with GDPR, we provide the **Compliance Pack for GDPR**. For more information about adding the pack to the Reports repository, see the *Solutions Guide for ArcSight Compliance Pack for GDPR*. The guide includes information about identifying assets that must comply with GDPR.

This package includes the following dashboards and reports, organized by GDPR objectives:

Category	Dashboards	Reports
Access Activity - Access Activity	After Hours Access Activity on GDPR Systems Overview Authorization Changes on GDPR Systems Overview Failed Access Activity on GDPR Systems Overview Failed Access Relationship on GDPR Systems Overview Failed Access Activity by GDPR Asset Failed Access Activity on GDPR Systems by User	After Hours Access Activity on GDPR Systems Summary Authorization Changes Summary on GDPR Systems Failed Access Activity by GDPR Assets Failed Access Activity on GDPR Systems Summary Failed Access Activity on GDPR Systems by Users
Access Activity - Regulatory Exposure	n/a	Potential Regulatory Exposure on GDPR Systems
Access Activity - Threat User Analysis	n/a	Admin Activity from Compromised GDPR System Anti-Virus Disabled on GDPR Systems Summary Audit Log Cleared on GDPR Systems Summary Threats Executed against GDPR Systems Summary
Admin Activity	n/a	User Creations on GDPR Environment User Deletions on GDPR Environment Users Added to a Group on GDPR Environment Users Removed from a Group on GDPR Environment

Category	Dashboards	Reports
Attack Surface Analysis - Attack Surface Identification	High Risk Vulnerabilities on GDPR Systems Information Leakage Vulnerabilities on GDPR Systems Password and Authentication Weaknesses on GDPR Systems SQL Injection Vulnerabilities on GDPR Systems SSL or TLS Vulnerabilities on GDPR Systems Vulnerabilities on GDPR Systems Overview Vulnerable GDPR Assets by Vulnerability Type XSS Vulnerabilities on GDPR Systems	High Risk Vulnerabilities on GDPR Systems Information Leakage Vulnerabilities on GDPR Systems Password and Authentication Weaknesses on GDPR Systems SQL Injection Vulnerabilities on GDPR Systems SSL or TLS Vulnerabilities on GDPR Systems Unpatched GDPR Systems Vulnerability Summary by CVE ID Vulnerability Summary by GDPR Asset Vulnerability Summary on GDPR Systems XSS Vulnerabilities on GDPR Systems
Attack Surface Analysis - Security Controls Risk Identification	DoS Attacks Against GDPR Systems	DoS Attacks Against GDPR Systems
Corporate Governance	Access Activity on GDPR Systems Overview Geo Access Activity on GDPR Systems Overview Physical Access Activity on GDPR Systems Overview	Access Activity on GDPR Systems Summary After Work Hours Physical Access Activity on GDPR Systems Summary Physical Access Activity on GDPR Systems Summary

Category	Dashboards	Reports
Regulatory Exposure	Data Flow to GDPR Systems Data Flow from GDPR Systems Data Flow from GDPR Systems to non EU Data Flow from non EU to GDPR Systems GDPR Systems Communication with non EU Countries GDPR Systems Communication Overview High Risk Events on GDPR Systems Overview Policy Violations on GDPR Systems Overview Threat Relationship on GDPR Systems Overview Threats on GDPR Systems Overview	Data Flow from GDPR Systems Summary Data Flow from GDPR Systems to non EU Summary Data Flow from non EU to GDPR Systems Summary Data Flow to GDPR Systems Summary High Risk Events on GDPR Systems Summary Policy Violations on GDPR Systems Summary Threats on GDPR Systems Summary

Category	Dashboards	Reports
Threat Analysis - Data Store Risk	n/a	Attacks Against Databases on GDPR Systems Cassandra Vulnerabilities on GDPR Systems CRM and ERP Vulnerabilities on GDPR Systems Database Configuration Changes on GDPR Systems Database Weaknesses on GDPR Systems Elasticsearch Vulnerabilities on GDPR Systems IBM Db2 Vulnerabilities on GDPR Systems MariaDB Vulnerabilities on GDPR Systems Microsoft SQL Server Vulnerabilities on GDPR Systems MongoDB Vulnerabilities on GDPR Systems MySQL Vulnerabilities on GDPR Systems Oracle Vulnerabilities on GDPR Systems PostgreSQL Vulnerabilities on GDPR Systems Redis Vulnerabilities on GDPR Systems
Threat Analysis - Internet	Malware Found on GDPR Systems MITRE ATT&CK on GDPR Systems by GDPR Asset MITRE ATT&CK on GDPR Systems by MITRE ID MITRE ATT&CK on GDPR Systems Overview MITRE ATT&CK Relationship on GDPR Systems Overview	Firewall Blocked Events in GDPR Environment Information Leaks from GDPR Systems Malware Found on GDPR Systems

Access Activity

In the Reports Portal, select Repository > Standard Content > GDPR > *Reports* or *Dashboards* > GDPR Access Activity.

As a data controller or data processor, you need to track access to GDPR systems, which collect, store, transfer, use, and organize data related to EU citizens or residents.

Category	Dashboards	Reports
Access Activity	After Hours Access Activity on GDPR Systems Overview Authorization Changes on GDPR Systems Overview Failed Access Activity on GDPR Systems Overview Failed Access Relationship on GDPR Systems Overview Failed Access Activity by GDPR Asset Failed Access Activity on GDPR Systems by User	After Hours Access Activity on GDPR Systems Summary Authorization Changes Summary on GDPR Systems Failed Access Activity by GDPR Assets Failed Access Activity on GDPR Systems Summary Failed Access Activity on GDPR Systems by Users
Regulatory Exposure	n/a	Potential Regulatory Exposure on GDPR Systems
Threat User Analysis	n/a	Admin Activity from Compromised GDPR System Anti-Virus Disabled on GDPR Systems Summary Audit Log Cleared on GDPR Systems Summary Threats Executed against GDPR Systems Summary

Access Activity

Select Reports > Portal > Repository > Standard Content > GDPR > *Reports* or *Dashboards* > GDPR Access Activity > Access Activity.

To comply with GDPR, you might want to track accounts that have been accessing systems that store or process users’ personal data. A high number of failed access attempts can indicate malicious activity. Also, to prevent a malicious user from accessing sensitive data, you should know when and what type of authorization changes occur on those systems.

After Hours Access Activity on GDPR Systems Summary

Reports the number of times and the accounts that accessed GDPR systems outside of regular hours, such as accessing a server on the weekend. The table provides results by the account and its associated server, and the target server accessed. This report relates to GDPR Articles 5 and 25 and Recital 49.

By default, the report uses the following time ranges to check for “after hours” access:

- 12 a.m. to 7 a.m. Monday through Friday
- 18 p.m. (6 p.m.) to 12 a.m. Monday through Friday
- All day on Saturday and Sunday

However, you can modify the time ranges by editing the filters for the report. The time range uses 24-hour values.

Authorization Changes Summary on GDPR Systems

Reports the number and type of authorization change events that occur on GDPR systems over time. The table provides results by the number of times each account made a change, the type of change, the affected GDPR system, and the outcome of the change such as ‘success.’ This report relates to GDPR Articles 5, 18, 24, 29, and 32 and Recital 39.

Authorization Changes Summary on GDPR Systems

Reports the number and type of authorization change events that occur on GDPR systems over time. The table provides results by the number of times each account made a change, the type of change, the affected GDPR system, and the outcome of the change such as ‘success.’ This report relates to GDPR Articles 5, 18, 24, 29, and 32 and Recital 39.

Failed Access Activity by GDPR Assets

Reports the number of times access to a GDPR asset failed. The chart shows the top GDPR assets with failed access attempts. For each GDPR asset, the table provides results by the number of failed events, user accounts with failed attempts, and the number of IP addresses associated with the failed events. This report relates to GDPR Articles 5 and 25 and Recital 49.

Failed Access Activity on GDPR Systems by Users

Reports the number of times users failed to access a GDPR system. The chart shows the users with the most failed access attempts. The table provides results by number of failed events, GDPR assets affected, and IP addresses associated with the failed events for each user with a failed attempt. This report relates to GDPR Articles 5 and 25 and Recital 49.

Failed Access Activity on GDPR Systems Summary

Reports the number attempts that failed to access a GDPR system over time. For each failed attempt, the table provides results by user account, the account's IP address and country, the target server's IP and host name, and the number of failed events. This report relates to GDPR Articles 5 and 25 and Recital 49.

After Hours Access Activity on GDPR Systems Overview

Provides, in charts and a table, an overview of accounts that access GDPR systems outside of regular hours, such as accessing a server on the weekend. You can view the targeted systems, users, and source IPs that generate the most events. This dashboard relates to GDPR Articles 25, 30, and 32 and Recital 82.

By default, the dashboard uses the following time ranges to check for "after hours" access:

- 12 a.m. to 7 a.m., Monday through Friday
- 18 p.m. to 12 a.m., Monday through Friday
- All day on Saturday and Sunday

Authorization Changes on GDPR Systems Overview

Provides an overview of events that indicate authorization change attempts on GDPR Systems. Relevant to GDPR Articles 5, 18, 24, and 32 and Recital 39.

Failed Access Activity by GDPR Asset

Provides, in charts and a table, an overview of failed access activity on the specified GDPR systems. This dashboard relates to GDPR Articles 5 and 25 and Recital 49.

You must specify at least one IP address, Mac address, or host name in lowercase.

Failed Access Activity on GDPR Systems by User

Provides, in charts and a table, an overview of failed access activity by user. This dashboard relates to GDPR Articles 5 and 25 and Recital 49.

You must specify at least one user account in lowercase.

Failed Access Activity on GDPR Systems Overview

Provides an overview of failed access activity on GDPR systems. This dashboard relates to GDPR Articles 5 and 25 and Recital 49.

Failed Access Relationship on GDPR Systems Overview

Provides an overview of the relationship between source and destination addresses and users on events that indicate a failure login activity on GDPR systems. This dashboard relates to GDPR Articles 5 and 25 and Recital 49.

Regulatory Exposure

Select Reports > Portal > Repository > Standard Content > GDPR > *Reports* or *Dashboards* > GDPR Access Activity > Regulatory Exposure.

As part of your compliance measures, you most likely track access events that might have compromised user data, thus breaching GDPR regulations.

Potential Regulatory Exposure on GDPR Systems

Reports the GDPR systems that might have been exposed to a regulatory infraction due to user access activities. The chart shows the systems with the most events. The table provides results by the event name and time by GDPR system. This report relates to GDPR Article 32 and Recital 49.

Threat User Analysis

Select Reports > Portal > Repository > Standard Content > GDPR > *Reports* or *Dashboards* > GDPR Access Activity > Threat User Analysis.

User activities such as changing authorizations or clearing audit logs often indicate malicious activities or potential vulnerabilities. Run the following reports to check for threat activities on your GDPR systems.

Admin Activity from Compromised GDPR System

Reports events associated with administrative activities that occur on GDPR systems. For example, users are executing commands or changing authorizations. The chart shows activity over time. The table provides results by time, user, affected GDPR asset, activity type, and the number of events. This report relates to GDPR Articles 30 and 32 and Recital 49.

Anti-Virus Disabled on GDPR Systems Summary

Reports how often anti-virus services have been stopped or paused on GDPR systems over time. A malicious user might pause an anti-virus service before running an illegal command or script or downloading or installing malicious programs. The table provides results by time, GDPR system, affected service, and number of events. This report relates to GDPR Article 32 and Recital 49.

Audit Log Cleared on GDPR Systems Summary

Reports the audit log has been cleared on GDPR systems. The chart shows the number of events over time. The table provides results by date, user, and host. This report relates to GDPR Articles 5 and 25 and Recital 49.

Threats Executed against GDPR Systems Summary

Reports how often GDPR systems have been threatened. The chart shows the number of events over time. The table provides results by date, system IP address, threat technique, event name, and number of events. This report relates to GDPR Article 32 and Recital 49.

Admin Activity

In the Reports Portal, select Repository > Standard Content > GDPR > *Reports* or *Dashboards* > GDPR Admin Activity > Provisioning Activity.

Administrators can create and remove users. These admins might inadvertently or deliberately add users to a system or group, giving users access to sensitive systems and information. Alternatively, a malicious user with access to an admin account might attempt to create users for later access or remove necessary accounts. To comply with GDPR, you should track administrator activities related to user creations, deletions, and group assignments.

Dashboards	Reports
n/a	User Creations on GDPR Environment User Deletions on GDPR Environment Users Added to a Group on GDPR Environment Users Removed from a Group on GDPR Environment

User Creations on GDPR Environment

Reports the number of user accounts created over time and by whom in the GDPR environment. The table provides results by date, created account, user creating the account, and their domains. This report relates to GDPR Articles 5, 6, and 7 and Recitals 78, 82, and 84.

User Deletions on GDPR Environment

Reports the number of user accounts deleted over time and by whom in the GDPR environment. The table provides results by date, the deleted account, user deleting the account, and their domains. This report relates to GDPR Article 17 and Recital 66.

Users Added to a Group on GDPR Environment

Reports the number of user accounts added to groups over time and by whom in the GDPR environment. The table provides results by date, subject, user adding the account, and affected group. This report relates to GDPR Articles 5, 6, 7, and 32 and Recitals 78, 82, and 84.

You must specify the name of a user group in lowercase.

Users Removed from a Group on GDPR Environment

Reports the number of user accounts removed from groups over time and by whom in the GDPR environment. The table provides results by date, subject, user removing the account, and affected group. This report relates to GDPR Articles 17 and 32 and Recital 66.

You must specify the name of a user group in lowercase.

Attack Surface Analysis

In the Reports Portal, select Repository > Standard Content > GDPR > *Reports* or *Dashboards* > **GDPR Attack Surface Analysis**.

Each point entry in your environment, which unauthorized users or programs can exploit, increases the environment's attack surface. This package helps you analyze the extent of the environment's vulnerability.

Category	Dashboards	Reports
Attack Surface Identification	High Risk Vulnerabilities on GDPR Systems Information Leakage Vulnerabilities on GDPR Systems Password and Authentication Weaknesses on GDPR Systems SQL Injection Vulnerabilities on GDPR Systems SSL or TLS Vulnerabilities on GDPR Systems Vulnerable GDPR Assets by Vulnerability Type Vulnerabilities on GDPR Systems Overview XSS Vulnerabilities on GDPR Systems	High Risk Vulnerabilities on GDPR Systems Information Leakage Vulnerabilities on GDPR Systems Password and Authentication Weaknesses on GDPR Systems SQL Injection Vulnerabilities on GDPR Systems SSL or TLS Vulnerabilities on GDPR Systems Unpatched GDPR Systems Vulnerability Summary by CVE ID Vulnerability Summary by GDPR Asset Vulnerability Summary on GDPR Systems XSS Vulnerabilities on GDPR Systems
Security Controls Risk Identification	DoS Attacks Against GDPR Systems	DoS Attacks Against GDPR Systems

Attack Surface Identification

Select Reports > Portal > Repository > Standard Content > GDPR > *Reports* or *Dashboards* > **GDPR Attack Surface Analysis** > **Attack Surface Identification**.

To prevent data breaches, you need to know how much of your GDPR environment is vulnerable to attack. Use the following dashboards and reports to identify, and thus reduce, your environment's attack surface.

High Risk Vulnerabilities on GDPR Systems Dashboard

Provides an overview of high-risk vulnerabilities reported on GDPR systems. This dashboard relates to GDPR Articles 32, 35, and 83 and Recitals 76, 77, 78, and 83.

High Risk Vulnerabilities on GDPR Systems Report

Reports the high-risk vulnerabilities detected in the GDPR environment. The chart shows the systems with the most vulnerabilities. The table provides results by GDPR asset, signature ID, agent severity, description of the vulnerability, and date of the most recent event. This report relates to GDPR Articles 32, 35, and 83 and Recitals 76, 77, 78, and 83.

Information Leakage Vulnerabilities on GDPR Systems Dashboard

Provides an overview of information leakage vulnerabilities reported on GDPR systems. This dashboard relates to GDPR Articles 32, 35, and 83 and Recitals 76, 77, 78, and 83.

Information Leakage Vulnerabilities on GDPR Systems Report

Reports the information leakage vulnerabilities detected in the GDPR environment. The chart shows the systems with the most vulnerabilities. The table provides results by GDPR asset, signature ID, agent severity, description of the vulnerability, and date of the most recent event. This report relates to GDPR Articles 32, 35, and 83 and Recitals 76, 77, 78, and 83.

Password and Authentication Weaknesses on GDPR Systems Dashboard

Provides an overview of password and authentication Weaknesses reported on GDPR systems. This dashboard relates to GDPR Articles 32, 35, and 83 and Recitals 76, 77, 78, and 83.

Password and Authentication Weaknesses on GDPR Systems Report

Reports the password and authentication weaknesses detected in the GDPR environment. The chart shows the number of events over time. The table provides results by GDPR asset, signature ID, agent severity, description of the vulnerability, and date of the most recent event. This report relates to GDPR Articles 32, 35, and 83 and Recitals 76, 77, 78, and 83.

SQL Injection Vulnerabilities on GDPR Systems Dashboard

Provides an overview of SQL Injection vulnerabilities reported on GDPR systems. This dashboard relates to GDPR Articles 32, 35, and 83 and Recitals 76, 77, 78, and 83.

SQL Injection Vulnerabilities on GDPR Systems Report

Reports the SQL injection vulnerabilities detected in the GDPR Environment. The chart shows the systems with the most detected vulnerabilities. The table provides results by GDPR asset, signature ID, agent severity, description of the vulnerability, and date of the most recent event. This report relates to GDPR Articles 32, 35, and 83 and Recitals 76, 77, 78, and 83.

SSL and TLS Vulnerabilities on GDPR Systems Dashboard

Provides an overview of SSL and TLS vulnerabilities reported on GDPR systems. This dashboard relates to GDPR Articles 32, 35, and 83 and Recitals 76, 77, 78, and 83.

SSL or TLS Vulnerabilities on GDPR Systems Report

Reports the SSL and TLS vulnerabilities detected in the GDPR Environment. Malicious users can exploit vulnerabilities in SSL and TLS. For example, the Heartbleed Bug is a known SSL vulnerability. The chart shows the systems with the most detected vulnerabilities. The table provides results by GDPR asset, signature ID, agent severity, description of the vulnerability, and date of the most recent event. This report relates to GDPR Articles 32, 35, and 83 and Recitals 76, 77, 78, and 83.

Unpatched GDPR Systems

Reports the GDPR Systems with missing security patches. One of the most common ways to reduce your environment’s attack surface is to ensure that all systems have the most recent security patches applied. The chart shows the systems with the most missing security patches. The table provides results by GDPR asset, signature ID, agent severity, description of the vulnerability, and date of the most recent event. This report relates to GDPR Articles 32, 35, and 83 and Recitals 76, 77, 78, and 83.

Vulnerable GDPR Assets by Vulnerability Type

Provides an overview of vulnerabilities reported on GDPR systems by Type. This dashboard relates to GDPR Articles 32, 35, and 83 and Recitals 76, 77, 78, and 83.

Vulnerabilities on GDPR Systems Overview

Provides an overview of vulnerabilities reported on GDPR systems. This dashboard relates to GDPR Articles 32, 35, and 83 and Recitals 76, 77, 78, and 83.

Vulnerability Summary by CVE ID

Reports the vulnerabilities detected in the GDPR environment by specific CVE ID. The chart shows the number of assets with the specified vulnerability over time. The table provides results by host name, IP address, Mac address, signature ID, description of the vulnerability, and date of the most recent event. This report relates to GDPR Articles 32, 35, and 83 and Recitals 76, 77, 78, and 83.

You must specify a CVE ID.

Vulnerability Summary by GDPR Asset

Reports the vulnerabilities detected on a specific GDPR asset. The chart shows the number of vulnerabilities detected over time. The table provides results by host name, IP address, Mac address, signature ID, description of the vulnerability, and date of the most recent event. This report relates to GDPR Articles 32, 35, and 83 and Recitals 76, 77, 78, and 83.

You must specify one GDPR asset by host name, IP address, or Mac address.

Vulnerability Summary on GDPR Systems

Reports the vulnerabilities detected in the GDPR environment. The chart shows the assets with the most detected vulnerabilities. The table provides results by asset, signature ID, agent severity, description of the vulnerability, and date of the most recent event. This report relates to GDPR Articles 32, 35, and 83 and Recitals 76, 77, 78, and 83.

XSS Vulnerabilities on GDPR Systems Dashboard

Provides an overview of XSS vulnerabilities reported on GDPR systems. This dashboard relates to GDPR Articles 32, 35, and 83 and Recitals 76, 77, 78, and 83.

XSS Vulnerabilities on GDPR Systems Report

Reports the cross-site scripting (XSS) vulnerabilities detected in the GDPR environment. Vulnerabilities associated with XSS enable malicious users to inject code in legitimate web pages or applications that executes harmful scripts in the user’s web browser when the browser parses data. The chart shows the assets with the most detected vulnerabilities. The table provides results by asset, signature ID, agent severity, description of the vulnerability, and date of the most recent event. This report relates to GDPR Articles 32, 35, and 83 and Recitals 76, 77, 78, and 83.

Security Controls Risk Identification

Select Reports > Portal > Repository > Standard Content > GDPR > *Reports* or *Dashboards* > GDPR Attack Surface Analysis > Security Controls Risk Identification.

Not all malicious users want to breach your systems to access or manipulate data. Some might want to disrupt service and deny users access to information. However, a denial-of-service (DoS) attack might indicate a future threat to your environment.

DoS Attacks Against GDPR Systems

Reports potential DoS events against databases in the GDPR environment. The chart shows the number of attacks over time. The table provides results by the source IP and port, the target IP and port, name of the event, and number of events. This report relates to GDPR Article 32 and Recital 49.

DoS Attacks Against GDPR Systems

Provides a summary overview of DoS Attacks against GDPR Systems. This dashboard relates to GDPR Article 32 and Recital 49.

Corporate Governance

In the Reports Portal, select Repository > Standard Content > GDPR > *Reports* or *Dashboards* > **GDPR Corporate Governance** > **Record Keeping**.

In some environments, sensitive data is stored in file cabinets or archives. To ensure compliance with GDPR, your organization might control access to the physical environment where these records are kept. Use the following dashboards and reports to track access to these environments.

Dashboards	Reports
Access Activity on GDPR Systems Overview Geo Access Activity on GDPR Systems Overview Physical Access Activity on GDPR Systems Overview	Access Activity on GDPR Systems Summary After Work Hours Physical Access Activity on GDPR Systems Summary Physical Access Activity on GDPR Systems Summary

Access Activity on GDPR Systems Summary

Reports access events to GDPR systems. The chart shows access by country over time. The table provides results by user, source IP and country, target IP and host, and number of events. This report relates to GDPR Articles 30, 32, and 25, and Recital 82.

After Work Hours Physical Access Activity on GDPR Systems Summary

Reports access to physical GDPR systems, such as buildings, during after work hours. The chart shows both failed and successful access by user and building. The table provides results by date, user, building, result, and number of attempts. This report relates to GDPR Articles 24 and 32 and Recital 49.

By default, the report uses the following time ranges to check for “after hours” access:

- 12 a.m. to 7 a.m., Monday through Friday
- 18 p.m. (6 p.m.) to 12 a.m., Monday through Friday
- All day on Saturday and Sunday

However, you can modify the time ranges by editing the filters for the report. The time range uses 24-hour values.

Physical Access Activity on GDPR Systems Summary

Reports access to physical GDPR systems, such as building. The chart shows both failed and successful access by building over time. The table provides results by date, user, building, result, and number of attempts. This report relates to GDPR Articles 24 and 32 and Recital 49.

Access Activity on GDPR Systems Overview

Provides an overview of access events reported on GDPR systems. This dashboard relates to GDPR Articles 30, 32, and 25 and Recital 82.

Geo Access Activity on GDPR Systems Overview

Provides an overview of GEO access activity to GDPR systems. This dashboard relates to GDPR Articles 30, 32, and 25 and Recital 82.

Physical Access Activity on GDPR Systems Overview

Provides an overview of physical access events reported on GDPR systems, by default “after Work Hours” charts defined from 12 a.m. to 7 a.m. and 18 p.m. to 12 a.m every Monday to Friday and the whole days of Saturday and Sunday, those can be re-configured to different values using this dashboard charts components filter. This dashboard relates to GDPR Articles 24 and 32 and Recital 49.

Regulatory Exposure

In the Reports Portal, select Repository > Standard Content > GDPR > *Reports* or *Dashboards* > **GDPR Regulatory Exposure** > **Composite Regulatory Exposure**.

To comply with GDPR, you might need to track how data flows among GDPR system, and from systems in non-EU countries.

Dashboards	Reports
Data Flow from GDPR Systems Data Flow from GDPR Systems to non EU Data Flow from non EU to GDPR Systems Data Flow to GDPR Systems GDPR Systems Communication with non EU Countries GDPR Systems Communication Overview High Risk Events on GDPR Systems Overview Policy Violations on GDPR Systems Overview Threat Relationship on GDPR Systems Overview Threats on GDPR Systems Overview	Data Flow from GDPR Systems Summary Data Flow from GDPR Systems to non EU Summary Data Flow from non EU to GDPR Systems Summary Data Flow to GDPR Systems Summary High Risk Events on GDPR Systems Summary Policy Violations on GDPR Systems Summary Threats on GDPR Systems Summary

Data Flow from GDPR Systems

Provides a summary overview of data flow from GDPR Systems. This dashboard relates to GDPR Articles 30, 46, 32, 45, 46, and 49 and Recital 82.

Data Flow from GDPR Systems Summary

Reports events that detect the flow of data from GDPR systems. The chart shows the GDPR systems with the most data flowing outward. The table provides results by the IP address of the GDPR source system, the target IP address and host, and the number of events detected. This report relates to GDPR Articles 30, 32, 45, 46, and 49 and Recital 82.

Data Flow from GDPR Systems to non EU

Provides a summary overview of data flow from non EU to GDPR Systems. This dashboard relates to GDPR Articles 30, 46, 32, 45, 46, and 49 and Recital 82.

Data Flow from GDPR Systems to non EU Summary

Reports events that detect the flow of data from GDPR systems to systems in non-European Union countries. The chart shows the GDPR systems with the most data flowing outward by country. The table provides results by the IP address of the GDPR source system, the IP address of the non-EU system, the country code of the target system, and the number of events detected. This report relates to GDPR Articles 30, 32, 45, 46, and 49 and Recital 82.

Data Flow from non EU to GDPR Systems

Provides a summary overview of data flow from non EU to GDPR Systems. This dashboard relates to GDPR Articles 30, 46, 32, 45, 46, and 49 and Recital 82.

Data Flow from non EU to GDPR Systems Summary

Reports events that detect the flow of data to GDPR systems from systems in non-European Union countries. The chart shows the GDPR systems with the most data flowing in by country of origin. The table provides results by the IP address and country code of the source system, the IP address of the GDPR system, and the number of events detected. This report relates to GDPR Articles 30, 32, 45, 46, and 49 and Recital 82.

Data Flow to GDPR Systems

Provides a summary overview of data flow to GDPR Systems. This dashboard relates to GDPR Articles 30, 46, 32, 45, 46, and 49 and Recital 82.

Data Flow to GDPR Systems Summary

Reports events that detect the flow of data to GDPR systems. The chart shows the GDPR systems with the most data flowing into them. The table provides results by the IP address of the source system, the target (GDPR system) IP address and host, and the number of events detected. This report relates to GDPR Articles 30, 32, 45, 46, and 49 and Recital 82.

GDPR Systems Communication Overview

Provides an overview of GDPR Systems communications. This dashboard relates to GDPR Articles 30, 46, 32, 45, 46, and 49 and Recital 82.

GDPR Systems Communication with non EU Countries

Provides an overview of GDPR Systems communications with non EU Countries. This dashboard relates to GDPR Articles 30, 46, 32, 45, 46, and 49 and Recital 82.

High Risk Events on GDPR Systems Overview

Provides an overview of high risk events related to GDPR systems. This dashboard relates to GDPR Article 32 and Recital 49.

High Risk Events on GDPR Systems Summary

Reports high-risk events that involve GDPR systems. The chart shows the targeted GDPR systems with the most high-risk events. The table provides results by the source IP and host of the events, the targeted IP and host GDPR system, the user, and number of events detected. This report relates to GDPR Articles 32 and 83 and Recital 49.

Policy Violations on GDPR Systems Overview

Provides an overview of policy violation events related to GDPR systems. This dashboard relates to GDPR Articles 32 and 83 and Recital 49.

Policy Violations on GDPR Systems Summary

Reports the number of policy violation events on GDPR systems over time. The table provides results by source IP address, the IP address and host of the target GDPR system, user, and number of events. This report relates to GDPR Articles 32 and 83 and Recital 49.

Threat Relationship on GDPR Systems Overview

Provides an overview of relationship between source and destination addresses on events which indicate compromise, reconnaissance, hostile, or suspicious activity on GDPR systems. This dashboard relates to GDPR Article 32 and Recital 49.

Threats on GDPR Systems Overview

Provides an overview of events that indicate compromise, reconnaissance, hostile, or suspicious activity on GDPR systems. This dashboard relates to GDPR Article 32 and Recital 49.

Threats on GDPR Systems Summary

Reports the number of events that indicate compromise, reconnaissance, hostile, or suspicious activity on GDPR systems over time. The table provides results by IP and Mac address of the source system, the IP address and host of the target GDPR system, user, and number of events. This report relates to GDPR Articles 32 and Recital 49.

Threat Analysis - Data Store Risk

In the Reports Portal, select Repository > Standard Content > GDPR > *Reports* or *Dashboards* > **GDPR Threat Analysis** > **Data Store Risk**.

GDPR requires that your enterprise establish technical and organizational standards that ensure appropriate security-to-risk levels. As part of your threat analysis, you should assess the vulnerability of data storage systems.

Dashboards	Reports
n/a	Attacks Against Databases on GDPR Systems Cassandra Vulnerabilities on GDPR Systems CRM and ERP Vulnerabilities on GDPR Systems Database Configuration Changes on GDPR Systems Database Weaknesses on GDPR Systems Elasticsearch Vulnerabilities on GDPR Systems IBM Db2 Vulnerabilities on GDPR Systems MariaDB Vulnerabilities on GDPR Systems Microsoft SQL Server Vulnerabilities on GDPR Systems MongoDB Vulnerabilities on GDPR Systems MySQL Vulnerabilities on GDPR Systems Oracle Vulnerabilities on GDPR Systems PostgreSQL Vulnerabilities on GDPR Systems Redis Vulnerabilities on GDPR Systems

Attacks Against Databases on GDPR System

Reports events that indicate compromise, reconnaissance, hostile, or suspicious activity against GDPR systems databases over time. The table provides results by the source GDPR IP address, IP address and host of the target system, name of the event, and number of events. This report relates to GDPR Article 32 and Recital 49.

Cassandra Vulnerabilities on GDPR Systems

Reports vulnerabilities related to Apache Cassandra on GDPR systems. Apache Cassandra is a free and open-source, distributed, wide-column store, NoSQL database management system. The chart shows the GDPRs reporting the most vulnerabilities. The table provides results by GDPR asset, signature ID, agent severity, description of the vulnerability, and date of the most recent event. This report relates to GDPR Articles 32, 35, and 83 and Recitals 76, 77, 78, and 83.

CRM and ERP Vulnerabilities on GDPR Systems

Reports vulnerabilities detected on GDPR systems related to CRM (Customer Relationship Management) and ERP (Enterprise Resource Planning) software. The chart shows the GDPR systems with the most vulnerabilities. The table provides results by GDPR asset, signature ID, agent severity, description of the vulnerability, and date of the most recent event. This report relates to GDPR Articles 32, 35, and 83 and Recitals 76, 77, 78, and 83.

Database Configuration Changes on GDPR Systems

Reports changes to the database configuration in the GDPR environment. The chart shows the GDPR systems with the most changes. The table provides results by host system, database change, the type of change, agent severity, and date of the most recent event. This report relates to GDPR Article 32.

Database Weaknesses on GDPR Systems

Reports vulnerabilities in databases detected in the GDPR environment over time and by severity. The table provides results by GDPR asset, signature ID, description of the vulnerability, agent severity, and date of the most recent event. This report relates to GDPR Articles 32, 35, and 83 and Recitals 76, 77, 78, and 83.

Elasticsearch Vulnerabilities on GDPR Systems

Reports vulnerabilities related to Elasticsearch on GDPR systems. The chart shows the GDPR systems with the most vulnerabilities. The table provides results by GDPR asset, signature ID, agent severity, description of the vulnerability, and date of the most recent event. This report relates to GDPR Articles 32, 35, and 83 and Recitals 76, 77, 78, and 83.

IBM Db2 Vulnerabilities on GDPR Systems

Reports vulnerabilities related to IBM Db2 on GDPR systems. The chart shows the GDPR systems with the most vulnerabilities. The table provides results by GDPR asset, signature ID, agent severity, description of the vulnerability, and date of the most recent event. This report relates to GDPR Articles 32, 35, and 83 and Recitals 76, 77, 78, and 83.

MariaDB Vulnerabilities on GDPR Systems

Reports vulnerabilities related to MariaDB on GDPR systems. The chart shows the GDPR systems with the most vulnerabilities. The table provides results by GDPR asset, signature ID, agent severity, description of the vulnerability, and date of the most recent event. This report relates to GDPR Articles 32, 35, and 83 and Recitals 76, 77, 78, and 83.

Microsoft SQL Server Vulnerabilities on GDPR Systems

Reports vulnerabilities related to Microsoft SQL Server on GDPR systems. The chart shows the GDPR systems with the most vulnerabilities. The table provides results by GDPR asset, signature ID, agent severity, description of the vulnerability, and date of the most recent event. This report relates to GDPR Articles 32, 35, and 83 and Recitals 76, 77, 78, and 83.

MongoDB Vulnerabilities on GDPR Systems

Reports vulnerabilities related to MongoDB on GDPR systems. The chart shows the GDPR systems with the most vulnerabilities. The table provides results by GDPR asset, signature ID, agent severity, description of the vulnerability, and date of the most recent event. This report relates to GDPR Articles 32, 35, and 83 and Recitals 76, 77, 78, and 83.

MySQL Vulnerabilities on GDPR Systems

Reports vulnerabilities related to MySQL on GDPR systems. The chart shows the GDPR systems with the most vulnerabilities. The table provides results by GDPR asset, signature ID, agent severity, description of the vulnerability, and date of the most recent event. This report relates to GDPR Articles 32, 35, and 83 and Recitals 76, 77, 78, and 83.

Oracle Vulnerabilities on GDPR Systems

Reports vulnerabilities related to Oracle on GDPR systems. The chart shows the GDPR systems with the most vulnerabilities. The table provides results by GDPR asset, signature ID, agent severity, description of the vulnerability, and date of the most recent event. This report relates to GDPR Articles 32, 35, and 83 and Recitals 76, 77, 78, and 83.

PostgreSQL Vulnerabilities on GDPR Systems

Reports vulnerabilities related to PostgreSQL on GDPR systems. The chart shows the GDPR systems with the most vulnerabilities. The table provides results by GDPR asset, signature ID, agent severity, description of the vulnerability, and date of the most recent event. This report relates to GDPR Articles 32, 35, and 83 and Recitals 76, 77, 78, and 83.

Redis Vulnerabilities on GDPR Systems

Reports vulnerabilities related to Redis on GDPR systems. The chart shows the GDPR systems with the most vulnerabilities. The table provides results by GDPR asset, signature ID, agent severity, description of the vulnerability, and date of the most recent event. This report relates to GDPR Articles 32, 35, and 83 and Recitals 76, 77, 78, and 83.

Threat Analysis - Internet

In the Reports Portal, select Repository > Standard Content > GDPR > *Reports* or *Dashboards* > **GDPR Threat Analysis** > **Internet Threat Analysis**.

GDPR requires that your enterprise establish technical and organizational standards that ensure appropriate security-to-risk levels. As part of your threat analysis, you should assess the vulnerability of firewalls, places where information might leak, and existence of malware on your GDPR systems.

Dashboards	Reports
Malware Found on GDPR Systems MITRE ATT&CK on GDPR Systems by GDPR Asset MITRE ATT&CK on GDPR Systems by MITRE ID MITRE ATT&CK on GDPR Systems Overview MITRE ATT&CK Relationship on GDPR Systems Overview	Firewall Blocked Events in GDPR Environment Information Leaks from GDPR Systems Malware Found on GDPR Systems

Firewall Blocked Events in GDPR Environment

Reports firewall blocked events in the GDPR environment. The chart shows the number of events by time and target port. If you pro-actively monitor the firewalls in your enterprise, you can identify problems at an early stage and prevent network attacks. The table provides results by source IP address and port, the targeted GDPR IP address and port, and the number of events. This report relates to GDPR Article 32 and Recital 49.

Information Leaks from GDPR Systems

Reports events that indicate information leaks on GDPR systems over time. The table provides results by date, event name, source IP address and port, the targeted GDPR IP address and port, and the user. This report relates to GDPR Articles 32, 33, and 34 and Recitals 49, 85, and 86.

Malware Found on GDPR Systems Dashboard

Provides an overview of malware reported events on GDPR Systems. This dashboard relates to GDPR Articles 32, 33, and 34 and Recitals 49 and 83.

Malware Found on GDPR Systems Report

Reports malware found on GDPR systems. The chart shows the systems with the most malware activity. The table provides results by GDPR asset, malware program, name of the event, and date of the most recent event. This report relates to GDPR Articles 32, 35, and 83 and Recitals 76, 77, 78, and 83.

MITRE ATT&CK on GDPR Systems by GDPR Asset

Provides an overview of MITRE ATT&CK events by GDPR asset. This dashboard relates to GDPR Article 32 and Recital 49.

MITRE ATT&CK on GDPR Systems by MITRE ID

Provides an overview of MITRE ATT&CK events reported on GDPR Systems by MITRE IDs. This dashboard relates to GDPR Article 32 and Recital 49.

MITRE ATT&CK on GDPR Systems Overview

Provides an overview of MITRE ATT&CK events reported on GDPR Systems. This dashboard relates to GDPR Article 32 and Recital 49.

MITRE ATT&CK Relationship on GDPR Systems Overview

Provides an overview of the relationship between different event entities on MITRE ATT&CK events reported on GDPR systems. This dashboard relates to GDPR Article 32 and Recital 49.

Ensuring Compliance with IT Governance

Requires the Log Management and Compliance service in ArcSight SIEM as a Service or the ArcSight Recon capability.

In the Reports Portal, select Repository > Standard Content > IT GOV > ISO-27002.

To comply with the information security management controls as part of ISO 27002 guidelines, your enterprise needs to establish and follow information security standards and policies. The guidelines help you identify and implement the controls needed to secure data. You can check the security controls in your enterprise against one or more specific ISO 27002 control set, such as *Information Security Policies or Asset Management*.

We provide the **Compliance Pack for IT Governance** to help you comply with Controls 6, 8, 9, 10, 12, 13, 14, 16, and 17. For more information about adding the pack to the Reports repository, see the *Solutions Guide for ArcSight Compliance Pack for IT Governance*.

This package includes dashboards and reports organized by the ISO-27002 requirements:

Category	Dashboards	Reports
"IT Governance – Executive Overview" on page 60	"Overall Risk Management" on page 60	n/a
"6 – Organization of Information Security" on page 61	n/a	"Suspicious Activity in Wireless Network" on page 61
"8 – Asset Management" on page 61	n/a	"Network Active Assets" on page 62 "New Hosts" on page 62 "New Services" on page 62

Category	Dashboards	Reports
"9 – Access Control" on page 62	"User Account Management" on page 64	"Account Lockouts by User" on page 63 "All Login Activity" on page 63 "Authentication with Null Sessions" on page 63 "Authorization Changes" on page 63 "Privileged Account Changes" on page 63 "Removal of Access Rights" on page 63 "Successful Brute Force Logins" on page 63 "Unauthorized User Access to Network Domain" on page 63 "User Account Creation" on page 64 "User Account Deletion" on page 64
"10 – Cryptography" on page 64	n/a	"Insecure Cryptographic Storage" on page 65 "Invalid Certificates" on page 65 "Systems Providing Unencrypted Services" on page 65

Category	Dashboards	Reports
"12 – Operations Security" on page 65	"Authentication Errors" on page 69 "Database Events" on page 69 "Events and Incidents that have Occurred" on page 70 "Malware Activity" on page 71 "Scans Overview" on page 72 "Vulnerabilities Management" on page 74 "Vulnerability Scans and Unauthorized Access" on page 74	"Account Activity Summary" on page 68 "Administrative Actions Events" on page 68 "Administrative Logins and Logouts" on page 68 "Application Configuration Modification" on page 68 "Audit Log Cleared" on page 68 "Authentication Logins with Insecure Ports" on page 68 "Blocked Firewall Traffic" on page 69 "Changes to Operating System" on page 69 "Covert Channel Activity" on page 69 "Device Configuration Changes" on page 69 "Device Logging Review" on page 69 "Exploit of Vulnerabilities" on page 70 "Failed Administrative User Logins" on page 70 "Failed Antivirus Updates" on page 70 "Failed File Access" on page 70 "Failed File Deletions" on page 70 "Failed User Logins" on page 70 "Fault Logs" on page 71 "File Changes in Production" on page 71 "Firewall Configuration Changes" on page 71 "Logins to Database Machines" on page 71 "Machines Conducting Policy Breaches" on page 71

Category	Dashboards	Reports
		"Malicious Code Sources" on page 71 "Network Device Configuration Changes" on page 72 "Policy Violations" on page 72 "Resource Exhaustion" on page 72 "Software Changes in Production" on page 72 "Successful Administrative User Logins" on page 72 "Successful File Deletions" on page 73 "Successful User Logins" on page 73 "Suspicious Activity" on page 73 "Trojan Code Activity" on page 73 "User Actions All Events" on page 73 "User Logins and Logouts" on page 73 "Virus Infected Machines" on page 73 "Vulnerabilities Scanner Results" on page 74
"13 – Communications Security" on page 74	"Email Activities" on page 75 "Peer to Peer Activity" on page 76 "Phishing Activities" on page 76	"Accessed Ports through Firewall" on page 75 "Firewall Open Port Review" on page 75 "Information Interception Events" on page 75 "Insecure Services" on page 75 "Interzone Traffic" on page 75 "Organizational Information Leaks" on page 75 "Personal Information Leaks" on page 76 "Processes by Asset" on page 76

Category	Dashboards	Reports
"14 – System Acquisition, Development, and Maintenance" on page 76	n/a	"Invalid Data Input" on page 77
"16 – Information Security Incident Management" on page 77	"Internal Reconnaissance" on page 78	"Confidential Breach Sources" on page 77 "Denial of Service" on page 77 "File Integrity Changes" on page 78 "Information Systems Failures" on page 78 "Integrity Breach Sources" on page 78 "Internal Reconnaissance by Event" on page 78 "Internal Reconnaissance by Source Address" on page 78 "Internal Reconnaissance by Target Address" on page 79
"17 – Information Security Aspects of Business Continuity Management" on page 79	n/a	"Availability Attacks" on page 79

IT Governance – Executive Overview

In the Reports Portal, select Repository > Standard Content > IT GOV > ISO-27002 > Dashboards > Overview.

To help individuals in management and C-suite positions to quickly understand the current state of your enterprise's compliance with ISO-27002 controls, you can view the following dashboard:

Dashboards	Reports
"Overall Risk Management" below	n/a

Overall Risk Management

Provides, in charts, the overall risk score of your IT environment. You can view the most assets at highest risk, risk score by ISO control, and the rules triggered by an ISO control.

6 – Organization of Information Security

In the Reports Portal, select Repository > Standard Content > IT GOV > ISO-27002 > Reports > ISO 6 – Organization of Information Security.

Control 6: *Organization of information security* of the ISO 27002 standard focuses on ensuring that your organization supports and maintains information security operations, both on- and off-site.

To assess your enterprise's compliance with this requirement, use the following reports:

Dashboards	Reports
n/a	"Suspicious Activity in Wireless Network" below

Suspicious Activity in Wireless Network

Reports events that indicate suspicious activity in the wireless network. For example, a malicious user might scan ports to discover open doors or weak points in the wireless network. The table provides results by the type of suspicious activity, details about the target and source systems, and the number of events.

In the logical model, use the iDestinationWirelessNetwork variable to specify wireless networks. For more information, see the *Solutions Guide for ArcSight Compliance Pack for IT Governance*.

8 – Asset Management

In the Reports Portal, select Repository > Standard Content > IT GOV > ISO-27002 > Reports > ISO 8 – Asset Management.

Control 8: *Asset Management* of the ISO 27002 standard focuses on identifying the physical and information assets in your enterprise, and determining the appropriate level of protection necessary for each.

To assess your enterprise's compliance with this requirement, use the following reports:

Dashboards	Reports
n/a	"Network Active Assets" on the next page "New Hosts" on the next page "New Services" on the next page

Network Active Assets

Reports all hosts that have been included as the source address in logged events. The table provides results by the source IP address, user, and zone; the number of events; and when the event occurred.

New Hosts

Reports all new hosts on the network detected by traffic analysis systems. The table provides results by the host name, IP address, and zone of the target system and when the event occurred.

New Services

Reports all new services on the network detected by traffic analysis systems. The table provides results by the service name, IP address, and host name; the port used, the number of events, and when the most recent event occurred.

9 – Access Control

In the Reports Portal, select Repository > Standard Content > IT GOV > ISO-27002 > *Dashboards* or *Reports* > ISO 9 – Access Control.

Control 9: *Access Control* of the ISO 27002 standard focuses on preventing unauthorized user access to information and the facilities that process information.

To assess your enterprise's compliance with this requirement, use the following dashboard and reports:

Dashboards	Reports
"User Account Management" on page 64	"Account Lockouts by User" on the next page "All Login Activity" on the next page "Authentication with Null Sessions" on the next page "Authorization Changes" on the next page "Privileged Account Changes" on the next page "Removal of Access Rights" on the next page "Successful Brute Force Logins" on the next page "Unauthorized User Access to Network Domain" on the next page "User Account Creation" on page 64 "User Account Deletion" on page 64

Account Lockouts by User

Reports the accounts most often locked out. The table provides results about the locked out user, the target IP address and host name, the number of event, and when the most recent event occurred.

All Login Activity

Reports all successful, failed, and attended login activity by all users in the network. The table provides results by the IP address and name of the target system, the source IP address, the user involved, the outcome of the login attempt, the number of attempts, and when the most recent attempt occurred.

Authentication with Null Sessions

Reports possible null authentication sessions where the outcome is successful, failed, or an attempt. A null session attack exploits an authentication vulnerability for Windows Administrative Shares where a malicious user connects to a local or remote share without authentication. The table provides results by the target IP address and user, the source IP address and user, the outcome of the authentication attempt, the number of attempts, and when the most recent attempt occurred.

Authorization Changes

Reports authorization changes made on systems and the number of events per host. The table provides results by the target zone, IP address, and user; the source user, the type of event, the number of attempts, and when the most recent attempt occurred.

Privileged Account Changes

Reports all changes made to privileged accounts, such as password changes. The table provides results by the event, the name and IP address of the user who made the change, and when the change occurred.

Removal of Access Rights

Reports the access rights removed from user accounts. The table provides results by the access right that was removed, the IP address and host where the change was made, the user who made the change, the number of changes, and when the change occurred.

Successful Brute Force Logins

Reports the details of successful brute force logins. The table provides results by the user logging in, the IP address and host affected, the number of logins and when the event occurred.

Unauthorized User Access to Network Domain

Reports login sessions where the user is unauthorized for the specific network domain. The table provides results by the user attempted access, the target IP address and host, the source IP address for the user, the outcome of the attempt, the number of attempts, and when the event occurred.

To specify authorized users and network domains, update the variables isDestinationAuthorizeUser and isNetworkDomain. For more information, see the *Solutions Guide for ArcSight Compliance Pack for IT Governance*.

User Account Creation

Reports all events that indicate a user account has been added to a system. The table provides results by the IP address and host where the event occurred, the user adding accounts, the number of events, and when the event occurred.

User Account Deletion

Reports all events that indicate a user account has been removed from a system. The table provides results by the IP address and host where the event occurred, the user removing accounts, the number of events, and when the event occurred.

User Account Management

Provides, in charts, details of scans, probes, and unauthorized access. You can view the number of accounts created and deleted by the user making the change, as well as the hosts that have been added or deleted.

10 – Cryptography

In the Reports Portal, select Repository > Standard Content > IT GOV > ISO-27002 > Reports > ISO 10 – Cryptography.

Control 10: *Cryptography* of the ISO 27002 standard focuses on using cryptographic keys to protect the confidentiality, integrity, and availability of information.

To assess your enterprise's compliance with this requirement, use the following reports:

Dashboards	Reports
n/a	"Insecure Cryptographic Storage" on the next page "Invalid Certificates" on the next page "Systems Providing Unencrypted Services" on the next page

Insecure Cryptographic Storage

Reports vulnerabilities associated with insecure cryptographic storage detected on your systems. The table provides results by IP address and name of the asset, the detected vulnerability, and when the most recent event occurred.

Invalid Certificates

Reports events that indicate an error with a server's certificate. The chart displays the number of such occurrences per host. The table provides results by the name of the event, the IP address and host name of the server, the user associated with event, the number of events, and when the event occurred.

Systems Providing Unencrypted Services

Reports the systems that provide unencrypted services. The table provides results by the port, process, service, IP address of the system, and the number of events.

12 – Operations Security

In the Reports Portal, select Repository > Standard Content > IT GOV > ISO-27002 > *Dashboards or Reports* > ISO 12 – Operations Security.

Control 12: *Operations security* of the ISO 27002 standard focuses on ensuring that the facilities that store and process information are protected from malware, data loss, and the exploitation of technical vulnerabilities. Use the following reports to check for compliance with the standard.

To assess your enterprise's compliance with this requirement, use the following dashboards and reports:

Dashboards	Reports

"Authentication Errors" on page 69 "Database Events" on page 69 "Events and Incidents that have Occurred" on page 70 "Malware Activity" on page 71 "Scans Overview" on page 72 "Vulnerabilities Management" on page 74 "Vulnerability Scans and Unauthorized Access" on page 74	"Account Activity Summary" on the next page "Administrative Actions Events" on the next page "Administrative Logins and Logouts" on the next page "Application Configuration Modification" on the next page "Audit Log Cleared" on the next page "Authentication Logins with Insecure Ports" on the next page "Blocked Firewall Traffic" on page 69 "Changes to Operating System" on page 69 "Covert Channel Activity" on page 69 "Device Configuration Changes" on page 69 "Device Logging Review" on page 69 "Exploit of Vulnerabilities" on page 70 "Failed Administrative User Logins" on page 70 "Failed Antivirus Updates" on page 70 "Failed File Access" on page 70 "Failed File Deletions" on page 70 "Failed User Logins" on page 70 "Fault Logs" on page 71 "File Changes in Production" on page 71 "Firewall Configuration Changes" on page 71 "Logins to Database Machines" on page 71 "Machines Conducting Policy Breaches" on page 71 "Malicious Code Sources" on page 71 "Network Device Configuration Changes" on page 72 "Policy Violations" on page 72 "Resource Exhaustion" on page 72 "Software Changes in Production" on page 72 "Successful Administrative User Logins" on page 72 "Successful File Deletions" on page 73 "Successful User Logins" on page 73 "Suspicious Activity" on page 73

	"Trojan Code Activity" on page 73 "User Actions All Events" on page 73 "User Logins and Logouts" on page 73 "Virus Infected Machines" on page 73 "Vulnerabilities Scanner Results" on page 74

Account Activity Summary

Reports all account activities by type. The table provides results by the event name, the user associated with the event, the target IP address and host name, and number of events per user.

Administrative Actions Events

Reports the accounts that have performed the most administrative actions. The table provides results by admin account, destination IP address, the name and ID of the detected event, the affected product, the number of events, and when the most recent event occurred.

Administrative Logins and Logouts

Reports the hosts that have had the highest number of logins and logouts by administrative accounts. The table provides results by the name of the event, the admin account, the IP address and name of the affected host, the action taken, the number of events, and when most recent event occurred.

Application Configuration Modification

Reports the applications that have had the highest number of configuration changes. For example, a user might have updated a license file or a program setting. The table provides results by the product modified, the IP address and zone of the host system, and the date that the modification occurred.

Audit Log Cleared

Reports the indication that audit logs have been cleared over time. The table provides results by when the event occurred, the IP address and host of the affected system, the affected account, the source account that might have cleared the audit log, and the affected device.

Authentication Logins with Insecure Ports

Reports assets with authenticated logins that used insecure ports. This report is useful for auditors to track and identify assets that are not following the security standard. The table provides results by the insecure port, the name of the source and target systems, the target user (if any), the type of event or user, the number of events, and the date of the most recent event.

Authentication Errors

Provides an overview of the authentication failure events in your enterprise. You can view a trend of failed authentication events over time, the different outcomes of the authentication events, and the failed logins by administrative and non-administrative users.

Blocked Firewall Traffic

Reports events generated by devices that have blocked traffic. The table provides results by the target port, the source and target IP address and host name, the type of event, and number of events.

Changes to Operating System

Reports the hosts with the most changes to the operating system. Detected modifications might be to the security options or OS accounts. The table provides results by the change made; the IP address, name, and zone of the affected host system; and the device product that was changed.

Covert Channel Activity

Reports events identified as covert channel activity. These events are generated by IDS devices and could indicate the use of different tools designed to establish an undetected channel to and from your enterprise. The table provides results by the type of event, the IP address and host name of the target and source systems, and when the event occurred.

Database Events

Provides, in charts and a table, an overview of the database events. You can view the trend of events over time, events by product, by the behavior of each event, and user names, IPs involved in the events. The table lists the name of the event; the target user and associated IP address; the source user and associated IP address; the outcome of the event; and the number of events.

Device Configuration Changes

Reports the type and number of modifications made to devices in the network. The table provides results by the date, time, event name, affected product, and the host where the changes occurred.

Device Logging Review

Reports the devices with the most logging events, such as a database. The table provides results by the device host name and address, a count of events received, and when the device most recently received an event.

Because this report queries the logging activity from all devices, it will have a performance impact each time that you run it.

Events and Incidents that have Occurred

Provides, in charts, an overview of the different security incidents that might indicate that systems or data in your enterprise have been compromised. You can view a trend of events by severity over time, as well as events by geographic location, the techniques used, severity, source IP address, and target IP address. You can also review the relationships between target and source IP addresses.

Exploit of Vulnerabilities

Reports the number of detected events where a user might have exploited a well-known vulnerability. For example, an IDS might report an event associated with a Unicode vulnerability. The table provides results by the vulnerability, the affected host, the source system, and the number of detected events.

Failed Administrative User Logins

Reports the number of failed logins by administrative accounts over time. A high number of failed access attempts can indicate malicious activity. The table provides results by account name, the name and IP address of the host where the login failed, the affected product or operating system, the number of failures detected, and when the most recent event occurred.

Failed Antivirus Updates

Reports number of failures in updating anti-virus software over time. The table provides results by the update that failed; the IP address, name, and zone of the target system; the type of event, and when the failure occurred.

Failed File Access

Reports the details of events that indicate failed attempts to access files. The table provides results by the targeted file, the IP address and name of the target system, the type of event, the number of attempts, and when the most recent attempt occurred.

Failed File Deletions

Reports information about files that failed to be deleted. The table provides results by the targeted file, the IP address and name of the target system, the type of event, the number of attempts, and when the most recent attempt occurred.

Failed User Logins

Reports the number of failed logins over time. A high number of failed access attempts can indicate malicious activity. The table provides results by account name, the name and IP address of the host where the login failed, the affected product or operating system, the number of failures detected, and when the most recent event occurred.

Fault Logs

Reports all events indicating that a system fault has occurred over time. The table provides results by the IP address and name of the host where the fault occurred, the name of the event, the number of events, and when the most recent event occurred.

File Changes in Production

Reports changes made to files in the production network. The table provides results by the target file, the IP address and name of the host of the file, the number of events, and when the most recent event occurred.

Before using this report, you must add the systems that reside in the production network to the variable isProductionNetwork. For more information, see the *Solutions Guide for ArcSight Compliance Pack for IT Governance*.

Firewall Configuration Changes

Reports events by host that indicate changes to firewall configuration. The table provides results by the IP address and zone of the firewall, the firewall rule and configuration that was changed, the number of changes, and the time that the event occurred.

Logins to Database Machines

Reports the user accounts with the most attempts to log in to databases in your environment. The table provides results by the user account, the affected host, the number of attempts, whether the attempt was successful, and events per hour.

Machines Conducting Policy Breaches

Reports policy breaches by system, where the event matches the category technique of `/Policy/Breach`. The table provides results by the device group, affected vendor and product, the IP address and name of the host, and when the breach occurred.

Malicious Code Sources

Reports malicious code events by host system. The table provides results by the event name, the IP address and name of the affected device, the affected product, the category of the malicious code, and the outcome.

Malware Activity

Provides, in charts, an overview of the malware events that might indicate systems or data in your enterprise have been compromised. You can view a trend of malware events over time, as well as events by geographic location, malware category and malicious event, the affected IP addresses and hosts, suspicious IP addresses and hosts names, and target IP addresses. You can also review the relationships between target and source IP addresses. You can also review the techniques used to exploit and launch further attacks.

Network Device Configuration Changes

Reports events that indicate configuration file changes on network equipment such as routers and switches. The table provides results by the change made, the device affected, the IP address where the change originated, the IP address and name of the host where the change occurred, and when the change occurred.

Policy Violations

Reports all policy breaches by source IP address. A policy breach could be IM use or the downloading of unauthorized content. The table provides results by the affected policy, the IP address and name of the source and target hosts, the number of breaches, and when the most recent breach occurred.

Resource Exhaustion

Reports events that indicate resource exhaustion on particular hosts. A malicious user can create or exploit resource exhaustion vulnerabilities by causing the programs to crash or falter, or by interfering with the programs such that the programs do not have enough resources to perform properly. If this occurs, the systems and programs become unavailable for use. The table provides results by the IP address and name of the host where the event occurred, the type of event, the number of events, and when the most recent event occurred.

Scans Overview

Provides an overview of scan results. You can view the signatures of potential vulnerabilities, the most active scanners, and the most scanned ports and assets.

Software Changes in Production

Reports events that indicate changes to daemons, access policies, and other software changes in the production environment. The table provides results by the event, the IP address and name of the target asset, and the target user.

Before using this report, you must add the systems that reside in the production network to the variable isProductionNetwork. For more information, see the *Solutions Guide for ArcSight Compliance Pack for IT Governance*.

Successful Administrative User Logins

Reports the number of successful logins by administrative accounts over time. The table provides results by account name, the name and IP address of the host where the logins occurred, the affected product or operating system, the number of successful logins, and the date of the most recent event.

Successful File Deletions

Reports events that indicate successful attempts to delete files by the target IP address. The table provides results by name of the deleted file, the IP address where the file was deleted, the number of files deleted, and when the deletion occurred.

Successful User Logins

Reports the number of successful logins over time. The table provides results by account name, the name and IP address of the host where the logins occurred, the affected product or operating system, the number of successful logins, and when the most recent event occurred.

Suspicious Activity

Reports suspicious events in your network. The table provides results by the event name, the IP address and name of the host where the event occurred, the number of events, and when the most recent event occurred.

Trojan Code Activity

Reports all the trojan activity detected by IP address in the environment. The table provides results by the type of activity, the IP address that originated the activity, the IP address and name of the target host, and when the event occurred.

User Actions All Events

Reports the actions taken by non-administrative accounts. For example, a user might delete an infected file. The report provides results by the source account, the affected account, the name of the event, the IP address where the action occurred, the affected product, the outcome of the user’s action, the number of times that the action was detected, and the date of the most recent event.

Run this report with caution, as it can generate enormous amounts of data. This report will not include events in which both source and destination users are null.

User Logins and Logouts

Reports the user accounts that log in and out the most. The table provides results by the name of the login action and category, the user account, the IP address, name, zone of the affected system, and the date of the event.

Virus Infected Machines

Reports the systems with the most detected viruses by affected product. The table provides results by the virus name, the affected system and product, and the date of the event.

Vulnerabilities Management

Provides an overview of the vulnerabilities detected per host. You can view a trend of vulnerabilities reported over time, the most reported vulnerabilities, the assets with the most vulnerabilities, and vulnerabilities by severity.

Vulnerabilities Scanner Results

Reports vulnerabilities by type as detected by vulnerability scanners. The table provides results by the vulnerability, the IP address and name of the affected host, and the quantity found.

Vulnerability Scans and Unauthorized Access

Provides an overview of the scans, probes, and unauthorized access reported in your environment. You can view results by the systems with the most unauthorized access attempts, severity of events, the most scanned ports, the vulnerabilities scanned, and the signature of the riskiest vulnerabilities.

13 – Communications Security

In the Reports Portal, select Repository > Standard Content > IT GOV > ISO-27002 > *Dashboards* or *Reports* > ISO 13 – Communications Security.

Control 13: *Communications Security* of the ISO 27002 standard focuses on using cryptographic keys to protect the confidentiality, integrity, and availability of information.

To assess your enterprise's compliance with this requirement, use the following reports:

Dashboards	Reports
"Email Activities" on the next page "Peer to Peer Activity" on page 76 "Phishing Activities" on page 76	"Accessed Ports through Firewall" on the next page "Firewall Open Port Review" on the next page "Information Interception Events" on the next page "Insecure Services" on the next page "Interzone Traffic" on the next page "Organizational Information Leaks" on the next page "Personal Information Leaks" on page 76 "Processes by Asset" on page 76

Accessed Ports through Firewall

Reports all ports accessed through a firewall by port and number of events. The table provides results by IP address of the firewall device, the type and vendor of the firewall, and the port used.

Email Activities

Provides an overview of email activities in your enterprise. You can view the accounts by quantity of emails received and sent, as well as by the size of emails received and sent.

Firewall Open Port Review

Reports the ports open in firewalls by the number of access events per port. The table provides results by IP address of the firewall device, the type of firewall, the open port, the number of events, and when the most recent event occurred.

Information Interception Events

Reports the traffic interception events that indicate spoofing and man-in-the-middle attacks. The table provides results by the type of event, the IP address of the target and source systems, the number of events, and when the most recent event occurred.

Insecure Services

Reports the events by port number and type of insecure service, such as FTP or Telnet. The table provides results by the target port, target process, target and source IP addresses, the target host name, the product that reported the insecure service, and the number of events.

Interzone Traffic

Reports the communications that pass between different zones over time. The table provides results by the IP address, name, and zone of the target host; the source zone, the protocol used; and when the most recent communication occurred.

Organizational Information Leaks

Reports events associated with information leaks as reported by IDSs over time. The table provides results by the event, the source and target users, the number of events, and when the most recent event occurred.

Peer to Peer Activity

Provides an overview of peer-to-peer communication events. You can view a trend of communications over time, the total number of communications, communications by source IP address, and the relationship of communications that occur between source and target IP address.

Personal Information Leaks

Reports events that are associated with personal information leaks as reported by IDSs over time. The table provides results by the event, the source and target users, the number of events, and when the most recent event occurred.

Phishing Activities

Provides an overview of phishing activity in your enterprise. You can view a trend of phishing events over time, events received from suspicious domains, and number of events by recipient email and sender's email.

Processes by Asset

Reports the processes running on assets in your environment. The table provides results by the IP address, name, and zone of the host where the processes are running, the process, the application protocol used, the service, the product, and the number of running processes.

14 – System Acquisition, Development, and Maintenance

In the Reports Portal, select Repository > Standard Content > IT GOV > ISO-27002 > Reports > ISO 14 – System acquisition development and maintenance.

Control 14: *System acquisition, development, and maintenance* of the ISO 27002 standard focuses on incorporating information security throughout the lifecycle of the data. Your enterprise is expected to ensure the security of data in both test/development and product environments.

To assess your enterprise's compliance with this requirement, use the following report:

Dashboards	Reports
n/a	"Invalid Data Input" on the next page

Invalid Data Input

Reports events that indicate corrupt data input such as exceptionally long URLs or SNMP requests that exceed the allowed buffer size.

The table provides results by the type of event, the IP address and name for both the target and source of the host, and the number of events.

16 – Information Security Incident Management

In the Reports Portal, select Repository > Standard Content > IT GOV > ISO-27002 > *Reports* or *Dashboards* > ISO 16: Information security incident management

Control 16: *Information security incident management* of the ISO 27002 standard expects your enterprise to effectively and consistently manage information security incidents.

To assess your enterprise's compliance with this requirement, use the following reports:

Dashboards	Reports
"Internal Reconnaissance" on the next page	"Confidential Breach Sources" below "Denial of Service" below "File Integrity Changes" on the next page "Information Systems Failures" on the next page "Integrity Breach Sources" on the next page "Internal Reconnaissance by Event" on the next page "Internal Reconnaissance by Source Address" on the next page "Internal Reconnaissance by Target Address" on page 79

Confidential Breach Sources

Reports the number of confidentiality breach events by IP addresses of the source system. The table provides results by the IP address, name, and zone of the source; the number of events; and when the most recent event occurred.

Denial of Service

Reports the number of denial of service (DoS) events by IP addresses of the targeted system. The table provides results by the IP address , name, and zone of the targeted system; the type of DoS activity; and the number of events.

File Integrity Changes

Reports changes to files where the modification might compromise the integrity of the file. The table provides results by the path to the modified file, the IP address and name of the targeted host, the number of modifications, and when the most recent event occurred.

Information Systems Failures

Reports the number of changes to monitored files by target IP address and type of change. The report includes only events where agent severity is High or Very-High. The table provides results by the type of event; the IP address, name, and zone of the targeted system; and the number of events.

Integrity Breach Sources

Reports the number of attacks associated with integrity breaches, by source IP and type of breach. The table provides results by the type of breach event; the IP address, name, and zone of the source system; the number of events; and when the most recent event occurred.

Internal Reconnaissance

Provides an overview of events that indicate internal reconnaissance, which are attacks that occur within your organization's network, systems, and premises.

Internal Reconnaissance by Event

Reports the top events by the source IP address associated with the specified internal reconnaissance events. The table provides results by the type of event, the IP address, name, and zone of the target and source hosts; and the number of events.

You must specify at least one event by type.

Internal Reconnaissance by Source Address

Reports the number of internal reconnaissance events associated with the specified source IP address. The table provides results by the type of event, the IP address, name, and zone of the target and source hosts; and the number of events.

You must specify at least one IP address.

Internal Reconnaissance by Target Address

Reports the number of internal reconnaissance events associated with the specified target IP address. The table provides results by the type of event, the IP address, name, and zone of the target and source hosts; and the number of events.

You must specify at least one IP address.

17 – Information Security Aspects of Business Continuity Management

In the Reports Portal, select Repository > Standard Content > IT GOV > ISO-27002 > Reports > ISO 17 – Information security aspects of business continuity management.

Control 17: *Information security aspects of business continuity management* of the ISO 27002 standard expects that your business practices include managing the continuity of information security.

To assess your enterprise's compliance with this requirement, use the following report:

Dashboards	Reports
n/a	"Availability Attacks" below

Availability Attacks

Reports the number of events by targeted zone that indicate attacks to limit or prevent the availability of systems, networks, devices, or services in your enterprise. The table provides results by the type of event; the IP address, name, and zone of the targeted host; the number of events; and when the most recent event occurred.

Ensuring Compliance with NERC Standards

In the Reports Portal, select Repository > Standard Content > NERC.

The North American Electric Reliability Corporation (NERC) Critical Infrastructure Protection sets the standards for monitoring, detecting, and responding to various cyberattacks and threats to the electric power industry to ensure the reliability and security of the bulk power industry. Owners, operators, and users of bulk power systems in the United States and Canada must comply with NERC standards.

To help you comply or prove compliance with NERC, we provide the **Compliance Insight Pack for NERC**. For more information about adding the pack to the Reports repository, see the *Solutions Guide for ArcSight Compliance Pack for NERC*. The guide includes information about identifying assets that must comply with NERC.

Note: Certain dashboards in this package require ArcSight ESM and ArcSight ESM Unified NERC CIP to populate.

This package includes the following dashboards, organized by NERC controls:

Category	Dashboards
CIP Overview– Executive Summary	NERC Compliance Overview NERC Insights Real-Time Alerts by CIP ID
CIP-002-6 Cyber Security: BES Cyber System Categorization	New Devices
CIP-005-7 Cyber Security: Electronic Security Perimeter(s)	Traffic Anomaly
CIP-007-6 Cyber Security: System Security Management	Login Activity Overview Malware Overview User Activity Overview Users and Accounts Overview
CIP-008-6 Cyber Security: Incident Reporting and Response Planning	Attack and Suspicious Activity Overview Command and Control Overview Lateral Movement Overview Privilege Escalation Overview MITRE ATT&CK ICS Overview
CIP-010-4 Cyber Security: Configuration Change Management and Vulnerability Assessments	Configuration Changes Overview Vulnerability Overview

CIP Overview– Executive Summary

In the Reports Portal, select Repository > Standard Content > NERC > CIP Overview.

Overview dashboards summarize the compliance state of your bulk power system as determined by correlation rules for each NERC CIP Standard and provides a holistic view of the up to date threats on your organization.

Note: These dashboards display correlation events forwarded from ESM to Recon and require ArcSight ESM Unified NERC CIP to populate.

Dashboards	Reports
NERC Compliance Overview NERC Insights Real-Time Alerts by CIP ID	N/A

NERC Compliance Overview

Provides a color-coded status overview of NERC CIP-related alerts reported in the organization. Click each widget to view a drill-down dashboard with more information about alerts, such as Real Time Alerts by CIP ID. This dashboard refreshes every 5 minutes with real-time data from the ArcSight Forwarding Connector.

NERC Insights

The NERC Insights dashboard offers a snapshot of the health and compliance status of the organization's infrastructure. Each insight within the dashboard has color coded status to facilitate immediate action to high severity issues. This dashboard is updated every 5 minutes with data collected over the past hour. This dashboard requires correlation events forwarded from ESM to Recon.

Real-Time Alerts by CIP ID

Provides an overview of specific NERC CIPs based on ESM Alerts. To access this dashboard directly from the `CIP Overview` folder, you must select a specific CIP, such as CIP-010.

002-6-Cyber Security: BES Cyber System Categorization

In the Reports Portal, select Repository > Standard Content > NERC> CIP-002 BES Cyber System Categorization.

NERC Standard 002-6: *BES Cyber System Categorization* focuses on identifying and categorizing the assets of your BES cyber system, ensuring that your organization supports and maintains appropriate cyber security requirements for your organization.

Dashboards	Reports
New Devices	n/a

New Devices

Helps you track new device activity.

Charts:

- Activity by Time
- Events Table

005-7-Cyber Security: Electronic Security Perimeter(s)

In the Reports Portal, select Repository > Standard Content > NERC > CIP-005 Electronic Security Perimeter(s).

NERC Standard 005-7: *Electronic Security Perimeter* identifies specific electronic security perimeters for your BES cyber system, ensuring that your organization supports and maintains appropriate cyber security requirements for your organization.

Dashboards	Reports
Traffic Anomaly Overview	n/a

Traffic Anomaly Overview

Helps you identify anomalies in network traffic.

Charts:

- Anomalies Detected
- Targeted Ports
- Source IPs
- Targeted IPs
- Timeline
- Events Table

Special Views:

- *Source IP- Target IP Relationship* which provides a scatter chart displaying the relationship between source and target IPs.
- *Traffic Anomaly Distribution* which provides a distribution map displaying traffic anomalies.
- *Traffic by Volume*, which provides a line chart displaying traffic volume over time.

Filters:

- Device Vendor and Device Product
- Anomaly Type
- Application Protocol
- Transport Protocol
- Category Significance

007-6-Cyber Security: System Security Management

In the Reports Portal, select Repository > Standard Content > NERC> CIP-007 System Security Management.

NERC Standard 007-6: *System Security Management* manages your system by specifying technical, operational, and procedural requirements for your BES cyber system, ensuring that your organization supports and maintains appropriate cyber security requirements for your organization.

Dashboards	Reports
Login Activity Overview Malware Overview User Activity Overview Users and Accounts Overview	n/a

Login Activity Overview

Provides an overview of login activity. The table shows the details of the event, and each event will take you to the Event Inspector. You can also click Open in Search and it will take you to the search page and loads the `categoryBehavior = /Authentication/Verify` query with the same time that the dashboard was run.

Charts:

- By Destination User
- By Destination Host
- By Source Address
- Events Table

Special Filters:

- Login Activity Distribution
- Windows Logon Type

Filters:

- Login Outcomes
- Device Vendor and Product

Malware Overview

Helps you track malware activity.

Charts:

- Reported Malware
- Malware Distribution
- Infected Assets
- Action Outcome and Malware Name
- Timeline
- Events Table

Special Views:

- DGA Overview
- Attacks and Suspicious Activity
- Host Profile Overview

Filters:

- Device Vendor and Product
- Category Outcome
- Agent Severity

User Activity Overview

Provides an overview of user activity.

Charts:

- Login Connections
- Privileged Groups
- Account Management Actions
- Outbound Traffic
- Requested URLs
- Processes Used
- Application Protocols
- Ports
- Events Table

Filters:

- Device Vendor and Product
- Category Outcome

Users and Accounts Overview

Provides an overview of all the users created and deleted in the last hour.

Charts:

- Created Users
- Deleted Users
- Trend
- Events Table

008-6-Cyber Security: Incident Reporting and Response Planning

In the Reports Portal, select Repository > Standard Content > NERC> CIP-008 Incident Reporting and Response Planning.

NERC Standard 008-6: *Incident Reporting and Response Planning* creates and maintains an appropriate incident response plan for your BES cyber system, ensuring that your organization supports and maintains appropriate cyber security requirements for your organization.

Dashboards	Reports
Attack and Suspicious Activity Overview Command and Control Overview Lateral Movement Overview Privilege Escalation Overview MITRE ATT&CK ICS Overview	n/a

Attacks and Suspicious Activity Overview

Displays an overall view of the attackers, it's techniques and targets.

Charts:

- Attack/Target Matrix
- SSH Attacks- drilldown to SSH Attacks Overview Dashboard
- Suspicious Activity Relationship
- Top 5 Ports
- Events Table
- Web Attacks- drilldown to Web Attacks Overview Dashboard

Filters:

- Agent Severity
- Attack Technique

Command and Control Overview

Displays command and control events. You can drill down to this dashboard from the Insights dashboard.

Charts:

- Command and Control Activity Flow
- Events Table

Lateral Movement Overview

Displays lateral movement events which represent the way an attack spreads from an entry point to the rest of the network. For example, by placing malware on a user's computer, a malicious user could attempt to move laterally to infect other computers on the network, to infect internal servers, and so on until they reach their final target. The Lateral Movement Overview dashboard is interactive, so clicking on a specific item on a chart will render the other charts accordingly.

Charts:

- Activity over Time
- Source-Target IP Relationship
- Events Table

MITRE ATT&CK ICS Overview

Displays an overview of MITRE ATT&CK events including charts that sort events by MITRE ATT&CK technique, tactic, and frequency.

Tactics, Alerts by MITRE ATT&CK Techniques, and Alert Distribution by MITRE ATT&CK Tactics are interactive charts, meaning they update and change as you interact with other charts in the dashboard.

> **Note:** This dashboard requires ArcSight ESM to populate.

Charts:

- Tactics
- Alerts by MITRE ATT&CK Techniques
- Alert Distribution by MITRE ATT&CK Tactics
- Events Table

Privilege Escalation Overview

Displays privilege escalation events. This is a drill-down dashboard that can be reached from the NERC Insights dashboard.

Charts:

- Privileged Groups
- Events Table

010-4-Cyber Security: Configuration Change Management and Vulnerability Assessments

In the Reports Portal, select Repository > Standard Content > NERC> CIP-010 Configuration Change Management and Vulnerability Assessments.

This standard determines how you manage configuration changes and track vulnerabilities to protect your BES cyber system from unauthorized changes, ensuring that your organization supports and maintains appropriate cyber security requirements for your organization.

Dashboards	Reports
Configuration Changes Overview Vulnerability Overview	n/a

Configuration Changes Overview

Provides an overview of configuration changes found on the organization.

Charts:

- Configuration Changes
- Configuration Changes by User
- Configuration Changes by Host
- Trends
- Events Table

Filters:

- Device Vendor, Product, and Signature ID
- Agent Severity

Vulnerability Overview

Provides information to help you track vulnerabilities reported in your enterprise.

Charts:

- Vulnerable Activity Relationship
- Reported Vulnerabilities
- Vulnerable Systems
- Trends
- Events Table

Filters:

- Device Vendor, Product, and Signature ID
- Agent Severity

Ensuring Compliance with PCI DSS

Requires the Log Management and Compliance service in ArcSight SIEM as a Service or the ArcSight Recon capability.

In the Reports Portal, select Repository > Standard Content > PCI.

The PCI Security Standards Council has established standards to ensure the security of payment account data. To help you comply with the PCI Data Security Standards, we provide the **Compliance Pack for PCI**. For more information about adding the pack to the Reports repository, see the *Solutions Guide for ArcSight Compliance Pack for PCI*.

This pack includes dashboard and reports organized by the following PCI requirements:

Category	Dashboards	Reports
"1 – Maintain Firewalls to Protect Cardholder Data" on page 96	"Overview of Communication Activity from CDE" on page 101 "Overview of Communication Activity to CDE" on page 101	"Accessed Ports Through Firewall" on page 99 "Blocked Inbound Traffic to Card Holder Data Environment" on page 99 "Blocked Outbound Traffic from Card Holder Data Environment" on page 99 "Cardholder Data in the DMZ" on page 100 "External to Internal PCI Systems" on page 100 "Firewall Configuration Changes" on page 100 "Inbound Traffic to the Card Holder Data Environment" on page 100 "Internal PCI Systems to External" on page 100 "Network Routing Configuration Changes" on page 100 "Outbound Traffic from the Card Holder Data Environment" on page 101 "Personal Firewall Installed" on page 101 "Private IP Addresses Disclosure" on page 101 "Unauthorized Access to Card Holder Data Environment" on page 101 "Unauthorized Inbound Traffic to Card Holder Data Environment" on page 101 "Unauthorized Inbound Traffic to DMZ" on page 102 "Unauthorized Outbound Traffic from Card Holder Data Environment" on page 102 "VPN Configuration Changes" on page 102

Category	Dashboards	Reports
"2 – Do Not Use Default Security Parameters" on page 102	"Default Vendor Accounts Overview" on page 103 "Insecure Services – Dashboard" on page 103	"Default Vendor Accounts" on page 103 "Insecure Services – Report" on page 103 "Misconfigured Systems" on page 103 "Multiple Functions Implemented on a Server" on page 103 "Software Inventory" on page 103 "Unencrypted Administrative Accesses" on page 104
"3 – Protect Stored Cardholder Data" on page 104	n/a	"Credit Cards in Clear Text" on page 104
"4 – Encrypt Transmission of Cardholder Data" on page 104	n/a	"Cryptographic Hash Algorithm Related Vulnerabilities" on page 105 "Cryptographic Public Key Related Vulnerability Detected" on page 105 "Cryptographic Symmetric Key Related Vulnerabilities" on page 105 "Cryptographic Weak Protocol Vulnerability Detected" on page 105 "SSL or TLS Vulnerabilities" on page 105 "TLS BREACH Vulnerabilities" on page 106 "TLS CRIME Vulnerabilities" on page 106 "Wireless Encryption Violations" on page 106

Category	Dashboards	Reports
"5 – Use and Regularly Update Antivirus Software or Programs" on page 106	" Antivirus Activity" on page 107 " Malware Activities Overview" on page 108	"Disabled Antivirus and EDR" on page 107 "Failed Antivirus and EDR Updates" on page 107 "Installed Antivirus and EDR" on page 107 "Malicious Code Activities from CDE" on page 107 "Malware Activity" on page 108 "Malware Activity by Host" on page 108 "Spyware and Adware Activity" on page 108

Category	Dashboards	Reports
"6 – Maintain Secure Systems and Applications" on page 108	n/a	"Broken Authentication and Session Management" on page 109 "Buffer Overflows" on page 109 "Configuration Modifications by Host" on page 110 "Cross-Site Request Forgery" on page 110 "Cross-Site Scripting" on page 110 "Database Configuration Changes" on page 110 "Improper Access Control" on page 110 "Improper Error Handling" on page 111 "Injection Flaws" on page 111 "Insecure Cryptographic Storage" on page 111 "Meltdown or Spectre Vulnerable Assets" on page 111 "Operating System Changes" on page 111 "Outbound Communication from Development to Production" on page 111 "Outbound Communication from Production to Development " on page 111 "Security Patch Missing" on page 112 "SQL Injection Vulnerabilities" on page 112 "Use of Custom Accounts in Production" on page 112
"7 – Restrict Access to Cardholder Data" on page 112	"User Access Activity to Card Holder Data Environment" on page 113	"All Accesses to Cardholder Data Environment" on page 113 "All Accesses to Cardholder Data Environment by User" on page 113

Category	Dashboards	Reports
"8 – Assign a Unique ID to Each User" on page 113	"Password Policy Changes Overview" on page 114 "Windows Account Lockout" on page 115	"Clear Text Password Transmission" on page 114 "Password Policy Changes" on page 114 "Password Policy Minimum Age Changed" on page 114 "Successful Password Changes" on page 114 "Terminated User Activity" on page 115 "Terminated Users" on page 115 "Windows Account Lockouts by System" on page 115 "Windows Account Lockouts by User" on page 115
"9 – Restrict Physical Access to Cardholder Data" on page 115	"Failed Physical Facility Access - Dashboard" on page 116 "Successful Physical Facility Access" on page 116	"Failed Physical Facility Access - Report" on page 116 "Physical Facility Access Attempts" on page 116

Category	Dashboards	Reports
"10 – Track and Monitor Access to Cardholder Data" on page 116	"Firewall Events" on page 119	"Account Creation" on page 117 "Account Deletion" on page 117 "Account Modification" on page 118 "Administrative Actions Events" on page 118 "Administrative Authorization Changes" on page 118 "Anonymous User Activity in CDE" on page 118 "Audit Logs Cleared" on page 118 "Clock Synchronization Problems" on page 118 "Empty Origination of Event" on page 119 "Failed Administrative Actions" on page 119 "Failed Administrative Logins" on page 119 "Failed Logins" on page 119 "File Creations Deletions Modifications" on page 119 "IDS Events" on page 119 "Information System Failures" on page 120 "Successful Administrative Logins" on page 120 "Successful Logins to CDE" on page 120 "Successful User Logins" on page 120 "Successful User Logins by Host" on page 120 "User Group Creation" on page 120 "User Group Deletion" on page 120

Category	Dashboards	Reports
"11 – Test Security Systems and Processes Regularly" on page 120	"Attacks and Suspicious Activities Overview" on page 121 "Vulnerabilities Scanning" on page 124 Vulnerability Summary Overview	"Drill Down Assets with Buffer Overflow Vulnerabilities" on page 121 "Drill Down Assets with High Risk Vulnerabilities" on page 122 "Drill Down Assets with SSL and TLS Vulnerabilities" on page 122 "Drill Down CSRF Vulnerable Assets" on page 122 "Drill Down SQL Injection Vulnerable Assets" on page 122 "Drill Down XSS Vulnerable Assets" on page 122 "Exploit of Vulnerability" on page 123 "File Integrity Events" on page 123 "High Risk Vulnerabilities" on page 123 "Information Interception Events" on page 123 "Rogue Wireless AP Detected" on page 123 "Traffic Anomaly on Application Layer" on page 123 "Traffic Anomaly on Network Layer" on page 124 "Traffic Anomaly on Transport Layer" on page 124 "Vulnerability Summary by CVE" on page 124 "Vulnerability Summary by Host" on page 124 "Vulnerability Summary Overview" on page 124
"12 – Maintain a Policy that Addresses Information Security " on page 125	"Policy Violations - Dashboard" on page 125	"All Reporting Devices" on page 125 "Policy Violations - Report" on page 125 "Windows Domain Policy Changes" on page 125

1 – Maintain Firewalls to Protect Cardholder Data

In the Reports Portal, select Repository > Standard Content > PCI > *Reports* or *Dashboards* > Requirement 1: Firewall Configuration.

PCI Requirement 1 requires that you install and maintain a firewall configuration to protect data in a cardholder data environment (CDE). **Firewalls** control computer traffic in and out of your network, as well as to and from sensitive areas within secure or sensitive internal networks. To prove compliance with PCI DSS, you must monitor the firewalls at Internet connections and between any demilitarized zones (DMZs). You must also monitor the devices that manage traffic.

Use the following dashboards and reports to check for potential firewall vulnerabilities in your environment.

Dashboards	Reports

"Overview of Communication Activity from CDE" on page 101 "Overview of Communication Activity to CDE" on page 101	"Accessed Ports Through Firewall" on the next page "Blocked Inbound Traffic to Card Holder Data Environment" on the next page "Blocked Outbound Traffic from Card Holder Data Environment" on the next page "Cardholder Data in the DMZ" on page 100 "External to Internal PCI Systems" on page 100 "Firewall Configuration Changes" on page 100 "Inbound Traffic to the Card Holder Data Environment" on page 100 "Internal PCI Systems to External" on page 100 "Network Routing Configuration Changes" on page 100 "Outbound Traffic from the Card Holder Data Environment" on page 101 "Personal Firewall Installed" on page 101 "Private IP

	Addresses Disclosure" on page 101 "Unauthorized Access to Card Holder Data Environment" on page 101 "Unauthorized Inbound Traffic to Card Holder Data Environment" on page 101 "Unauthorized Inbound Traffic to DMZ" on page 102 "Unauthorized Outbound Traffic from Card Holder Data Environment" on page 102 "VPN Configuration Changes" on page 102

Accessed Ports Through Firewall

Reports the firewalls that allowed the most traffic by port number. The table provides results by IP addresses for the firewall, the source system, and the destination system; the destination port; number of events; and the firewall rule number that triggered the event.

Blocked Inbound Traffic to Card Holder Data Environment

Reports the destination ports with traffic to the CDE from non-CDE systems that has been blocked the most often. The table provides results by IP addresses for the firewall, the source system, and the destination system; the destination port; the protocol used, number of events; and when the most recent event occurred.

Blocked Outbound Traffic from Card Holder Data Environment

Reports an overview of blocked traffic from the CDE to non-CDE systems over time. The table provides results by blocked outbound traffic per firewall. It lists the IP addresses for the firewall, the source system, and the destination system; the source and destination zones; affected port; and when the most recent event occurred.

Cardholder Data in the DMZ

Reports the internal systems that send the most communications to a DMZ, or less secure environment, in the specified time range. The table provides results by IP address of the source and destination systems, the affected ports, when the events occurred, and the number of events.

External to Internal PCI Systems

Reports the external systems that are communicating directly with PCI internal systems most often. The table provides results by the IP addresses and zones of the source and destination systems, the affected port, protocol used, and the number of events.

Firewall Configuration Changes

Reports the firewalls and devices with the most changes to their configuration. The table provides results by the IP address, product, and vendor of the device that was changed; the name and rule related to the change; the number of changes detected; and when the most recent event occurred.

Inbound Traffic to the Card Holder Data Environment

Reports the systems that allowed the most traffic to the CDE from non-CDE systems by destination address and port. The table provides results by the IP addresses for the firewall, the source system, and the destination system; the affected port; the protocol used; the number of events; and when the most recent event occurred.

Internal PCI Systems to External

Reports the CDE systems that communicate directly with external systems. PCI standards expects that your enterprise can justify this type of traffic. The table provides results by the IP address of the source system, destination system, and the device; the destination port; the protocol used; and the number of events.

Network Routing Configuration Changes

Reports the network routing devices that have had the most configuration changes in the specified time range. The table provides results by the IP address for the device, the type of device; the event name; number of events; and when the most recent event occurred.

Outbound Traffic from the Card Holder Data Environment

Reports the systems that allowed traffic from the CDE to non-CDE systems by destination IP address. The table provides results by the IP addresses for the device, the source system, and the destination system; the affected port; the protocol used; number of events; and when the most recent event occurred.

Overview of Communication Activity from CDE

Provides, in charts and a table, an overview of communication going out from the CDE. You can view the target and source IP addresses, target ports, and the block source IP addresses.

Overview of Communication Activity to CDE

Provides, in charts and a table, an overview of communication coming into the CDE. You can view the target and source IP addresses, target ports, and the block source IP addresses.

Personal Firewall Installed

Reports the servers with a personal firewall installed. PCI standards require that users install personal firewall software on any device, such as a laptop, that is used to access the cardholder data environment and also might connect to the Internet when outside the PCI network. The table lists the IP address and name of the system hosting the personal firewall, as well as the more recent time that the firewall was detected.

Private IP Addresses Disclosure

Reports the RFC1918 IP addresses with the most communication with public IP addresses. The table provides results by IP address of the source and associated destination systems, the destination port, the protocol used, and the number of events.

Unauthorized Access to Card Holder Data Environment

Reports the accounts with the most unauthorized attempts to access the CDE. The table provides results by the user account, source and destination IP addresses, time the events occurred, and the number of events.

Unauthorized Inbound Traffic to Card Holder Data Environment

Reports the IP addresses in the cardholder environment that have experienced the most unauthorized traffic to the CDE from non-CDE systems. The table provides results by the source and destination IP addresses, the ports of the destination system, the protocol used, the number of events, and when the most recent event occurred.

Unauthorized Inbound Traffic to DMZ

Reports the systems with the highest amount of unauthorized traffic to the DMZ. The table provides results by the IP addresses for the device, the source system, and the destination system; the source zone; affected port; number of events; and when the most recent event occurred.

Unauthorized Outbound Traffic from Card Holder Data Environment

Reports the ports with the most unauthorized traffic from the CDE to non-CDE systems. The table provides results by the IP addresses for the device, the source system, and the destination system; the destination zone; the affected port; the protocol used; and number of events.

VPN Configuration Changes

Reports the VPN gateways with the most changes to their configuration. The table provides results by IP address of the VPN, the policies or configurations changed, the type of VPN, and number of events.

2 – Do Not Use Default Security Parameters

In the Reports Portal, select Repository > Standard Content > PCI > *Reports* or *Dashboards* > Requirement 2: Default Security Parameters.

PCI Requirement 2 addresses the use of vendor-supplied default settings, such as passwords and account names. These are known values and can be exploited by malicious users. While devices and firewalls installed by IT administrators might have strong security process, users who install software and add devices might not follow good security practices.

Use the following dashboards and reports to check for default security parameters in your environment.

Dashboards	Reports
"Default Vendor Accounts Overview" on the next page "Insecure Services – Dashboard" on the next page	"Default Vendor Accounts" on the next page "Insecure Services – Report" on the next page "Misconfigured Systems" on the next page "Multiple Functions Implemented on a Server" on the next page "Software Inventory" on the next page "Unencrypted Administrative Accesses" on page 104

Default Vendor Accounts

Reports default vendor accounts by username. The table provides results by the IP address and name of the device’s address, the vendor’s name, the account name, and quantity.

Default Vendor Accounts Overview

Provides, in several charts, an overview of default vendor accounts. You can view the accounts associated with the most events, account activity over time, the IP addresses associated with the accounts, and the most active vendors.

Insecure Services – Dashboard

Provides, in charts and table, insecure events by port number and IP address, activities by day, and the products that report insecure services in other systems.

Insecure Services – Report

Reports insecure events by port number. The table provides results by the target port, target process, target and source IP addresses, the target host name, the product that reported the insecure service, and the number of events.

Misconfigured Systems

Reports systems with the most misconfiguration events reported in your environment. In general, the most common vulnerability in your environment is misconfigured operating systems, frameworks, libraries, and applications. Misconfigurations include missing security patches or updates, incomplete or ad hoc configurations, use of insecure default configurations, poorly configured HTTP headers, and error messages that contain sensitive information. The table provides results by IP address and name of the misconfigured system, the name of the event, and number of events.

Multiple Functions Implemented on a Server

Reports the servers that have multiple functions installed on them. For example, a server might have functions such as DNS, a Web server, and a database.

Software Inventory

Reports the software found by IP address and host name.

Unencrypted Administrative Accesses

Reports the accounts that have had unencrypted administrative access events. The table provides results by the IP address and name of the host, the affected account, the port used, affected process, and number of events.

3 – Protect Stored Cardholder Data

In the Reports Portal, select Repository > Standard Content > PCI > Reports > Requirement 3: Protect Stored Cardholder Data.

PCI Requirement 3 ensures that cardholder data cannot be read or used by individuals who maliciously or unintentionally access encrypted data. You must have security measures to encrypt, truncate, mask, or hash critical components of the data.

To assess your enterprise's compliance with this requirement, use the following report:

Credit Cards in Clear Text

Reports the hosts where credit card data has been detected in clear text format. The table provides results by the affected host and reporting device IP addresses, the signature ID, and when the clear text was detected.

4 – Encrypt Transmission of Cardholder Data

In the Reports Portal, select Repository > Standard Content > PCI > Reports > Requirement 4: Encryption Transmission.

PCI Requirement 4 focuses on managing and maintaining the security of the card holder data when it is transmitted over open or public networks. Transmitted data should be encrypted. Malicious users can exploit vulnerabilities in cryptographic hashes and keys, as well as through SSL and TLS. For example, the Heartbleed Bug is a known SSL vulnerability.

To assess your enterprise's compliance with this requirement, use the following reports:

Dashboards	Reports
n/a	"Cryptographic Hash Algorithm Related Vulnerabilities" below "Cryptographic Public Key Related Vulnerability Detected" below "Cryptographic Symmetric Key Related Vulnerabilities" below "Cryptographic Weak Protocol Vulnerability Detected" below "SSL or TLS Vulnerabilities" below "TLS BREACH Vulnerabilities" on the next page "TLS CRIME Vulnerabilities" on the next page "Wireless Encryption Violations" on the next page

Cryptographic Hash Algorithm Related Vulnerabilities

Reports events by host name that indicate potential vulnerabilities related to hash algorithms. All cryptographic hashes that directly use the full output of a Merkle–Damgård construction are vulnerable to length extension attacks. The table provides results by name of the event, host and IP address, and number of events.

Cryptographic Public Key Related Vulnerability Detected

Reports flaws found in cryptographic public keys on hosts, as reported by vulnerability scanners in your environment. The table provides results by name of the event, host and IP address, and number of events.

Cryptographic Symmetric Key Related Vulnerabilities

Reports vulnerabilities related to cryptographic symmetric keys by the address or host name of the target asset. The table provides results by the target asset, the device vendor and product, the number of events, and when the most recent event occurred.

Cryptographic Weak Protocol Vulnerability Detected

Reports all vulnerabilities associated with weak cryptographic protocol. The table provides results by the vulnerability name, the affected assets, the number of events, and when the most recent event occurred.

SSL or TLS Vulnerabilities

Reports all SSL and TLS vulnerabilities detected by host name. The table provides results by name of the event, host and IP address, and number of events.

TLS BREACH Vulnerabilities

Reports TLS BREACH vulnerabilities detected by host name. A TLS BREACH attack is a form of the CRIME attack against HTTP compression. The table provides results by name of the event, host and IP address, and number of events.

TLS CRIME Vulnerabilities

Reports the hosts detected with vulnerabilities to a TLS CRIME attack. In a CRIME attack, malicious users access the content of secret authentication cookies, so they can hijack sessions of an authenticated web session, then launch additional attacks. The table provides results by name of the event, host and IP address, and number of events.

Wireless Encryption Violations

Reports the hosts that have wireless encryption violations, as detected by vulnerability scanners. The table provides results by name of the event, host and IP address, and number of events.

5 – Use and Regularly Update Antivirus Software or Programs

In the Reports Portal, select Repository > Standard Content > PCI > *Reports* or *Dashboards* > Requirement 5: Antivirus.

PCI Requirement 5 focuses on preventing malware, such as worms, viruses, and trojans, from infecting the cardholder data environment (CDE). This type of malware can enter the network through common business activities and processes: employee email, Internet usage, cell phones, or storage devices. Malware can then damage systems by exploiting system security vulnerabilities or trying to steal confidential information. Your enterprise should install and maintain antivirus software on all devices frequently affected by malware to protect networks from existing and emerging threats.

To assess your enterprise's compliance with this requirement, use the following dashboards and reports:

Dashboards	Reports
" Antivirus Activity" below " Malware Activities Overview" on the next page	"Disabled Antivirus and EDR" below "Failed Antivirus and EDR Updates" below "Installed Antivirus and EDR" below "Malicious Code Activities from CDE" below "Malware Activity" on the next page "Malware Activity by Host" on the next page "Spyware and Adware Activity" on the next page

Antivirus Activity

Provides charts for an overview of antivirus activities in the CDE. You can view the trends of antivirus cleaning/quarantining attempts and failures over time, a trend of failed cleaning and the number of times antivirus has failed to update and the associated agent, and the number of events by device vendor.

Disabled Antivirus and EDR

Reports events associated with disabling antivirus and EDR programs by target host. The table provides results by the target host, the antivirus or EDR program affected, the user that disabled the program, the number of events, and when the event occurred.

Failed Antivirus and EDR Updates

Reports events where antivirus and EDR programs failed to update by target host. The table provides results by the target host, the antivirus or EDR program affected, the name and userID that disabled the program, the number of events, and when the event occurred.

Installed Antivirus and EDR

Reports events where antivirus and EDR programs are installed by type of program. The table provides results by the type of antivirus or EDR product, the location of the program, and the number of events.

Malicious Code Activities from CDE

Reports malicious code activity sent from the CDE. The table provides results by the source and target addresses, the type of event, the product, and the number of events.

Malware Activities Overview

Provides an overview of all malware activity in the CDE. You can view the trends of malware activities over time, top signature IDs, top affected systems, and the top reporting products.

Malware Activity

Reports the malware detected in the CDE. The table provides results by the type of malware, the target asset, the number of events, and the when the event occurred.

Malware Activity by Host

Reports the malware activity by target host. The table provides results by the type of malware, the target asset, the number of events, and the when the event occurred.

Spyware and Adware Activity

Reports target hosts where spyware or adware has been detected. The table provides results by the affected asset, the type of spyware or adware, the event class, the number of events, and when the event occurred.

6 – Maintain Secure Systems and Applications

In the Reports Portal, select Repository > Standard Content > PCI > *Reports* or *Dashboards* > Requirement 6: Secure Systems and Applications.

PCI Requirement 6 sets the expectation that you apply security patches to all applications and systems in the cardholder data environment (CDE) to protect them from malicious and unintentional misuse. The patches should be evaluated to ensure that they do not conflict with current security configurations. You must also ensure that in-house development teams practice secure coding techniques. Applications that store sensitive data must be able to protect the data.

To assess your enterprise's compliance with this requirement, use the following reports:

Dashboards	Reports
n/a	"Broken Authentication and Session Management" below "Buffer Overflows" below "Configuration Modifications by Host" on the next page "Cross-Site Request Forgery" on the next page "Cross-Site Scripting" on the next page "Database Configuration Changes" on the next page "Improper Access Control" on the next page "Improper Error Handling" on page 111 "Injection Flaws" on page 111 "Insecure Cryptographic Storage" on page 111 "Meltdown or Spectre Vulnerable Assets" on page 111 "Operating System Changes" on page 111 "Outbound Communication from Development to Production" on page 111 "Outbound Communication from Production to Development " on page 111 "Security Patch Missing" on page 112 "SQL Injection Vulnerabilities" on page 112 "Use of Custom Accounts in Production" on page 112

Broken Authentication and Session Management

Reports events associated with broken authentication and session management over time. The table provides results by the target asset, name and signature ID of the vulnerability, and the number of events.

Buffer Overflows

Reports vulnerabilities associated with buffer overflows by CDE asset. This type of vulnerability occurs when a developer fails to appropriately manage memory for user-controlled data. A malicious user could put more data into a pre-allocated memory buffer than the buffer can hold, dramatically impacting the operation of a program. The table provides results by the affected asset, the detected vulnerability, the signature ID of the vulnerability, and when the most recent event occurred.

Configuration Modifications by Host

Reports modifications made to CDE assets. The table provides results by the affected asset, the type of modification, the user who made the change, the number of events, and when the most recent event occurred.

Cross-Site Request Forgery

Reports assets that might be vulnerable to a cross-site request forgery (XSRF or CSRF) attack. In an CSRF attack, also known as a one-click attack or session riding, a malicious user submits unauthorized commands to a web application from a user account that the application trusts. The table provides results by the targeted asset and when the most recent event occurred.

Cross-Site Scripting

Reports the signature ID of cross-site scripting (XSS) attacks by volume. Vulnerabilities associated with XSS enable malicious users to inject code in legitimate web pages or applications that executes harmful scripts in the user's web browser when the browser parses data. The scripts might hijack user sessions, deface web sites, or redirect users to harmful sites. A web application or web page becomes vulnerable when it includes untrusted data; data without proper validation or escaping; or data supplied by users through an API that can create HTML or Java-script. XSS attacks tend to occur in forums, message boards, and web pages that allow comments. Malicious users can execute XSS attacks in VPSCript, ActiveX, Flash, and CSS. However, this type of injection attack most commonly occurs in Java Script. The table provides results by the signature ID of the event, the target asset, the number of events, and when the most recent event occurred.

Database Configuration Changes

Reports changes to the database configuration by affected asset. The table provides results by the database host, the modification made, the user who made the change, the number of changes, and when the most recent change occurred.

Improper Access Control

Reports vulnerabilities associated with improper access controls. The table provides results by the signature ID of the event, the target asset, the number of events, and when the most recent event occurred.

Improper Error Handling

Reports vulnerabilities associated with improper handling of errors by affected assets. The table provides results by the signature ID of the event, the target asset, and when the most recent event occurred.

Injection Flaws

Reports the assets with the most injection flaws. The table provides results by the affected asset, the injection flaw and its signature ID, and when the event occurred.

Insecure Cryptographic Storage

Reports the IP addresses of systems where sensitive data is not stored securely. The table provides results by the affected asset, the event, the number of events, and when the most recent event occurred.

Meltdown or Spectre Vulnerable Assets

Reports the assets with the most Meltdown or Spectre vulnerabilities. The table provides results by the affected asset, the vulnerability and its signature ID, the number of events, and when the most recent event occurred.

Operating System Changes

Reports changes to operating systems. The table provides results by the target asset, the change, the outcome of the change, and the number of changes.

Outbound Communication from Development to Production

Reports all communication sent from the development environment to the production environment. The table provides results by the source and target addresses, the port used, the transportation protocol, and the number of events.

In the logical model, you must edit the `isSourceZonePCIDevelopment` and `isDestinationZonePCIProduction` variables to indicate the respective zones for development and production.

Outbound Communication from Production to Development

Reports all communication sent from the production environment to the development environment. The table provides results by the source and target addresses, the port used, the transportation protocol, and the number of events.

In the logical model, you must edit the `isSourceZonePCIProduction` and `isDestinationZonePCIDevelopment` variables to indicate the respective zones for production and development.

Security Patch Missing

Reports assets by IP address with missing security patches. One of the most common ways to reduce your environment’s attack surface is to ensure that all systems have the most recent security patches applied. The table provides results by the affected asset, the vulnerability and signature ID associated with the missing patch, the number of events, and when the most recent event occurred.

SQL Injection Vulnerabilities

Reports SQL injection vulnerabilities by asset. In a SQL injection attack, a malicious user can interfere with the queries that an application makes to its database. The user could view delete, or modify data not usually available for retrieval. A malicious user could also use SQL injections to start a denial-of-service attack or compromise other services, servers, or infrastructure. The table provides results by the target assets, the vulnerability and its signature ID, the number of events, and when the most recent event occurred.

Use of Custom Accounts in Production

Reports events in the production environment associated with the specified list of accounts. The table provides results by the specified accounts, the target asset, the number of events, and when the most recent event occurred.

You must enter the accounts that you want to include in the report. Use commas to separate the values.

7 – Restrict Access to Cardholder Data

In the Reports Portal, select Repository > Standard Content > PCI > *Reports* or *Dashboards* > Requirement 7: Restrict Access By Business Need to Know.

PCI Requirement 7 focuses on controlling access to cardholder data, thus limiting access privileges only to users who need to know the data according to your enterprise's needs. Usually, enterprises apply the principle of least privilege when granting access rights in the cardholder data environment (CDE).

To assess your enterprise's compliance with this requirement, use the following dashboards and reports:

Dashboards	Reports
"User Access Activity to Card Holder Data Environment" below	"All Accesses to Cardholder Data Environment" below "All Accesses to Cardholder Data Environment by User" below

All Accesses to Cardholder Data Environment

Reports the most accessed hosts in the CDE. The table provides results by the target host name and IP address, the target user, the source user and address, and the number of events.

All Accesses to Cardholder Data Environment by User

Reports all access activity in the CDE by the user. By default, the report lists user activities. The table provides results by the target host name and address, the target user, the port used, the source address, and the number of events.

In the logical model, use the isDestinationUserPCI variable to specify the users in the CDE that you want to include in the reports. For more information, see the *Solutions Guide for ArcSight Compliance Pack for PCI*.

User Access Activity to Card Holder Data Environment

Provides, in charts and a table, an overview of user access activities in the CDE. You can view a trend of activity over time, as well as events by target users, target IP address, and source IP address.

8 – Assign a Unique ID to Each User

In the Reports Portal, select Repository > Standard Content > PCI > *eports* or *Dashboards* > Requirement 8: Unique User ID.

PCI Requirement 8 covers identification and authentication for all access to system components in the cardholder data environment (CDE). Basically, your enterprise must maintain and monitor changes to user accounts and password policies to prevent malicious users from gaining access to the CDE through weak passwords or by changing password policies. This requirements applies to all accounts with administrative features, including point-of-sale accounts; accounts used by vendors and third parties; and any account used to view cardholder data or access cardholder data or to access systems with cardholder data. This requirement does not apply to end-user accounts used by consumers.

To assess your enterprise's compliance with this requirement, use the following dashboards and reports:

Dashboards	Reports
"Password Policy Changes Overview" below "Windows Account Lockout" on the next page	"Clear Text Password Transmission" below "Password Policy Changes" below "Password Policy Minimum Age Changed" below "Successful Password Changes" below "Terminated User Activity" on the next page "Terminated Users" on the next page "Windows Account Lockouts by System" on the next page "Windows Account Lockouts by User" on the next page

Clear Text Password Transmission

Reports events by IP address where passwords were transmitted in clear text. The table provides results by the target host name and IP address, the port used, the number of events, and when the clear text password was detected.

Password Policy Changes Overview

Provides, in charts and a table, an overview of policy changes on CDE assets. You can view a trend of changes made over time, changes to target user accounts, changes to target IP addresses, and changes by type.

Password Policy Changes

Reports changes to the password policy over time in the CDE. The table provides results by the target IP address, the user who made the change, the change made, the number of events, and when the change occurred.

Password Policy Minimum Age Changed

Reports changes to the policy for the minimum password age over time in the CDE. The table provides results by the target IP address, the user who made the change, the change made, the number of events, and when the change occurred.

Successful Password Changes

Reports successful password changes over time in the CDE. The table provides results by the target IP address and host name, the affected user account, the number of events, and when the most recent event occurred.

Terminated User Activity

Reports user accounts that have been terminated but show successful authentication events after termination. The table provides results by the terminated account and when successful authentication occurred.

Terminated Users

Reports all user accounts terminated in the CDE by termination date. The table provides results by the terminated account and when the account was terminated.

Windows Account Lockout

Provides, in charts and a table, an overview of Windows accounts that have been locked out. You can view a trend of events over time, events by target IP address, and events by the accounts locked out.

Windows Account Lockouts by System

Reports, by host system, all Windows accounts that have been locked out. The table provides results by the target host name, IP address, domain, and user; the number of lockouts; and when the most recent event occurred.

Windows Account Lockouts by User

Reports, by user and domain, all Windows accounts that have been locked out. The table provides results by the target domain and user, the number of lockouts, and when the most recent event occurred.

9 – Restrict Physical Access to Cardholder Data

In the Reports Portal, select Repository > Standard Content > PCI > *Reports* or *Dashboards* > Requirement 9: Physical Access.

PCI Requirement 9 expects your organization to restrict access to devices that allow an individual physical access to the systems that store cardholder data, thus limiting the ability for malicious users to access or destroy the devices, data, systems, or hard copies.

By default, these reports and dashboards assume all assets are associated with physical access. To specify specific locations and buildings, update the isPCIBuilding variable in the data worksheet for each PCI Requirement 9 report or dashboard. For more information, see the *Solutions Guide for ArcSight Compliance Pack for PCI*.

To assess your enterprise's compliance with this requirement, use the following dashboards and reports:

Dashboards	Reports
"Failed Physical Facility Access - Dashboard" below "Successful Physical Facility Access" below	"Failed Physical Facility Access - Report" below "Physical Facility Access Attempts" below

Failed Physical Facility Access - Dashboard

Provides, in charts and table, an overview of failed attempts to access physical facilities. You can view a trend of access activity over time, as well as activity by reporting device, location, and user.

Failed Physical Facility Access - Report

Reports the number of failed attempt to access physical facilities by location. The table provides results by the target location, the user involved, the number of attempts, and when the attempt occurred.

Physical Facility Access Attempts

Reports the number of attempts to access physical facilities by location and user. The table provides results by the target location, the user involved, the outcome of the attempt, the number of attempts, and when the most recent event occurred.

Successful Physical Facility Access

Provides, in charts and table, an overview of successful attempts to access physical facilities. You can view a trend of access activity over time, as well as activity by reporting device, location, and user.

10 – Track and Monitor Access to Cardholder Data

In the Reports Portal, select Repository > Standard Content > PCI > *Reports* or *Dashboards* > Requirement 10: Track and Monitor Data Access.

PCI Requirement 10 focuses on tracking changes to user accounts and groups to detect and prevent data breaches within the cardholder data environment (CDE). Malicious users might create groups or accounts to grant them access to sensitive data, then delete their changes to hide their activity.

To assess your enterprise's compliance with this requirement, use the following dashboard and reports:

Dashboards	Reports
"Firewall Events" on page 119	"Account Creation" below "Account Deletion" below "Account Modification" on the next page "Administrative Actions Events" on the next page "Administrative Authorization Changes" on the next page "Anonymous User Activity in CDE" on the next page "Audit Logs Cleared" on the next page "Clock Synchronization Problems" on the next page "Empty Origination of Event" on page 119 "Failed Administrative Actions" on page 119 "Failed Administrative Logins" on page 119 "Failed Logins" on page 119 "File Creations Deletions Modifications" on page 119 "IDS Events" on page 119 "Information System Failures" on page 120 "Successful Administrative Logins" on page 120 "Successful Logins to CDE" on page 120 "Successful User Logins" on page 120 "Successful User Logins by Host" on page 120 "User Group Creation" on page 120 "User Group Deletion" on page 120

Account Creation

Reports all user accounts created. The table provides results by IP address or host name of the system, as well as the name of the new account.

Account Deletion

Reports all user accounts that have been deleted. The table provides results by name of the account that made the change, IP address or host name of the system, and event name for the deleted account.

Account Modification

Reports all user accounts that have been modified. The table provides results by the type of modification, name of the changed account, the account that made the change, and the IP address or host name of the system.

Administrative Actions Events

Reports all actions, except logins, made by administrative users. The table provides results by the user name, device event class, number of events, and when the change occurred.

Administrative Authorization Changes

Reports all changes authorized by administrative users. The table provides results by the source and target user, the number of changes, and when the change occurred.

Anonymous User Activity in CDE

Reports all logins to the CDE by anonymous users. The table provides details about the user, the affected host, the number of attempted logins, and when the most recent event occurred.

By default, the report includes all users who log in to the CDE because the variable `isUserNameAnonymous` is set to *yes*. To make the report more specific, in the logical model, enter the list of anonymous users for the variable `isUserNameAnonymous`, as shown in the example. For more information, see the *Solutions Guide for ArcSight Compliance Pack for PCI*.

Audit Logs Cleared

Reports the audit logs cleared by user. The table provides results by the user, the affected host, the number of events, and when the most recent event occurred.

Clock Synchronization Problems

Reports the number of assets with clock synchronization issues over time. In SSL, clocks are used for certificate validation. A malicious user could modify the server or client clock to disregard dates in certificates. Then that user will be able to impersonate the server forever even if the certificate expires. The table provides details about the affected asset and when the most recent event occurred.

Empty Origination of Event

Reports events in which the source, such as user, address, device or hostname, cannot be identified. The table provides results by the anomaly's name, the number of events, and when the most recent event occurred.

Failed Administrative Actions

Reports failed actions, except logins, by administrative users. The table provides results by the target user and host, device event class, the affected product, the number of failed attempts, and when the most recent event occurred.

Failed Administrative Logins

Reports the number of failed logins by administrative users. The table provides results by the target host, administrative user, and the number of failed attempts.

Failed Logins

Reports the number of failed logins by user. The table provides results by the target host, administrative user, and the number of failed attempts.

File Creations Deletions Modifications

Reports the file creations, deletions, and modifications by host. The table provides results by the asset, the type of activity, outcome of the activity, the number of events, and when the most recent event occurred.

Firewall Events

Provides, in charts and a table, an overview of firewall events. You can view a trend of firewall events overtime, the number of times a firewall rule has been hit, the firewalls by vendor, and products reporting the events.

IDS Events

Reports all events recorded by the IDSs in your enterprise. The table provides results by the IDS device, the type of event, the number of events, and when the most recent event occurred.

Information System Failures

Reports all failures associated with information systems. The table provides results by the target asset, the type of failure, the device vendor, and the number of failure events.

Successful Administrative Logins

Reports all successful logins by administrative users. The table provides results by the target asset, the user, and the number of logins.

Successful Logins to CDE

Reports all successful logins within the CDE. The table provides results by the target asset, the user, the number of logins, and when the most recent login occurred.

Successful User Logins

Reports all successful logins by user. The table provides results by the target asset, the user, the number of logins, and when the most recent login occurred.

Successful User Logins by Host

Reports all successful user logins by host. The table provides results by the target asset, the user, the number of logins, and when the most recent login occurred.

User Group Creation

Reports all user groups created. The table provides results by the event, the new user group, and the user who created the account.

User Group Deletion

Reports all user groups deleted. The table provides results by the event, the user group deleted, and the user who deleted the account.

11 – Test Security Systems and Processes Regularly

In the Reports Portal, select Repository > Standard Content > PCI > *Reports* or *Dashboards* > Requirement 11: Test Systems and Processes.

PCI Requirement 11 focuses on frequently testing your processes and the security system components of your cardholder data environment, such as performing regular vulnerability scans. PCI expects your enterprise to keep your processes and systems current with evolving security issues.

To assess your enterprise's compliance with this requirement, use the following dashboards and reports:

Dashboards	Reports
"Attacks and Suspicious Activities Overview" below "Vulnerabilities Scanning" on page 124 "Vulnerability Type Overview" on page 124	"Drill Down Assets with Buffer Overflow Vulnerabilities" below "Drill Down Assets with High Risk Vulnerabilities" on the next page "Drill Down Assets with SSL and TLS Vulnerabilities" on the next page "Drill Down CSRF Vulnerable Assets" on the next page "Drill Down SQL Injection Vulnerable Assets" on the next page "Drill Down XSS Vulnerable Assets" on the next page "Exploit of Vulnerability" on page 123 "File Integrity Events" on page 123 "High Risk Vulnerabilities" on page 123 "Information Interception Events" on page 123 "Rogue Wireless AP Detected" on page 123 "Traffic Anomaly on Application Layer" on page 123 "Traffic Anomaly on Network Layer" on page 124 "Traffic Anomaly on Transport Layer" on page 124 "Vulnerability Summary by CVE" on page 124 "Vulnerability Summary by Host" on page 124 "Vulnerability Summary Overview" on page 124

Attacks and Suspicious Activities Overview

Provides, in charts and a table, an overview of attacks and suspicious events. You can view the IP addresses generating the most attacks, the systems that are the target of most attacks, a trend of attacks over time, and the top events.

Drill Down Assets with Buffer Overflow Vulnerabilities

Lists assets that might be vulnerable to buffer overflow. This type of vulnerability occurs when a developer fails to appropriately manage memory for user-controlled data. A malicious user could put more data into a pre-allocated memory buffer than the buffer can hold, dramatically impacting the operation of a program.

Drill Down Assets with High Risk Vulnerabilities

Reports assets that might be vulnerable to listed high-risk security threats. High-risk vulnerabilities represent those that are relatively easy for attackers to exploit and gain control over system components. Many high-risk vulnerabilities can temporarily or permanently disrupt enterprise operations.

Drill Down Assets with SSL and TLS Vulnerabilities

Reports assets that might have the listed TLS or SSL vulnerability. For example, malicious users can exploit a known vulnerability in SSL with the Heartbleed Bug.

Drill Down CSRF Vulnerable Assets

Reports assets that might be vulnerable to the listed cross-site request forgery (XSRF or CSRF) attack. In a CSRF attack, also known as a one-click attack or session riding, a malicious user submits unauthorized commands to a web application from a user account that the application trusts.

Drill Down SQL Injection Vulnerable Assets

Reports assets that might be vulnerable to the listed SQL injection attacks. In a SQL injection attack, a malicious user can interfere with the queries that an application makes to its database. The user could view, delete, or modify data not usually available for retrieval. A malicious user could also use SQL injections to start a denial-of-service attack or compromise other services, servers, or infrastructure.

Drill Down XSS Vulnerable Assets

Reports assets that might be vulnerable to the listed cross-site scripting (XSS) attacks. Vulnerabilities associated with XSS enable malicious users to inject code in legitimate web pages or applications that executes harmful scripts in the user’s web browser when the browser parses data. The scripts might hijack user sessions, deface websites, or redirect users to harmful sites. A web application or web page becomes vulnerable when it includes untrusted data, data without proper validation or escaping, or data supplied by users through an API that can create HTML or Java-script. XSS attacks tend to occur in forums, message boards, and web pages that allow comments. Malicious users can execute XSS attacks in VBSCript, ActiveX, Flash, and CSS. However, this type of injection attack most commonly occurs in Java Script.

Exploit of Vulnerability

Reports events that indicate an attempt to exploit a given detected vulnerability. The table provides results by the vulnerability, IP address and name of the affected system, number of events associated with the vulnerability, and when the most recent event occurred.

File Integrity Events

Reports events that indicate file integrity might be compromised in your environment. File integrity monitoring, also known as change monitoring, checks operating system files, Windows registries, application software, Linux system files, and more, for changes that might indicate an attack. The table provides results by the signature ID, IP address and name of the affected system, the number of events, and when the most recent event occurred.

High Risk Vulnerabilities

Reports the systems with the greatest likelihood of being exploited based on the reported vulnerabilities. The table provides results by the vulnerability, the signature ID, name of the affected system, and when the most recent event occurred.

Information Interception Events

Reports traffic interception events that indicate spoofing or man-in-the-middle attacks. The table provides results by the signature ID, details of the source and destination addresses, the number of events, and when the most recent event occurred.

Rogue Wireless AP Detected

Reports rogue wireless access points (AP) found in your environment. A user might install a rogue AP unintentionally or maliciously in an office or data center without the knowledge or permission from the system administrator via the wired infrastructure. The chart shows rogue APs found over time. The table provides results by the device ID and name, when the event occurred, and the number of events.

Traffic Anomaly on Application Layer

Reports all the traffic anomalies found in the application layer. Malicious users attack the application layer of an application, which specifies the communication protocols and interface methods used by hosts in the network, to disrupt processes and services on a web server or application. The table provides results by signature ID, details of the affected system or product, the number of events, and when the most recent event occurred.

Traffic Anomaly on Network Layer

Reports all the traffic anomalies found in the network layer. This layer supports communications by sending packets of data back and forth between different networks, and thus can be vulnerable to a large variety of attacks. The table provides results by the destination and source systems, the number of events, and when the most recent event occurred.

Traffic Anomaly on Transport Layer

Reports all the traffic anomalies found in the transport layer. In this layer, a malicious user might hijack session by taking control of a session between two nodes after the initial authentication process is complete. The table provides results by signature ID, the destination and source systems, the number of events, and when the most recent event occurred.

Vulnerability Summary by CVE

Reports vulnerabilities by CVE and severity. The table provides results by the CVE, its severity, the affected asset, and when the most recent event occurred.

Vulnerability Summary by Host

Reports vulnerabilities found by host. The table provides results by the CVE, its severity, the affected asset, and when the most recent event occurred.

Vulnerability Summary Overview

Reports all the vulnerabilities found in the PCI environment. The table provides results by the vulnerability name, CVE, the common vulnerability score (CVSS), signature ID, the affected asset, and when the most recent event occurred.

Vulnerabilities Scanning

Provides, in several charts, the details of reported vulnerabilities over time. You can view the assets with the most high-risk vulnerabilities, the most reported vulnerabilities, and the assets with vulnerabilities including the hostnames.

Vulnerability Type Overview

Provides charts for an overview of vulnerabilities by category: SQL, XSS, CSRF, SSL, high-risk, and buffer overflow. You can drill down in the charts to identify the affected assets.

12 – Maintain a Policy that Addresses Information Security

In the Reports Portal, select Repository > Standard Content > PCI > *Reports* or *Dashboards* > Requirement 12: Maintain Information Security Policy.

PCI Requirement 12 expects your enterprise to maintain a policy that addresses the information security for all personnel who are associated with your enterprise or have some form of access to the cardholder's data system. Personnel should know the enterprise's expectations for handling cardholder data, and should know their responsibilities for protecting the sensitivity of the data.

To assess your enterprise's compliance with this requirement, use the following dashboards and reports:

Dashboards	Reports
"Policy Violations - Dashboard" below	"All Reporting Devices" below "Policy Violations - Report" below "Windows Domain Policy Changes" below

All Reporting Devices

Lists all reporting devices in the environment by number of events. PCI expects that you maintain an inventory of devices and check for unapproved devices. The table lists device by product, vendor, IP address, and zone.

Policy Violations - Dashboard

Provides, in charts and a table, an overview of policy violations. You can view the number of violations by day, the IP addresses and signature IDs associated with violations, and the users with the most violations.

Policy Violations - Report

Reports policy violations by IP address. The table lists the details of the affected host system, the number of events, and when the events occurred.

Windows Domain Policy Changes

Reports changes to the Windows domain policy by associated IP address. The table lists the details of the affected host system and the number of changes.

Ensuring Compliance with SOX Standards

Requires the Log Management and Compliance service in ArcSight SIEM as a Service or the ArcSight Recon capability.

In the Reports Portal, select Repository > Standard Content > Data Compliance Content > Sarbanes Oxley.

The Sarbanes-Oxley Act (SOX) is a United States federal law that was enacted in 2002. The stated purpose of the law is to protect investors by improving the accuracy and reliability of corporate disclosures made pursuant to the securities laws and for other purposes.

To help you comply or prove compliance with SOX, we provide the **Compliance Insight Package for SOX**. For more information about adding the package to the Reports repository, see the *Solutions Guide for ArcSight Insight Compliance Package for SOX*. The guide includes information about identifying assets that must comply with SOX.

This package includes the following dashboards and reports, organized by SOX objectives:

Category	Dashboards	Reports
Executive Summary	Control Overview Controls Risk Score Overview Executive Cyber Threat Overview	n/a
ISO 5 Information Security Policies	Policy Violations Overview	Policy Violations
ISO 6 Organization of Information Security	VPN Connection Overview Wireless Attacks and Suspicious Activity	Outbound Communication from Development to Production Environment Outbound Communication from Production to Development Environment VPN Connection Summary Wireless Attacks and Suspicious Activity
ISO 7 Human Resource Security	Activity by User	n/a
ISO 8 Asset Management	Removable Media Activity	n/a

Category	Dashboards	Reports
ISO 9 Access Control	n/a	Account Creations Account Deletions Account Lockouts by System Account Lockouts by User Insecure Ports Insecure Services Password Policy Changes Password Weaknesses User Group Account Creations User Group Account Deletions
ISO 10 Cryptography	n/a	SSH Vulnerabilities SSL or TLS Vulnerabilities VPN Vulnerabilities
ISO 11 Physical and Environmental Security	Failed Physical Physical Access Overview Successful Physical Physical Access Overview	Failed Building Physical Access Activity Summary Failed User Physical Access Activity Summary Successful Building Physical Access Activity Summary Successful User Physical Access Activity Summary

Category	Dashboards	Reports
ISO 12 Operations Security	Administrative Login Overview Application Vulnerabilities Overview Failed Login Overview Failed Login Relationship Firewall Configuration Changes Malware Overview Successful Login Overview Unpatched Systems Vulnerability Overview	Antivirus Stopped or Paused Audit Log Cleared Database Configuration Changes Database Vulnerabilities Failed Administrative Login Summary Failed Antivirus Updates Failed Login by SOX Asset Failed Login Summary Firewall Configuration Changes High Risk Vulnerabilities Malware Summary Network Device Configuration Changes Overflow Vulnerabilities SQL Injection Vulnerabilities Successful Administrative Login Summary Successful Login by SOX Asset Unpatched Systems Vulnerability Summary by CVE ID Vulnerability Summary by SOX Asset Vulnerability Summary on SOX Environment XSRF Vulnerabilities XSS Vulnerabilities
ISO 13 Communications Security	DoS Activity Firewall Blocked Events	Covert Channel Activity DoS Attacks Summary Firewall Blocked Events

Category	Dashboards	Reports
ISO 16 Information Security Incident Management	High Risk Events Overview MITRE ATT&CK Overview Reconnaissance Activity Threat Overview Threat Relationship	High Risk Events Summary MITRE ATT&CK Summary by MITRE Technique MITRE ATT&CK Summary by SOX Asset Reconnaissance Summary Threats Summary
ISO 17 Information Security Aspects of Business Continuity Management	n/a	Asset Shutdown Summary
ISO 18 Compliance	Information Disclosure Vulnerabilities Organization Information Leaks Personal Information Leakage Overview	Information Disclosure Vulnerabilities Organization Information Leaks Summary Personal Information Leakage Summary

Sarbanes-Oxley Executive Summary

In the Reports Portal, select Repository > Standard Content > Data Compliance Content > Sarbanes Oxley > Executive Summary.

This category is relevant to all ISO 27002:2013 controls. To assess your enterprise's compliance with this requirement, use the following dashboards:

Dashboards	Reports
Control Overview Controls Risk Score Overview Executive Cyber Threat Overview	n/a

Control Overview

Used as a drill-down dashboard by the Controls Risk Score Overview dashboard.

Controls Risk Score Overview

Provides an overview of ISO 27002:2013 controls based on correlation events reported from ESM.

Executive Cyber Threat Overview

Provides a cyber threat overview for executives. The dashboard shows the top 5:

- Vulnerabilities
- MITRE ATT&CK techniques
- ArcSight categorized attacks
- Attacked assets

5 – Information Security Policies

In the Reports Portal, select Repository > Standard Content > Data Compliance Content > Sarbanes Oxley > ISO 27002 > *Dashboards* or *Reports* > ISO 5 Information Security Policies.

To assess your enterprise's compliance with this requirement, use the following dashboard and report:

Dashboards	Reports
Policy Violations Overview	Policy Violations

Policy Violations Overview

Provides an overview of policy violation events that involve Sarbanes Oxley systems, relevant to ISO 27002:2013 Control 5.1.2.

Policy Violations

Provides a summary of policy violation events that involve Sarbanes Oxley systems, relevant to ISO 27002:2013 Control 5.1.2.

6 – Organization of Information Security

In the Reports Portal, select Repository > Standard Content > Data Compliance Content > Sarbanes Oxley > ISO 27002 > *Dashboards* or *Reports* > ISO 6 Organization of Information Security.

To assess your enterprise's compliance with this requirement, use the following dashboards and reports:

Dashboards	Reports
VPN Connection Overview Wireless Attacks and Suspicious Activity	Outbound Communication from Development to Production Environment Outbound Communication from Production to Development Environment VPN Connection Summary Wireless Attacks and Suspicious Activity

VPN Connection Overview

Provides an overview of VPN connection activity involving Sarbanes Oxley systems, relevant to ISO 27002:2013 Control 6.2.2.

Before using this dashboard, ensure that variables `isAgentZoneSOX` and `isAgentAddressSOX` are defined in the SOX logical model. For more information, see the *Solutions Guide for ArcSight Insight Compliance Package for SOX*.

Wireless Attacks and Suspicious Activity

Provides an overview of wireless attacks and suspicious activity involving Sarbanes Oxley systems, relevant to ISO 27002:2013 Control 6.2.1.

Outbound Communication from Development to Production Environment

Provides a summary of outbound communication events from development to production environments involving Sarbanes Oxley systems, relevant to ISO 27002:2013 Control 6.1.2.

Before using this report, ensure that variables `isSourceZoneSOXDevelopment` and `isDestinationZoneSOXProduction` are defined in the SOX logical model. For more information, see the *Solutions Guide for ArcSight Insight Compliance Package for SOX*.

Outbound Communication from Production to Development Environment

Provides a summary of outbound communication events from production to development environments involving Sarbanes Oxley systems, relevant to ISO 27002:2013 Control 6.1.2.

Before using this report, ensure that variables `isSourceZoneSOXProduction` and `isDestinationZoneSOXDevelopment` are defined in the SOX logical model. For more information, see the *Solutions Guide for ArcSight Insight Compliance Package for SOX*.

VPN Connection Summary

Provides a summary about VPN connection events which involving Sarbanes Oxley systems, relevant to ISO 27002:2013 Control 6.2.2.

Before using this report, ensure that variables `isAgentZoneSOX` and `isAgentAddressSOX` are defined in the SOX logical model. For more information, see the *Solutions Guide for ArcSight Insight Compliance Package for SOX*.

Wireless Attacks and Suspicious Activity

Provides a summary of wireless attack and suspicious activity events involving Sarbanes Oxley systems, relevant to ISO 27002:2013 Control 6.2.1.

7 – Human Resource Security

In the Reports Portal, select Repository > Standard Content > Data Compliance Content > Sarbanes Oxley > ISO 27002 > Reports > ISO 7 Human Resource Security.

Activity by User

Provides an overview of activity by specific users involving Sarbanes Oxley systems, relevant to ISO 27002:2013 Controls 7.1.1, 7.2.3 , and 7.3.1.

8 – Asset Management

In the Reports Portal, select Repository > Standard Content > Data Compliance Content > Sarbanes Oxley > ISO 27002 > Reports > ISO 8 Asset Management.

Removable Media Activity

Provides an overview of removable media activity involving Sarbanes Oxley systems, relevant to ISO 27002:2013 Control 8.3.1.

9 – Access Control

In the Reports Portal, select Repository > Standard Content > Data Compliance Content > Sarbanes Oxley > SOX Reports > ISO 9 Access Control.

To assess your enterprise's compliance with this requirement, use the following reports:

Dashboards	Reports
n/a	Account Creations Account Deletions Account Lockouts by System Account Lockouts by User Insecure Ports Insecure Services Password Policy Changes Password Weaknesses User Group Account Creations User Group Account Deletions

Account Creations

Provides a summary of account creation activity events involving Sarbanes Oxley systems, relevant to ISO 27002:2013 Control 9.2.1.

Account Deletions

Provides a summary of account deletion activity events involving Sarbanes Oxley systems, relevant to ISO 27002:2013 Control 9.2.1.

Account Lockouts by System

Provides a summary of account lockout activity events by system involving Sarbanes Oxley systems, relevant to ISO 27002:2013 Control 9.2.1.

Account Lockouts by User

Provides a summary of account lockout activity events by user involving Sarbanes Oxley systems, relevant to ISO 27002:2013 Control 9.2.1.

Insecure Ports

Provides a summary of insecure ports that are involved in communication with Sarbanes Oxley systems, relevant to ISO 27002:2013 Control 12.1.2.

Insecure Services

Provides a summary of insecure services that are involved in communication with Sarbanes Oxley systems, relevant to ISO 27002:2013 Control 12.1.2.

Password Policy Changes

Provides a summary of password policy change events involving Sarbanes Oxley systems, relevant to ISO 27002:2013 Control 9.4.3.

Password Weaknesses

Provides a summary of SQL vulnerabilities involving Sarbanes Oxley systems, relevant to ISO 27002:2013 Control 9.4.3.

User Group Account Creations

Provides a summary of user group account creation events involving Sarbanes Oxley systems, relevant to ISO 27002:2013 Control 9.2.1.

User Group Account Deletions

Provides a summary of user group account deletion events involving Sarbanes Oxley systems, relevant to ISO 27002:2013 Control 9.2.1.

10 – Cryptography

In the Reports Portal, select Repository > Standard Content > Data Compliance Content > Sarbanes Oxley > ISO 27002 > Reports > ISO 10 Cryptography.

To assess your enterprise's compliance with this requirement, use the following reports:

Dashboards	Reports
n/a	SSH Vulnerabilities SSL or TLS Vulnerabilities VPN Vulnerabilities

SSH Vulnerabilities

Provides a summary of SSH vulnerabilities involving Sarbanes Oxley systems, relevant to ISO 27002:2013 Control 10.1.1.

SSL or TLS Vulnerabilities

Provides a summary of SSL or TLS vulnerabilities involving Sarbanes Oxley systems, relevant to ISO 27002:2013 Control 10.1.1.

VPN Vulnerabilities

Provides a summary of VPN vulnerabilities involving Sarbanes Oxley systems, relevant to ISO 27002:2013 Control 10.1.1.

11 – Physical and Environmental Security

In the Reports Portal, select Repository > Standard Content > Data Compliance Content > Sarbanes Oxley > ISO 27002 > *Dashboards* or *Reports* > ISO 11 Physical and Environmental Security.

To assess your enterprise's compliance with this requirement, use the following dashboards and reports:

Dashboards	Reports
Failed Physical Access Overview Successful Physical Access Overview	Failed Building Physical Access Activity Summary Failed User Physical Access Activity Summary Successful Building Physical Access Activity Summary Successful User Physical Access Activity Summary

Failed Physical Access Overview

Provides an overview of failed physical access activity events, relevant to ISO 27002:2013 Control 11.1.2.

Successful Physical Access Overview

Provides an overview of successful physical access activity events, relevant to ISO 27002:2013 Control 11.1.2.

Failed Building Physical Access Activity Summary

Provides a summary of failed physical access activity events by building, relevant to ISO27002:2013 control 11.1.2.

Failed User Physical Access Activity Summary

Provides a summary of failed physical access activity events by user, relevant to ISO27002:2013 control 11.1.2.

Successful Building Physical Access Activity Summary

Provides a summary of successful physical access activity events by building, relevant to ISO27002:2013 control 11.1.2.

Successful User Physical Access Activity Summary

Provides a summary of successful physical access activity events by user, relevant to ISO27002:2013 control 11.1.2.

12 – Operations Security

In the Reports Portal, select Repository > Standard Content > Data Compliance Content > Sarbanes Oxley > ISO 27002 > *Dashboards* or *Reports* > ISO 12 Operations Security.

To assess your enterprise's compliance with this requirement, use the following dashboards and reports:

Dashboards	Reports
Administrative Login Overview	Antivirus Stopped or Paused
Application Vulnerabilities Overview	Audit Log Cleared
Failed Login Overview	Database Configuration Changes
Failed Login Relationship	Database Vulnerabilities
Firewall Configuration Changes	Failed Administrative Login Summary
Malware Overview	Failed Antivirus Updates
Successful Login Overview	Failed Login by SOX Asset
Unpatched Systems	Failed Login Summary
Vulnerability Overview	Firewall Configuration Changes
	High Risk Vulnerabilities
	Malware Summary
	Network Device Configuration Changes
	Overflow Vulnerabilities
	SQL Injection Vulnerabilities
	Successful Administrative Login Summary
	Successful Login by SOX Asset
	Unpatched Systems
	Vulnerability Summary by CVE ID
	Vulnerability Summary by SOX Asset
	Vulnerability Summary on SOX Environment
	XSRF Vulnerabilities
	XSS Vulnerabilities

Administrative Login Overview

Provides an overview of administrative login activity, relevant to ISO 27002:2013 Control 12.4.3.

To define administrative accounts, use the worksheet condition of this dashboard. Use lowercase to define the accounts. For example, add the user "Administrator" as "administrator."

Application Vulnerabilities Overview

Provides an overview of the following application vulnerabilities, relevant to ISO 27002:2013 Control 12.6.1:

- SQL injection
- XSS
- XSRF
- Overflow

Failed Login Overview

Provides an overview of failed login activity, relevant to ISO 27002:2013 Control 12.4.1.

Failed Login Relationship

Based on ArcSight categorization, provides an overview of failed login relationships involving Sarbanes Oxley systems, relevant to ISO 27002:2013 Control 12.4.1.

Firewall Configuration Changes

Provides an overview of firewall configuration change events, relevant to ISO 27002:2013 Control 12.1.2.

Malware Overview

Provides an overview of malware activity, relevant to ISO 27002:2013 Control 12.2.1.

Successful Login Overview

Provides an overview of successful login activity, relevant to ISO 27002:2013 Control 12.4.1.

Unpatched Systems

Provides an overview of missing security patches on Sarbanes Oxley systems, relevant to ISO 27002:2013 Control 12.5.1.

Vulnerability Overview

Provides an overview of vulnerability events involving Sarbanes Oxley systems, relevant to ISO 27002:2013 Control 12.6.1.

Antivirus Stopped or Paused

Provides a summary of antivirus services that were stopped or paused, relevant to ISO 27002:20213 Control 12.4.1.

Audit Log Cleared

Provides a summary of audit log cleared events involving Sarbanes Oxley systems, relevant to ISO 27002:2013 Control 12.4.2.

Database Configuration Changes

Provides a summary of database configuration changes, relevant to ISO 27002:2013 Control 12.1.2.

Database Vulnerabilities

Provides a summary of database vulnerabilities involving Sarbanes Oxley systems, relevant to ISO 27002:2013 Control 12.6.1.

Failed Administrative Login Summary

Provides a summary of failed administrative login events involving Sarbanes Oxley systems, relevant to ISO 27002:2013 Control 12.4.3.

To define administrative accounts, use the worksheet condition of this dashboard. Use lowercase to define the accounts. For example, add the user "Administrator" as "administrator."

Failed Antivirus Updates

Provides a summary of failed antivirus updates, relevant to ISO 27002:20213 Control 12.4.1.

Failed Login by SOX Asset

Provides a summary of failed logins detected on specific SOX assets , relevant to ISO 27002:2013 control 12.4.1.

When you run this report, specify the asset (host name, IP address, or MAC address) in lowercase.

Failed Login Summary

Provides a summary of failed login events involving Sarbanes Oxley systems, relevant to ISO 27002:2013 Control 12.4.1.

Firewall Configuration Changes

Provides a summary of firewall configuration change events, relevant to ISO 27002:2013 Control 12.1.2.

High Risk Vulnerabilities

Provides a summary of high-risk vulnerabilities involving Sarbanes Oxley systems, relevant to ISO 27002:2013 Control 12.6.1.

Malware Summary

Provides a summary of malware events on Sarbanes Oxley systems, relevant to ISO 27002:2013 Control 12.2.1.

Network Device Configuration Changes

Provides a summary of network device configuration change events involving Sarbanes Oxley systems, relevant to ISO 27002:2013 Control 12.1.2.

Overflow Vulnerabilities

Provides a summary of overflow vulnerabilities involving Sarbanes Oxley systems, relevant to ISO 27002:2013 Control 12.6.1.

SQL Injection Vulnerabilities

Provides a summary of SQL vulnerabilities involving Sarbanes Oxley systems, relevant to ISO 27002:2013 Control 12.6.1.

Successful Administrative Login Summary

Provides a summary of successful administrative login events involving Sarbanes Oxley systems, relevant to ISO 27002:2013 Control 12.4.3.

To define administrative accounts, use the worksheet condition of this dashboard. Use lowercase to define the accounts. For example, add the user "Administrator" as "administrator."

Successful Login by SOX Asset

Provides a summary of successful logins detected on specific SOX assets, relevant to ISO 27002:2013 control 12.4.1.

When you run this report, specify the asset (host name, IP address, or MAC address) in lowercase.

Unpatched Systems

Provides a summary of missing security patches involving Sarbanes Oxley systems, relevant to ISO 27002:2013 Control 12.5.1.

Vulnerability Summary by CVE ID

Provides a summary of vulnerabilities detected on SOX environments by specific CVE ID, relevant to ISO 2700:2013 Control 12.6.1.

When you run this report, specify the CVE ID in lowercase.

Vulnerability Summary by SOX Asset

Provides a summary of vulnerabilities detected on specific SOX assets, relevant to ISO 27002:2013 Control 12.6.1.

When you run this report, specify the asset (host name, IP address, or MAC address) in lowercase.

Vulnerability Summary on SOX Environment

Provides a summary of vulnerabilities involving Sarbanes Oxley systems, relevant to ISO 27002:2013 Control 12.6.1.

XSRF Vulnerabilities

Provides a summary of XSRF vulnerabilities involving Sarbanes Oxley systems, relevant to ISO 27002:2013 Control 12.6.1.

XSS Vulnerabilities

Provides a summary of XSS vulnerabilities involving Sarbanes Oxley systems, relevant to ISO 27002:2013 Control 12.6.1.

13 – Communications Security

In the Reports Portal, select Repository > Standard Content > Data Compliance Content > Sarbanes Oxley > ISO 27002 > *Dashboards* or *Reports* > ISO 13 Communications Security.

To assess your enterprise's compliance with this requirement, use the following dashboards and reports:

Dashboards	Reports
DoS Activity Firewall Blocked Events	Covert Channel Activity DoS Attacks Summary Firewall Blocked Events

DoS Activity

Based on ArcSight categorization, provides an overview of DoS activity involving Sarbanes Oxley systems, relevant to ISO 27002:2013 Control 13.2.3.

Firewall Blocked Events

Provides an overview of blocked firewall events, relevant to ISO 27002:2013 Control 13.2.1.

Covert Channel Activity

Displays covert channel activities, relevant to ISO 27002:2013 Control 13.2.1.

DoS Attacks Summary

Provides a summary of events that indicate DoS activity, relevant to ISO 27002:2013 Control 13.2.3.

Firewall Blocked Events

Provides a summary of blocked firewall events, relevant to ISO27002:2013 control 13.2.1

16 – Information Security Incident Management

In the Reports Portal, select Repository > Standard Content > Data Compliance Content > Sarbanes Oxley > ISO 27002 > *Dashboards* or *Reports* > ISO 16 Information Security Incident Management.

To assess your enterprise's compliance with this requirement, use the following dashboards and reports:

Dashboards	Reports
High Risk Events Overview MITRE ATT&CK Overview Reconnaissance Activity Threat Overview Threat Relationship	High Risk Events Summary MITRE ATT&CK Summary by MITRE Technique MITRE ATT&CK Summary by SOX Asset Reconnaissance Summary Threats Summary

High Risk Events Overview

Provides an overview of high-risk events involving Sarbanes Oxley systems, relevant to ISO 27002:2013 Control 16.1.2.

MITRE ATT&CK Overview

Provides an overview of MITRE ATT&CK events involving Sarbanes Oxley systems, relevant to ISO 27002:2013 Control 16.1.2.

Reconnaissance Activity

Based on ArcSight categorization, provides an overview of reconnaissance activity involving Sarbanes Oxley systems, relevant to ISO 27002:2013 Control 16.1.2.

Threat Overview

Based on ArcSight categorization, provides an overview of threat activity involving Sarbanes Oxley systems, relevant to ISO 27002:2013 Control 16.1.2.

Threat Relationship

Based on ArcSight categorization, provides overview of threat relationships involving Sarbanes Oxley systems, relevant to ISO 27002:2013 Control 16.1.2.

High Risk Events Summary

Provides a summary of high-risk events involving Sarbanes Oxley systems, relevant to ISO 27002:2013 Control 16.1.2.

MITRE ATT&CK Summary by MITRE Technique

Provides a summary of MITRE ATT&CK events involving Sarbanes Oxley systems by MITRE technique, relevant to ISO 27002:2013 Control 16.1.2.

MITRE ATT&CK Summary by SOX Asset

Provides a summary of MITRE ATT&CK events involving Sarbanes Oxley systems by target asset, relevant to ISO 27002:2013 Control 16.1.2.

Reconnaissance Summary

Provides a summary of reconnaissance events involving Sarbanes Oxley systems, relevant to ISO 27002:2013 Control 16.1.2.

Threats Summary

Provides a summary of threat events involving Sarbanes Oxley systems, relevant to ISO 27002:2013 Control 16.1.2.

17 – Information Security Aspects of Business Continuity Management

In the Reports Portal, select Repository > Standard Content > Data Compliance Content > Sarbanes Oxley > ISO 27002 > Reports > ISO 17 Information Security Aspects of Business Continuity Management.

Asset Shutdown Summary

Provides a summary of asset shutdown events involving Sarbanes Oxley systems, relevant to ISO 27002:2013 Control 17.1.3.

18 – Compliance

In the Reports Portal, select Repository > Standard Content > Data Compliance Content > Sarbanes Oxley > ISO 27002 > *Dashboards* or *Reports* > ISO 18 Compliance.

To assess your enterprise's compliance with this requirement, use the following dashboards and reports:

Dashboards	Reports
Information Disclosure Vulnerabilities	Information Disclosure Vulnerabilities
Organization Information Leaks	Organization Information Leaks Summary
Personal Information Leakage Overview	Personal Information Leakage Summary

Information Disclosure Vulnerabilities

Provides an overview of information disclosure vulnerability events involving Sarbanes Oxley systems, relevant to ISO 27002:2013 Controls 18.1.4, 13.2.4.

Organization Information Leaks

Based on ArcSight categorization, provides an overview of information leakage activity (for example, company data), relevant to ISO 27002:2013 Controls 18.1.3, 13.2.4.

Personal Information Leakage Overview

Based on ArcSight categorization, provides an overview of personal information leakage activity, relevant to ISO 27002:2013 Controls 18.1.4, 13.2.4.

Information Disclosure Vulnerabilities - Dashboard

Provides a summary of information disclosure vulnerabilities involving Sarbanes Oxley systems, relevant to ISO 27002:2013 Controls 18.1.4, 13.2.4.

Organization Information Leaks Summary - Dashboard

Provides a summary of information leakage events (for example, company data leaks), relevant to ISO 27002:2013 Controls 18.1.3, 13.2.4.

Personal Information Leakage Summary - Dashboard

Provides a summary of personal information leakage events, relevant to ISO 27002:2013 Controls 18.1.4, 13.2.4.

Importing Event Data From Logger

If you have ArcSight Logger deployed, you can import event data from Logger into the ArcSight Database to enable you to search on that data from within ArcSight Platform. To do so, the process requires you to first import the Logger event metadata, then Logger event archives into the Database. After the system successfully imports a Logger archive file, the events in that archive file will be available in the Database. You can gradually import the Logger archive files as needed.

✓ **NOTE**: Depending on your version of ArcSight Platform (SaaS or non-SaaS), this feature will follow a different procedure. Ensure that you select the right one for your environment.

Importing Logger Data to the ArcSight Database (SaaS)

Available only to customers in the ArcSight SaaS environment

⚠ This process can be started only after the metadata migration process has been started from at least one of the available Logger(s)

If you have ArcSight Logger deployed in your network infrastructure, you can search Logger event data collected over time. To do so, you must import the events stored in the Logger archives to the ArcSight Database. This process requires you to first import the event metadata, then the event data. Before you begin searching through Logger data, ensure that the data migrations have completed. The system stores the imported archives according to the retention policies established in Logger.

1. Verify that you have imported metadata from at least one available Logger.

   For more information, see "Importing Logger Data to the ArcSight Database" in the *ArcSight SaaS Quick Start for Administrator's* guide.

2. Select **Configuration > Import Logger Data > Data Import**.
3. In the **Select the Logger for Data Import** menu, select the Logger from which you want to import the data.

   For more information about Logger aliases, see "Managing the S3 Bucket" in the *ArcSight SaaS Quick Start for Administrator's* guide.

   For the selected Logger, the system displays a list of the archives stored. You can find this in a table under the Displaying x results label. For each archive, the table displays the following information. To filter the displayed information, you can enter search for values within each column.

   Archive Name

   Represents the name of the archive, as assigned in Logger. For more information, see "Archiving Events" in the *Administrator's Guide to ArcSight Logger*.

   Day

   Represents the day of the month that Logger generated the archive. Values are 01 to 31 (depending on the month).

   Month

   Represents the month that Logger generated the archive. Values are 01 to 12.

   Year

   Represents the year that Logger generated the archive. Values are displayed in a 4-digit format.

   Storage Group

   Represents the name of the Logger associated with the archive.

   Data Files

   Displays the number of files contained in the archive, as well as indicating the number of the files that have been correctly imported (files without missing data). For example, 2/3 means there are 3 files in the archive, and 2 of them were imported correctly.

Import Status

Indicates the status of the migration of the archive.

The import process follows this order: Not imported > Pending Import> Importing. Note that the Pending Import state can take up to 5 minutes to complete the archive analysis. The result of the importing process can be either Imported or Import Failed.

Import Date

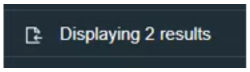
Represents the date that the archive was imported. If the import has not been performed, it will appear as "---".

Archive Size

Show the size of the archive in gigabytes.

4. Check the box to the left of each archive that you want to enable for import.

   After you select a Logger, the system displays the **Import** button to the left of Displaying x results:

5. To start importing the selected archives, click Import.

   The system updates the import state of each archive as the process proceeds.

   > Only archives with an import state of **Not Imported** have a check box and are available for import.

6. (Optional) To update the list of archives contained in the Logger, click Refresh to the right of the Search box.
7. (Optional) After the system has successfully imported Logger event data, you can search for the Logger events.

Importing Logger Data to the ArcSight Database (non-SaaS)

Not available to customers in the ArcSight SaaS environment.

> The procedure and steps described in this section have been tested with Logger and ArcSight Platform installed on two different machines

This section guides you through the process of importing the Logger metadata and then its corresponding archived events to the ArcSight Database. Before you start searching the imported Logger archived events, ensure that the data migrations have completed according to the procedures in "Migrating Logger Data to the ArcSight Database" in the guide corresponding to your deployment:

- Administrator's Guide for the ArcSight Platform 24.2 - AWS Deployment
- Administrator's Guide for the ArcSight Platform 24.2 - Azure Deployment
- Administrator's Guide for the ArcSight Platform 24.2 - Google Cloud Deployment
- Administrator's Guide for the ArcSight Platform 24.2 - Off-cloud Deployment

To start the procedure, please follow the "Checklist: Migrating Logger Data" below.

Checklist: Migrating Logger Data

Not available to customers in the ArcSight SaaS environment.

Use the following checklist to migrate event data from Logger. You must perform the tasks in the listed order.

	Task	See
☐	1. Ensure that you have read the considerations and can comply with the prerequisites for importing Logger data	Prerequisites and Considerations for Importing Logger Data in the in the guide corresponding to your deployment: • Administrator's Guide for the ArcSight Platform 24.2 - AWS Deployment • Administrator's Guide for the ArcSight Platform 24.2 - Azure Deployment • Administrator's Guide for the ArcSight Platform 24.2 - Google Cloud Deployment • Administrator's Guide for the ArcSight Platform 24.2 - Off-cloud Deployment
☐	2. Import the Logger event metadata	"Import Metadata for Logger Events" below
☐	3. (Optional) Shut down the Logger instance after successfully importing the metadata	"Removing a Logger after Its Data Is Copied to the ArcSight Database" on page 151
☐	4. Import the Logger event data that you want to search	"Import Logger Events" on page 151

Import Metadata for Logger Events

Not available to customers in the ArcSight SaaS environment.

Select **Configuration > Import Logger Data > Logger Metadata Import**.

This topic applies only to Logger processes soon-to-be shut down.

Logger metadata refers to the information that is stored in the Logger `postgresql` database, which is needed to read the events from the Logger archive files for each storage group.

You import the metadata once for each Logger whose processes are soon to be shutdown. Complete the following activities:

- "Register a Logger " below
- "Import the Metadata" below
- "Update the Logger Registration" on the next page

Register a Logger

Applies only if you have not previously registered the Logger from which you will import data

Before importing the metadata, make sure to add the Logger details for the import process.

1. In ArcSight Platform, select **Configuration > Import Logger Data > Logger Metadata Import**.
2. Click the + icon.
3. Add the Logger details such as:
   a. Host: Logger IP address or host name
      For example, `12.345.67.890` or `logger6.extremelyfocused.com`
   b. Host Username: OS username
   c. Host Password: OS password
4. Click **Save**. Otherwise, click **Cancel**.

Note: You can remove Logger registration if no data has been imported. To delete the Logger registration, click the delete icon (trash can).

Import the Metadata

Note: It's recommended that you perform the following steps before the actual metadata import:

- Stop all Logger event ingestion
- Switch connectors to send events to the ArcSight Database
- Archive all the existing events in Logger before importing the Logger metadata

While importing the metadata, the Logger server must be accessible at all times.

The metadata contains all the information related to accessing the events of a particular Logger. You can migrate the Logger metadata to the ArcSight Database directly from the **Logger Metadata Import** page.

> Make sure to import the metadata before importing the Logger data as this is the first step to view and consume logger events.

1. In ArcSight Platform, select **Configuration > Import Logger Data > Logger Metadata Import**.
2. Check the box next to the Logger whose metadata will be migrated and click the **import** icon.

   A pop-up window will notify you that the Logger metadata import procedure is about to begin, making sure you have already mounted the appropriate archives on all database nodes.

   At this point, you must decide whether Logger processes resume after the import of metadata is done:

   - **Yes**: The Logger processes will resume after the import is finished. ArcSight Platform proceeds to import and store the metadata.
   - **No**: The Logger processes will remain shut down. ArcSight Platform proceeds to import and store the metadata.

     > After successfully importing the metadata and the Logger processes have been shut down, you have the option to remove or repurpose that particular Logger.

   - **Cancel**: The system will not continue with the process for importing the metadata. The Logger continues in its current state.

Update the Logger Registration

Required only if user credentials for the registered Logger have changed.

If the credentials have been changed after registering a Logger, make sure to update the username and password information before importing the Logger metadata.

The Logger processes status, host username, and password can be updated after the Logger registration, but only if the metadata import process hasn't started.

These values cannot be updated after you start an import.

1. In ArcSight Platform, select **Configuration > Import Logger Data > Logger Data Import**.
2. Check the box next to the Logger host and click the pencil icon.
3. Update the values accordingly.

Ensure that the username and password that you use match the OS credentials set in Logger.

4. Click **Save**. Otherwise, click **Cancel**.

Removing a Logger after Its Data Is Copied to the ArcSight Database

This process is optional. Not available to customers in the ArcSight SaaS environment.

After you have successfully imported the metadata , you have the option to remove or repurpose that particular Logger. The next phase, where you import the archived event data, does not require the Logger.

1. To ensure that the Logger will no longer receive events, reconfigure the SmartConnectors to send events to the ArcSight SaaS environment.
2. Log in to ArcSight.

   Note that your login role must have the *Logger Data Migration* permission.
3. Select Configuration > Import Logger Data > Data Import.
4. Verify that all archives are listed and thus ready for import to the ArcSight Database.

   We recommend that you check the listed archives to ensure that you have copied all desired metadata from each Logger.
5. Shut down the Logger process.

   You can now repurpose the Logger host system.

Import Logger Events

Not available to customers in the ArcSight SaaS environment.

Select **Configuration** > **Import Logger Data** > **Logger Data Import**.

This option will allow you to bring events from a Logger instance to the ArcSight Database and perform searches on them. Since this process consumes both time and resources, consider importing only events in necessary time ranges.

> ⚠ Before you can migrate Logger data, you must import the metadata that defines it.

- "Import Archived Events" on the next page
- "Review Migration Details" on page 153
- "Resume an Incomplete Migration" on page 154
- "Delete Incomplete or Failed Migrations" on page 154

Import Archived Events

Before importing Archived Events, ensure that you have performed the process from the Logger side first.

> **Note:** For more information, see "Migrating Logger Data to the ArcSight Database" in the guide corresponding to your deployment:
>
> - Administrator's Guide for the ArcSight Platform 24.2 - AWS Deployment
> - Administrator's Guide for the ArcSight Platform 24.2 - Azure Deployment
> - Administrator's Guide for the ArcSight Platform 24.2 - Google Cloud Deployment
> - Administrator's Guide for the ArcSight Platform 24.2 - Off-cloud Deployment

1. Select **Configuration** > **Import Logger Data** > **Logger Data Import**.
2. Click +.
3. Select the Logger host of your preference.

   You can choose only one host at a time.
4. Specify the time range that you want to import, following these considerations:
   - The time range is based on receipt time.

     > Convert the time range you wish to search through from browser time/selected time zone to UTC.
     >
     > That way, once the data is imported, you can search through it using the original browser time/selected time zone.

   - The migration only allows you to migrate a minimum time range of 1 day.
   - Specify a date in the past. You cannot import data for future dates as it will import no events and will cause issues when you try to import new data again.
   - Overlapping dates will cause an error message. If this is not the first import of this Logger instance, ensure to select a time range different than the one already imported.

     > Select a data-time range different than the one already imported. To confirm the host's start and end dates already available in the ArcSight Database, see how to verify the migration table in "Review Migration Details" on the next page
5. Click Import.
6. To check the import progress, view the Import Status column.

   The import will take a considerable amount of time, based on the quantity of events that are present in the time range selected.

7. (Optional) If the import is interrupted, you can attempt to resume the process.

   Alternatively, you can delete an incomplete migration.

Review Migration Details

> **Note:** Ensure that you comply with the prerequisites before importing data. For more information, see Prerequisites and Considerations for Importing Logger Data in the guide corresponding to your deployment:
>
> - Administrator's Guide for the ArcSight Platform 24.2 - AWS Deployment
> - Administrator's Guide for the ArcSight Platform 24.2 - Azure Deployment
> - Administrator's Guide for the ArcSight Platform 24.2 - Google Cloud Deployment
> - Administrator's Guide for the ArcSight Platform 24.2 - Off-cloud Deployment

The migrations table will display the most relevant information of all the imports executed. For each migration, the system registers the following details:

Logger Host

Represents the Logger IP address or host name. For example, `12.345.67.890` or `logger6.extremelyfocused.com`.

Data Start Date

Indicates the absolute date of the earliest possible event.

Data End Date

Indicates the absolute date of the latest possible event.

Import Date

Indicates the migration date and time displayed in the ArcSight Database timezone.

Import Status

Indicates the status of the import process.

- **Initialized**: The verification of the archives corresponding to the requested time range is being performed.
- **In progress**: Import is still in progress. Archived events are being extracted, read and sent to the ArcSight Database.
- **Complete**: Successfully imported the data.
- **Failed**: The archives are inaccessible, which can be caused by:
  - An unresponsive mount
  - A network connectivity issue

  - A user who doesn't have the correct access permissions
  - Data that couldn't be uncompressed, etc

Event Count

Indicates the number of events migrated. This number increases automatically as the process continues.

Logger Host User Name

Indicates the OS username associated with the Logger host.

Data Import ID

Represents the unique identifier for the event migration. You must have this value to delete a migration.

To review details about the executed migration, see the logs in the `opt/vertica/udfs/datamigration/logs/` directory.

After events have been imported, either Logger or ArcSight Platform will manage the retention policy depending on the state of the Logger processes.

Resume an Incomplete Migration

A migration might be interrupted if access to the mount or data file is affected in any way during the process: an unresponsive mount, a network connectivity issue, a user who doesn't have the correct access permissions, data that couldn't be uncompressed, etc.

An Incomplete migration can be resumed. The process starts from the last point of migration so you do not lose the data previously migrated.

1. Select the migrations that you want to resume.
2. Click 🗗.

A migration that continues to appear as incomplete after it has been resumed at least once, might indicate the data cannot be migrated because of corruption issues.

Check the logs for any related messages, and contact support to help finish the migration.

Delete Incomplete or Failed Migrations

It's possible that a migration might fail to complete. For example, the status is Failed or indicates that the migration is Complete but it contains no events. In these types of scenarios, you can delete the migration, then try again.

1. Select the migrations that you want to delete.
2. Click 🗑.

Managing Your Stored Data

*You must have the **Manage Storage Groups** permission to use this feature.*

Select Configuration > Storage.

The **Storage Information** list provides an overview of all available storage groups. You can have up to 10 storage groups, each with specific retention periods and query filters. To find a storage group, use the Search field.

Use Storage Groups to Organize and Retain Data

Based on a query filter, you can divide data into **storage groups**, which allows you to partition the incoming events data and provide different retention periods. Because you can set data retention policies per storage group, you can retain certain high-volume events for a short time period and other important events for longer time period. Higher volumes of event data, require more storage space. The **storage utilization** column displays the amount of storage utilized.

You can have up to 10 storage groups, including the provided *Default Storage Group*. The system counts all groups, active or inactive, toward the **maximum number of groups**. In a multi-tenant environment, your provider might limit the maximum number of groups that a tenant can create. For more information about limiting the number of groups per tenant, see Setting the Maximum Number of Storage Groups for Tenants in the *Administrator's Guide to ArcSight Platform 24.2*.

Each storage group has a **query filter** for directing the correct events to that group. The query filter enables you to associate each storage group with specific compliance requirements, business needs, or search activities. For example, one group might have a filter for categoryDeviceGroup =/ Firewall and another for severity >= 7. If an event does not match any of the active filters, the event gets sent to the *Default Storage Group*. You cannot change the name, query, or rank of this built-in group.

> By default, the maximum value for retaining events in the *Default Storage Group* is 12 months. However, the license for your deployed product might require a lower maximum value, such as 30 days. For more information about how deployed products affect data retention policies in a non-SaaS environment, see "Understanding License Keys" in the *Administrator's Guide to ArcSight Platform 24.2*.

The Apply Changes to System option at the top of the Storage Groups page indicates that one or more groups have been modified but the changes need to be applied.

- "Create a Storage Group" below
- "Send Events to the Correct Storage Group" below

Create a Storage Group

By default, you can create up to 10 storage groups, including the *Default Storage Group*. However, in a multi-tenant environment, the maximum number of storage groups is set by your provider.

1. Select **Configuration** > **Storage**.
2. Click the add icon +.
3. Enter a name for the storage group.

   > The name cannot include special characters other than a hyphen (-).

4. Enter a query with which to filter the incoming events into this storage group.

   For example: categoryDeviceGroup='/Firewall' or categoryDeviceGroup='/IDS'.

   The query can include parentheses, quotes, and single quotes.
5. For the storage group's status, indicate whether to activate the group.
6. (Optional) For **Delete Data Older than**, enter the age of data, in months, that you want to purge from the storage group in the database.
7. Click **Save**.
8. Apply your changes.

Send Events to the Correct Storage Group

For efficient data retrieval, the system matches each incoming event with the query filter for a single, active storage group. However, an event could be associated with the rules of more than one group. When an event matches with multiple storage groups, the system **assigns the event to the highest ranked group**.

For example, *if Event_29* matches the query filter for the storage groups ranked 3, 5, and 6, then the system assigns the event to the group that is ranked 3. If an event does not match any of the active filters, the system sends the event to the *Default Storage Group*.

You can change the ranking of storage groups to ensure that the system places events in the best location.

1. Select **Configuration** > **Storage**.
2. From the **Storage Information** table, drag each storage group up or down to the preferred

priority position.

The system always places the *Default Storage Group* in the lowest ranked position.

Activate and Deactivate Storage Groups

To prevent new events from being sent to a storage group, you can deactivate the group. For example, you might no longer need a particular storage group or find that you have changed the filters and functionality of that group from its original purpose. Rather than continuing to modify an existing group, you can deactivate it. Alternatively, you might want to activate a storage group only during certain periods of time. Note that the system counts all groups, active or inactive, toward the maximum number of storage groups. Also, even though you deactivate a group, the deletion settings for that group remain in effect.

1. Select Configuration > Storage.
2. Select the storage group that you want to activate or deactivate.
3. To edit the group's settings, click the ✎ icon.
4. For Storage Group Status, slide the indicator left or right.

   Activated groups display a status of Active.
5. Click Save.

Change the Settings of a Storage Group

After creating or modifying storage groups, you must apply the changes. You can modify multiple groups before applying your changes. To indicate that that one or more groups have pending changes, the system displays the Apply Changes to System option at the top of the Storage Groups page.

- "Modify a Storage Group" below
- "Apply Your Changes to a Storage Group" on the next page

Modify a Storage Group

You can modify a storage group at any time.

1. Select Configuration > Storage.
2. Select the storage group that you want to modify.
3. Click the pencil icon ✎.
4. For Group Status, slide the indicator left or right.
5. Activated groups will display a status of Active.

6. Click Save.
7. Apply your changes.

Apply Your Changes to a Storage Group

Select Configuration > Storage > Apply Changes to System.

When you change the query filter, status, or rank of a storage group, your changes do not go into effect until you apply the changes. The following considerations affect how your changes are applied:

- If you modify the query filter, the system will begin adding events that match the updated filter. However, the storage group retains all currently stored events associated with the previous filter. The retention policies continue to apply to all events within the group.
- If you do not want the storage group to have both sets of events, you can create a new storage group for the updated query filter, then deactivate the older storage group.
- On the first day of the month, the ArcSight Database deletes events matching the retention policies of the storage groups. For example, on March 15, you change the deletion time to three months from four months. On April 1, the database begins deleting all data older than three months.
- While changes are being applied, you cannot create or modify a storage group.

Use Storage Group Queries in a Search

Search allows you to specify the storage group in which you want to search events. Rather than entering the query filter of a storage group again in Search, specify the following for your Search query: Storage Group = Firewall Events. By specifying the storage group, you limit the search to that storage group’s partitions only, thus improving search performance.

Configure Retention Policies for Your Data

Events are stored in their assigned storage groups in the ArcSight database. Over time, the storage system can retain unneeded or outdated data. To preserve space in the database and improve data retrieval from storage groups, you can configure the database to remove events older than a certain number of months. For example, your data retention policy might expect your system to purge certain data, such as DNS logs that are older than 24 months.

When setting the policies for storage group retention and disk space utilization, do not allow your disk space utilization to increase above 90%. Running out of disk space can reduce the performance of searches due to increasing fragmentation. If such a situation continues to where there is no space left, then the database cannot ingest new data.

Delete Old Data from Storage Groups

Events are stored in their assigned storage groups in the ArcSight Database. Over time, the storage system can retain unneeded or outdated data. To preserve space in the database and improve data retrieval from storage groups, you can configure the database to remove events older than a certain number of months. For example, the data retention policy for your organization might expect data older than 24 months to be purged. This process **deletes data from the database**.

The system automatically applies all deletion settings on the first day of the month at 2:10 a.m.

1. Create or modify a storage group.
2. For Delete Data Older Than, enter the age of data, in months, when you want old events to be deleted.

   > By default, the maximum value for retaining events in the Default Storage Group is 12 months. However, the license for your deployed product might require a lower maximum value, such as one month. With a Log Management and Compliance (Recon) license, you can set the value to "-1" which enables the storage group to Never Expire for a long-term storage option.

   Ensure that your retention policy takes into consideration the maximum size of your storage groups and database. Also, consider that, in deleting events, the policy might affect results of an Event Integrity Check.
3. Click Save.
4. Apply your changes.

Manage Retention Policies for Imported Logger Data

> ⚠ You can have up to 10 storage groups overall (including both groups created in the ArcSight Database and those migrated from Logger). Exceeding this quantity will likely affect the performance.

To manage the storage and expiration of the recently imported data from Logger, the system automatically enables the retention policy for the Logger event data. You do not need to manually direct events to a certain storage group and implement additional retention policies, but rather take advantage of the same storage rules already set in Logger.

You can update and review the retention policy strictly from the Logger interface. However, changes made to the retention policy after the archive migration has been started won't be reflected on the archives imported to the ArcSight Database.

> For more information about retention policies for event data, see "Storage" in the *Administrator's Guide to ArcSight Logger*.

For a non-SaaS environment

As part of the metadata migration, the tool brings in the Storage Groups and their retention information. Because in Logger the retention settings are based on days, the tool converts them to months and rounds it up as to comply with the format used by the ArcSight Database. If the Maximum Archives Age value was set to -1 for a Storage Group in Logger (meaning a disabled retention policy), the retention process for it will also be disabled in ArcSight Platform.

For a SaaS environment

When you migrate Logger data to a SaaS environment, the system temporarily stores data in an AWS S3 bucket. For successfully migrated data, the system deletes the temporary files stored in the bucket after a month.

For data that hasn't been imported, the temporary files will be deleted from the bucket based on the ArcSight license purchased by your organization.

The retention period for data imported to the ArcSight Database will be either the **Storage Group Retention** value (from Logger) or the one established by the ArcSight license, depending on which one is lower.

For more information about preparing for data migration, see Installing the AWS Command Line Interface in Each Logger in the *ArcSight SaaS Quick Start for Administrator's* guide.

Setting Up Multi-tenancy

Applies only when the Multi-tenancy feature is enabled. Not available to customers in the ArcSight SaaS environment.

The ArcSight Platform allows you to create and manage multiple tenants in your environment. After you enable Multi-tenancy, you must first onboard a provider who then onboards tenants. Based on the type of license you have purchased, you would be eligible for EPS or Data Retention Periods packages or a **pay-per-use program** for unlimited EPS.

You can design roles that apply to one or more of them, and also assign users to manage them. At least one user needs the Manage Tenants permission to create the tenants.

You as a **provider** can manage one or more tenants where each tenant's data is unique. Your **tenant** could be an internal business unit or a third-party organization. Each tenant must have a unique key that maps system resources, such as database content, to the tenant. To preserve tenant integrity, you cannot modify the key after it has been created.

> Ensure to see Reviewing Multi-tenancy Security Considerations in the off-cloud deployment version of the *Administrator's Guide for ArcSight Platform*. You can find the same topics in the guides corresponding to the following deployment environments:
>
> - AWS
> - Azure
> - Google Cloud

Checklist: Setting Up Multi-tenancy Without ArcSight ESM

Applies only when the Multi-tenancy feature is enabled and ArcSight Platform is not integrated with ESM Multi-tenancy. Not available to customers in the ArcSight SaaS environment.

Use the following checklist to enable Multi-tenancy and onboard a provider and then tenants. You must perform the tasks in the listed order.

> In the table below, the links for the *Administrator's Guide for ArcSight Platform* direct you to the off-cloud deployment version of the guide. You can find the same topics in the guides corresponding to the following deployment environments:
>
> - AWS
> - Azure
> - Google Cloud

	Task	See
☐	1. Plan to enable Multi-tenancy in your ArcSight environment	Planning for Multi-tenancy in the *Administrator's Guide for ArcSight Platform*
☐	2. Enable Multi-tenancy on the Core Components tab of the Management Portal	Enabling Multi-tenancy in the *Administrator's Guide for ArcSight Platform*
☐	3. Create the first System Admin user	Creating the First System Admin User in the *Administrator's Guide for ArcSight Platform*
☐	4. Create and configure a provider	"Onboard a Provider" on page 163 in this guide
☐	5. Create and configure a tenant	"Onboard Tenants" on page 165 in this guide

□	6. Tune the tenant-specific topics used in Transformation Hub routing rules	Tune Tenant Topic Settings in the *Administrator's Guide for ArcSight Platform*
□	7. Provision a Tenant	"Provision a Tenant" on page 168 in this guide
□	8. Configure Tenant Topics in Kafka Scheduler	Configure Tenant Topics in Kafka Scheduler in the *Administrator's Guide for ArcSight Platform*
□	9. Configure Customer URI in SmartConnectors	Configure Customer URI in SmartConnectors in the *Administrator's Guide for ArcSight Platform*

Checklist: Setting Up Multi-tenancy With ArcSight ESM

Applies only when the Multi-tenancy feature is enabled and ArcSight tenants are integrated with ESM tenants.Not available to customers in the ArcSight SaaS environment.

Use the following checklist to enable Multi-tenancy in ArcSight and integrate tenants with tenants in ESM.

> In the following table, the links for the *Administrator's Guide for ArcSight Platform* direct you to the off-cloud deployment version of the guide. You can find the same topics in the guides corresponding to the following deployment environments:
>
> - AWS
> - Azure
> - Google Cloud

	Task	See
□	10. Plan to enable Multi-tenancy in your ArcSight environment	Planning for Multi-tenancy in the *Administrator's Guide for ArcSight Platform*
□	2. Enable Multi-tenancy on the Core Components tab of the Management Portal	Enabling Multi-tenancy in the *Administrator's Guide for ArcSight Platform*
□	3. Create the first System Admin user	Creating the First System Admin User in the *Administrator's Guide for ArcSight Platform*
□	4. Create and configure a provider	"Onboard a Provider" on the next page
□	5. Plan to integrate ESM tenants with ArcSight tenants	Planning to Integrate ESM Tenants with ArcSight Tenants in the *Administrator's Guide for ArcSight Platform*
□	6. Create and configure tenants	"Onboard Tenants" on page 165

□	7. Tune tenant topic settings Not applicable in SOAR-only scenario	Tune Tenant Topic Settings in the *Administrator's Guide for ArcSight Platform*
□	8. Provision a tenant	"Provision a Tenant" on page 168
□	9. Configure Tenant Topics in Kafka Scheduler Not applicable in SOAR-only scenario	Configure Tenant Topics in Kafka Scheduler in the *Administrator's Guide for ArcSight Platform*
□	10. Configure Customer URI in SmartConnectors	Configure Customer URI in SmartConnectors in the *Administrator's Guide for ArcSight Platform*
□	11. (Optional) If you are upgrading from an earlier version of ArcSight Platform that is already integrated with ArcSight ESM in Multi-tenant mode	"Move Users from a Provider to a Tenant" on page 183
□	12. Configure Alert Ingestion from ArcSight ESM	"Configuring Components for Alert Ingestion" on page 172

Onboard a Provider

Applies only when the Multi-tenancy feature is enabled. Not available to customers in the ArcSight SaaS environment.

Onboarding a provider involve steps to create and configure it;this section details each.

Create a Provider Profile

Applies only when the Multi-tenancy feature is enabled. Not available to customers in the ArcSight SaaS environment.

When you log in as a System Admin user the first time; the system prompts you to create a provider profile. Follow these steps:

1. Enter the required information below on the General page:

   Provider Name: Specify a name for the provider.

   Description: (Optional) Specify a description for the provider's organization.

   Website: (Optional) Specify the URL of the provider organization's website.

   Primary Location: (Optional) Specify the required address details of the provider.

2. Continue to enter the remaining information below on the General page:

   Business Contact: Specify the name, and optionally the email address and role of the provider's business contact.

Security Contact: Specify the name, and optionally the email address and role of the provider's security contact.

3. Click Finish General to proceed.

   A new provider profile will be created with the specified details.

4. Proceed to configure the provider profile on the Configuration page.

Configure a Provider Profile

Applies only when the Multi-tenancy feature is enabled. Not available to customers in the ArcSight SaaS environment.

You must enter the credentials for the ArcSight database user for the provider.

On the Configure page complete the following procedure in the provider onboarding wizard:

1. Specify the credentials for the read-only database user.
   For more information to create provider database credentials if not already, see Create a Database User for the Provider in the off-cloud deployment version of the *Administrator's Guide for ArcSight Platform*. You can find the same topics in the guides corresponding to the following deployment environments:

   - AWS
   - Azure
   - Google Cloud

2. Click Finish Configuration to proceed.

3. (Optional) If you have ArcSight ESM configured in Multi-tenant mode, you must use the same tenant keys to onboard tenants to the ArcSight Platform.
   For more information, see Planning to Integrate ArcSight ESM Tenants with ArcSight Platform Tenants in the off-cloud deployment version of the *Administrator's Guide for ArcSight Platform*. You can find the same topics in the guides corresponding to the following deployment environments:

   - AWS
   - Azure
   - Google Cloud

4. (Optional) Create users, groups, roles and permissions as required. For more information, see "Managing Users" on page 182.

5. Click View Tenant List or View Provider Details to access the appropriate page.

Onboard Tenants

Applies only when the Multi-tenancy feature is enabled. Not available to customers in the ArcSight SaaS environment.

Select Administration > Tenants.

Onboarding a tenant involves steps to create, configure and provision it; this section details each.

> Ensure to see Reviewing Multi-tenancy Security Considerations in the off-cloud deployment version of the *Administrator's Guide for ArcSight Platform*. You can find the same topics in the guides corresponding to the following deployment environments:
>
> - AWS
> - Azure
> - Google Cloud

Create a Tenant

Applies only when the Multi-tenancy feature is enabled. Not available to customers in the ArcSight SaaS environment.

Select Administration > Tenants.

After you create a provider profile, you can create and onboard a tenant.

If you want to integrate ArcSight Platform tenants with the ArcSight ESM tenant details, then you must provide the tenant key used for ESM tenants. You must use the External ID and the email ID used for the users in ESM, while defining users for ArcSight Platform tenants. The roles defined for these user must also exactly match.

To create a tenant, log in as a System Admin user and do the following :

1. Select Administration > Tenants.
2. Select Onboard Tenant.
3. On the **Create** page, enter the required information:

   Name

   Represents the name of the tenant.

   Key

Represents the unique “Tenant Key” identifier, or `<tenant key>`, that you want to assign to the tenant. For example, `south_29_test6`.

> If you have multi-tenancy in ArcSight ESM, then specify the same tenant key here.

The key must meet the following criteria:

- 3 to 16 characters
- Begin with a letter
- Any combination of letters, numbers, and underscores
- Case-sensitive

If you do not specify a value, this field will be auto populated.

Description

Provides a description of the tenant's organization.

Industry /Vertical

Indicates the industry or vertical to which the tenant belongs.

Region

Indicates the region where the tenant is located.

Compliance (Optional)

Indicates the compliance or standard that the tenant requires. For example, SOX and ISO27001.

Primary Location (Optional)

Represents the required address details of the tenant:

4. Click Next to proceed.
5. Specify the following details on the Create page:

   Business Contact: Specify the name, email address and role of the tenant's business contact.

   Security Contact: Specify the name, email address and role of the tenant's security contact.

6. Click Finish Creation to proceed.

   The system creates a new tenant with the specified tenant key and details.

7. Proceed to configure the tenant on the Configure page, or click I’ll do later to save and exit from the page. If you do so, return to this page any time to complete the configuration.

(Optional) Auto Populate and Use a Tenant Key

Applies only when the Multi-tenancy feature is enabled. Not available to customers in the ArcSight SaaS environment.

Select Administration > Tenants.

If you choose to auto populate the tenant key, do the following to retrieve and peruse:

1. Select Administration > Tenants.
2. Select the appropriate tenant to view it's details.
3. View and copy the auto populated tenant key from the page.

> Click I'll do later on the tenant onboarding pop-up to configure the tenant later.

4. Use the retrieved key to create the database schema for the tenant.
   For more information see, Create a Database Schema and Users for a Tenant in the off-cloud deployment version of the *Administrator's Guide for ArcSight Platform*. You can find the same topics in the guides corresponding to the following deployment environments:
   - AWS
   - Azure
   - Google Cloud

Configure a Tenant

Applies only when the Multi-tenancy feature is enabled. Not available to customers in the ArcSight SaaS environment.

Select Administration > Tenants.

You must enter the credentials for the ArcSight Database users, an App Admin and a Search user for the tenant. For more information about auto-populated tenant keys, see "(Optional) Auto Populate and Use a Tenant Key" above.

On the Configure page complete the following procedure in the tenant onboarding wizard:

1. a. Specify credentials for the App Admin user. This user has elevated permissions to perform operations on the database to manage the tenant schema.
   For more information to create tenant database resources if not already, see Create a Database Schema and Users for the Tenant in the off-cloud deployment version of the *Administrator's Guide for ArcSight Platform.*You can find the same topics in the guides corresponding to the following deployment environments:

- AWS
- Azure
- Google Cloud

b. Specify credentials for the Search user. This user has restricted permissions for only event search operations for the tenant.

For more information to create tenant database resources if not already, see Create a Database Schema and Users for the Tenant in the off-cloud deployment version of the *Administrator's Guide for ArcSight Platform.*You can find the same topics in the guides corresponding to the following deployment environments:

- AWS
- Azure
- Google Cloud

2. Click Next to manually tune tenant topic settings in Transformation Hub, or click I'll do later to save and exit from the page. If you do so, return to this page any time to complete the configuration.

Provision a Tenant

Applies only when the Multi-tenancy feature is enabled. Not available to customers in the ArcSight SaaS environment.

Select Administration > Tenants.

After you have completed tuning tenant topic settings manually, you can proceed to provision the tenant.

When a tenant is provisioned:

- The tenant schema in the database will be populated with necessary tables.
- A tenant specific topic will be created in Transformation Hub to hold the security events of the tenant.
- A new routing rule will be created to route the tenant events to tenant specific topic, and associated with the Transformation Hub's routing processors.
- Reporting and Case management services will be made aware of the tenant being onboarded.

To provision the tenant, complete the following steps of tenant onboarding wizard from the view tenant list page:

1. Select the Yes, I have completed the instructions for configuring data ingestion check box on the Configuration page.

2. Click Finish Configuration to proceed.
3. (Optional) If configuration fails, modify configuration details and click Finish Configuration again.
4. Click Finish Provisioning.
5. (Optional) If provisioning fails, modify configuration details and click Finish Provisioning again.

   > It might take a few minutes for provisioning to complete.

6. (Optional) To view the existing list of tenants before provisioning completes, click View Tenant List.
7. Complete the following configurations, to complete the tenant provisioning:
   a. Configure Kafka Scheduler to ingest events from a tenant specific Kafka topic as source and the tenant schema in the ArcSight Database as the destination to process a tenant's events.
      For more information see, Configure Tenant Topics in Kafka Scheduler in the off-cloud deployment version of the *Administrator's Guide for ArcSight Platform.*You can find the same topics in the guides corresponding to the following deployment environments:
      - AWS
      - Azure
      - Google Cloud

   b. Configure ArcSight SmartConnector's destination configuration to include the provisioned tenant key.
      For more information see, Configure Customer URI in SmartConnectors in the off-cloud deployment version of the *Administrator's Guide for ArcSight Platform.*You can find the same topics in the guides corresponding to the following deployment environments:
      - AWS
      - Azure
      - Google Cloud
8. Click View Tenant List or View Tenant Details to view the appropriate page when provisioning is complete.

Configure Tenant Topics in Kafka Scheduler

The ArcSight Database uses an event consumer namely, Kafka Scheduler to ingest events from Transformation Hub's Kafka component. Kafka Scheduler is installed and configured as part of ArcSight Platform deployment.

> In a single tenant environment, the Kafka Scheduler ingests events from the Kafka topic, "mf-event-avro-enriched", but when Multi-tenancy is enabled, it must read and ingest events from "mf-event-avro-enriched-default".

You must configure tenants to ingest events from a tenant specific Kafka topic as source and the tenant schema in the ArcSight Database as the destination to process a tenant's events. Perform the following steps to do so:

1. Log in to the ArcSight database cluster node1 server as root.
2. Navigate to the ArcSight database tools directory. For example: /opt/arcsight-db-tools.
3. Perform the following steps to change the default source topic for Kafka Scheduler:
   a. To verify the default source topic configured in Kafka Scheduler (or to print the source topic being consumed), run the following command :

      ```
      ./kafka_scheduler status
      ```

      > You can perform this change upon onboarding the very first tenant in the user interface.

      i. If the source topic is configured to read from *"mf-event-avro-enriched-default"*, skip to Step 4.

      ii. If the source topic is not configured to read from *"mf-event-avro-enriched-default"*, run the following command to purge the existing Kafka Scheduler configuration and then change the default source topic:

      ```
      ./kafka_scheduler disable
      ./kafka_scheduler purge
      ```

      iii. Enable Kafka Scheduler to read from *"mf-event-avro-enriched-default"*:

      ```
      ./kafka_scheduler add -t default
      ./kafka_scheduler enable -t default
      ```

      iv. To verify the default source topic configured in Kafka Scheduler, run the following command:

      ```
      ./kafka_scheduler status
      ```

4. Onboard the tenant in Kafka Scheduler.

   > A tenant key is assigned when a tenant is created; you can retrieve this from the Tenant List page in the user interface.

   a. To use the tenant key identifier to create an ingest process in Kafka Scheduler, run the following command:

```
./kafka_scheduler add -t <tenantKey>
./kafka_scheduler enable -t <tenantKey>
```

b. To verify the default source topic configured in Kafka Scheduler, run the following command:

```
./kafka_scheduler status -t <tenantKey>
```

c. Verify Kafka Scheduler is now configured to ingest data for a specific tenant.

Configure Customer URI in SmartConnectors

> If ArcSight Suite is integrated with ArcSight Enterprise Security Manager (ESM), customer tagging should have been already performed.

You must tag both managed and unmanaged ArcSight SmartConnectors configured for given tenants with tenant keys. This ensures that all events from a single SmartConnector are tagged with a specific tenant. The steps to configure the Customer URI of managed or unmanaged ArcSight SmartConnectors are listed below.

1. For ArcSight SmartConnectors managed by ArcSight Management Console (ArcMC):
   a. Log on to the ArcMC.
   b. Click Node Management.
   c. In the navigation tree, browse to the container where the connector resides.
   d. In the management panel, click the Connectors tab.
   e. From the list of connectors, select all connectors for which you want to edit destination runtime parameters.
   f. Click Runtime Parameters to open the wizard and edit the parameters as follows:
      i. Select the destinations whose runtime parameters you want to modify.
      ii. Select the configurations to be affected.
      iii. Select Network.
      iv. Modify the Customer URI parameter.

   > The Customer URI parameter must be of format, "/<tenantkey>" for routing events to the tenant specific Kafka topic in Transformation Hub.

2. For unmanaged ArcSight SmartConnectors:
   a. Navigate to your SmartConnector installation path; locate the runagentsetup script file and run it.
   b. Select Modify Connector, then click Next.

c. Select Add, Modify, or Remove destinations, then click Next.

d. Select the destination for which you want to configure batching, then click Next.

e. Select Modify destination settings, then click Next.

f. Select Network, then click Next.

g. Specify the Customer URI setting, then click Next.

> The Customer URI parameter must be of format, "/<tenantKey>" for routing events to the tenant specific Kafka topic in Transformation Hub.

h. Select Done with editing destination settings, then click Next.

i. Click Exit.

Configuring Components for Alert Ingestion

After deploying ArcSight Platform, you must enable Multi-tenancy, integrate with ArcSight ESM, install a special content package and complete the following tasks to ingest alerts:

> Ensure to see Reviewing Multi-tenancy Security Considerations in the off-cloud deployment version of the *Administrator's Guide for ArcSight Platform*. You can find the same topic in the guides corresponding to the following deployment environments:
>
> - AWS
> - Azure
> - Google Cloud

Review the Content Guidelines

The ArcSight Platform provides optics for different personas such as CISOs, SOC Analysts, and other users. Data must follow a predefined structure so that the widgets display data correctly.

The widgets cannot display data correctly if incorrect data is entered into fields. If the data is correct but entered into the wrong fields, the widgets do not populate at all.

Content authors must ensure that their content has the correct information and that it creates alert conditions such that the data needed to be displayed in the widgets is correctly populated.

The following are the minimum requirements that every tenant must meet:

- Provide the following tenant information:
    - Network ranges
    - Zone Location
    - Department
    - Line of Business
    - Sector
    - Customer name

  Based on the information provided for these entities, the ArcSight Platform populates the widgets.
- Forward only the required correlation events from ArcSight Platform.
- All correlation events that are sent to the ArcSight Platform must contain correct values for the following mandatory fields:

Field	ESM Field Name	Description
Alert ID	Event ID	ID of the alert
Name	Name	Name of the alert
Priority	Priority	Priority of the alert
Source Address	Source Address	Source IP address of the alert
Destination Address	Destination Address	Destination IP address of the alert
Tenant	Customer URI	Customer in ESM. The customer name field must use the tenant key. For example, /All Customers/MSSP/CUSTOMERNAME where CUSTOMERNAME is the tenant key in ArcSight Platform
Alert Category	Old File Permission	Alert category is inferred by the rule that triggers alerts.
Destination Zone	Destination Zone URI	Destination zone for the alert
Source Zone	Source Zone URI	Source zone for the alert

- The values for the following fields can be derived from the network model: Destination Industry, Destination Department, and Destination Line of Business.

- Any correlation event that does not follow the data criteria for the mandatory fields will not be considered for data visualization in the ArcSight Platform console.
- To view the base event global ID in ArcSight Platform enriched alerts, all alerts from the tenant must contain the base event global ID along with their correlation events.

Configure Network and Zone Model

Network and zone model can be configured in ArcSight Enterprise Security Manager (ESM) or ArcSight Management Center (ArcMC).

Prerequisites

Ensure that the following components are installed and are available:

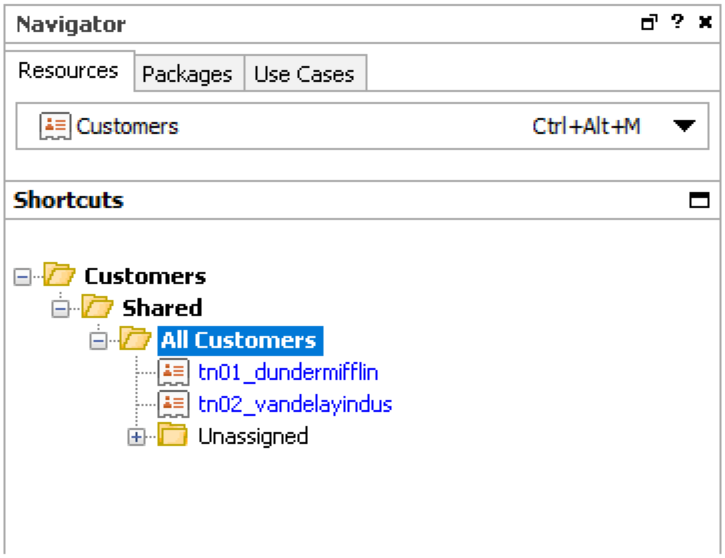
- ArcSight ESM
- Transformation Hub
- Download the content package ArcSight_Provider_Portal.arb from Software Licenses and Downloads (SLD).

Configuring Network and Zone Model in ArcSight ESM

The content package includes a reference network model and rules that can be reused. For more information about configuring the network model in ArcSight ESM, see Modeling the Network.

To set up content in ESM, perform the following steps:

1. Create customers. The customer name must be the same as the tenant key in ArcSight Platform.



Navigator

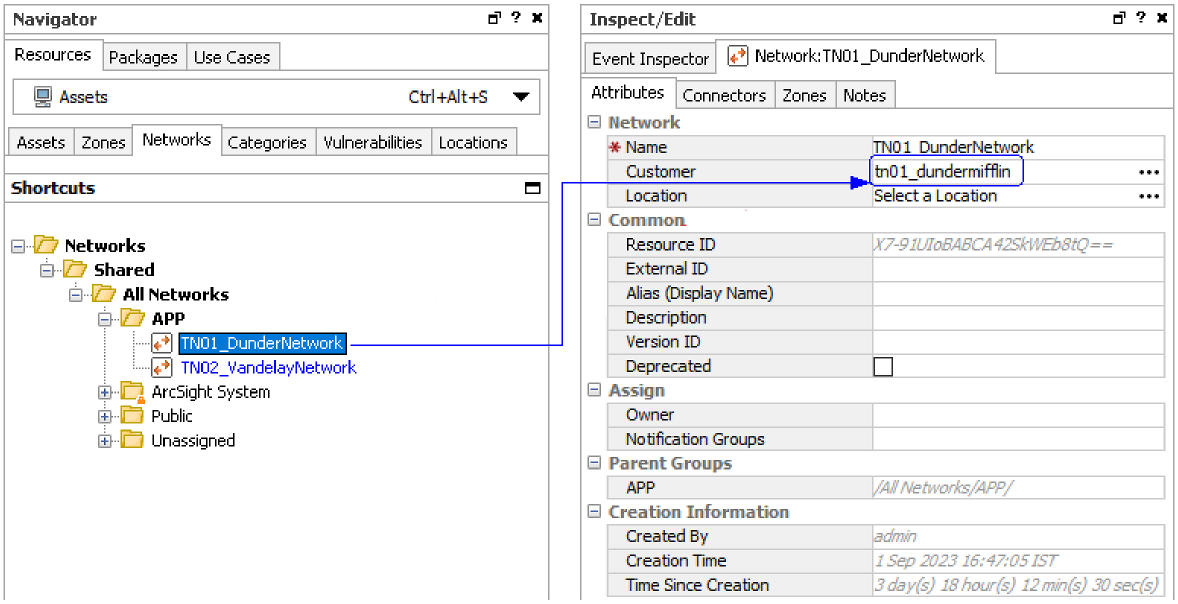
Resources | Packages | Use Cases

Customers Ctrl+Alt+M

Shortcuts

- Customers
  - Shared
    - All Customers
      - tn01_dundermifflin
      - tn02_vandelayindus
      - Unassigned

2. Create networks for each customer as required and map the network to the correct customer as shown in the following image:



Navigator

Resources | Packages | Use Cases

Assets Ctrl+Alt+S

Assets | Zones | Networks | Categories | Vulnerabilities | Locations

Shortcuts

- Networks
  - Shared
    - All Networks
      - APP
        - TN01_DunderNetwork
        - TN02_VandelayNetwork
      - ArcSight System
      - Public
      - Unassigned

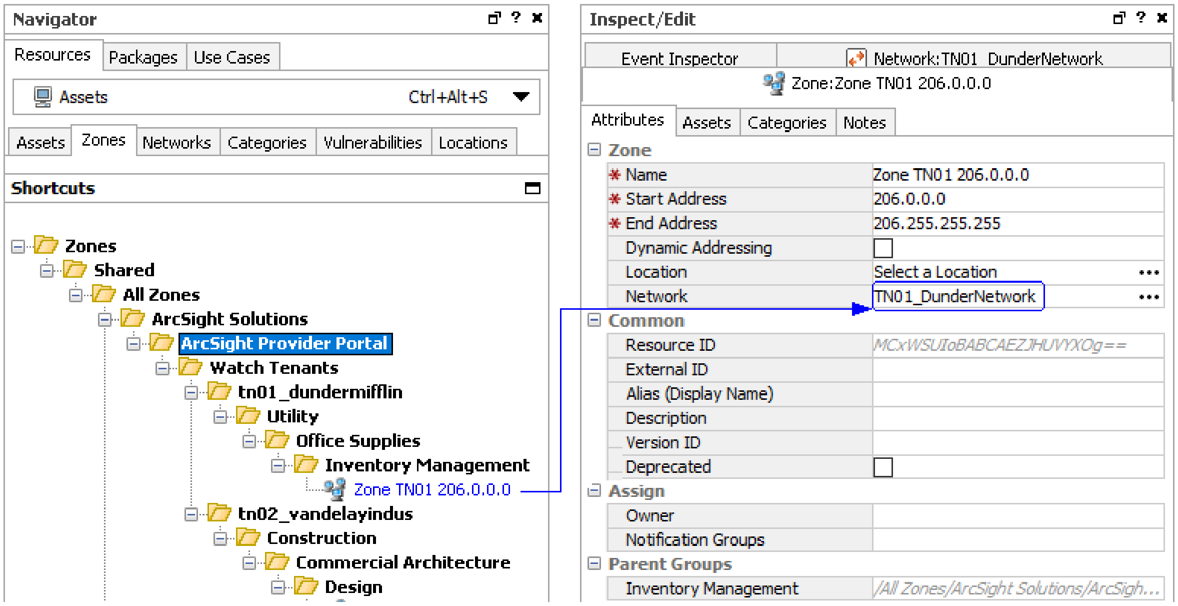
Inspect/Edit

Event Inspector | Network:TN01_DunderNetwork

Attributes | Connectors | Zones | Notes

Network	
* Name	TN01_DunderNetwork
Customer	tn01_dundermifflin
Location	Select a Location
Common	
Resource ID	X7-91UIoBABCA42SkWEb8tQ==
External ID	
Alias (Display Name)	
Description	
Version ID	
Deprecated	□
Assign	
Owner	
Notification Groups	
Parent Groups	
APP	/All Networks/APP/
Creation Information	
Created By	admin
Creation Time	1 Sep 2023 16:47:05 IST
Time Since Creation	3 day(s) 18 hour(s) 12 min(s) 30 sec(s)

3. Create zones and assign them to correct the network as shown in the following image:

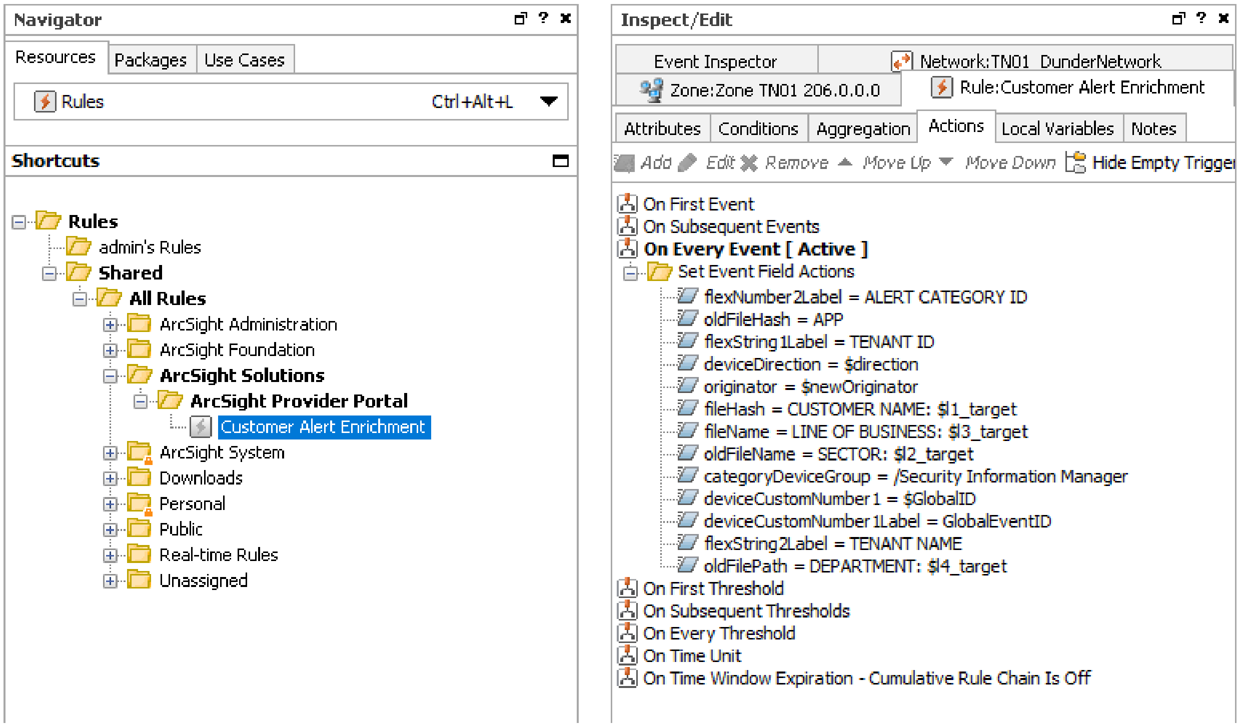


- Zones
  - Shared
    - All Zones
      - ArcSight Solutions
        - ArcSight Provider Portal
          - Watch Tenants
            - tn01_dundermifflin
              - Utility
                - Office Supplies
                  - Inventory Management
                    - Zone TN01 206.0.0.0
            - tn02_vandelayindus
              - Construction
                - Commercial Architecture
                  - Design

Zone	
* Name	Zone TN01 206.0.0.0
* Start Address	206.0.0.0
* End Address	206.255.255.255
Dynamic Addressing	□
Location	Select a Location
Network	TN01_DunderNetwork
Common	
Resource ID	MCxWSUIoBABCAEZJHUVYXOg==
External ID	
Alias (Display Name)	
Description	
Version ID	
Deprecated	□
Assign	
Owner	
Notification Groups	
Parent Groups	
Inventory Management	/All Zones/ArcSight Solutions/ArcSigh...

Update Rules to Add the Required Fields

Ensure that the enabled rules are configured to populate and aggregate the correct fields required for ArcSight Platform. Refer to the sample content package for more information on how to set up the fields as shown in the following image:



- Rules
  - admin's Rules
  - Shared
    - All Rules
      - ArcSight Administration
      - ArcSight Foundation
      - ArcSight Solutions
        - ArcSight Provider Portal
          - Customer Alert Enrichment
      - ArcSight System
      - Downloads
      - Personal
      - Public
      - Real-time Rules
      - Unassigned

- On First Event
- On Subsequent Events
- **On Every Event [Active]**
  - Set Event Field Actions
    - flexNumber2Label = ALERT CATEGORY ID
    - oldFileHash = APP
    - flexString1Label = TENANT ID
    - deviceDirection = $direction
    - originator = $newOriginator
    - fileHash = CUSTOMER NAME: $l1_target
    - fileName = LINE OF BUSINESS: $l3_target
    - oldFileName = SECTOR: $l2_target
    - categoryDeviceGroup = /Security Information Manager
    - deviceCustomNumber1 = $GlobalID
    - deviceCustomNumber1Label = GlobalEventID
    - flexString2Label = TENANT NAME
    - oldFilePath = DEPARTMENT: $l4_target
- On First Threshold
- On Subsequent Thresholds
- On Every Threshold
- On Time Unit
- On Time Window Expiration - Cumulative Rule Chain Is Off

> ⚠ Each alert must have an Alert Category that should be set in the Old File Permission field. This is not a part of the sample package and must be configured manually.

Configuring Network and Zone Model in ArcMC

Before you define the network and zone model in ArcMC, register each SmartConnector that sends the events to Transformation Hub. For more information, see Managing SmartConnectors with ArcSight Management Center.

Perform the following steps to define and push the network and zone configurations in ArcMC:

1. Manually create the networks.csv and zones.csv. The networks.csv defines the networks that will be used in the zones.csv file. The zones.csv file defines the zones within the networks already defined by the networks.csv file.

   > ⚠ Ensure that the network and zone configuration files are valid and the data within the files exactly maps to the ESM network model.

2. Push the network and zone configuration files corresponding to each tenant to the SmartConnector associated with the tenant. For information on how to push the network model to SmartConnectors using ArcMC, see ArcMC Network Models.

   > ⚠ For the Smart Connector to apply the zone model, in the Network group of the destination parameters, you must set the value for the Zone Population Mode field to "Rezone (override)". This can be done using ArcMC or directly in the SmartConnector by running setup. For more information, see Configuring Network in the SmartConnector documentation.

Monitoring Alert Ingestion

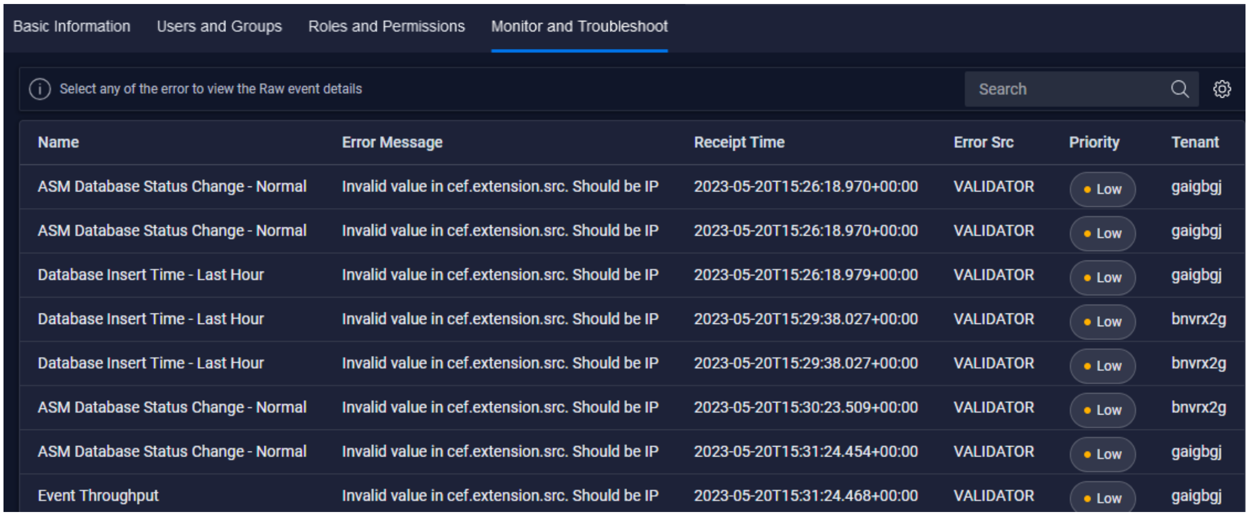
After you configure the components and push alerts to ArcSight Platform, log in to the console and verify if the widgets are populated correctly. If the widgets are not populated, troubleshoot the cause in the Administration > Tenants> <Your Tenant> Monitor and Troubleshooting tab of the console.

Troubleshooting Invalid Alerts

Alerts that do not follow the data criteria are not considered for data visualization. You can view and troubleshoot error messages related to these invalid alerts from the portal.

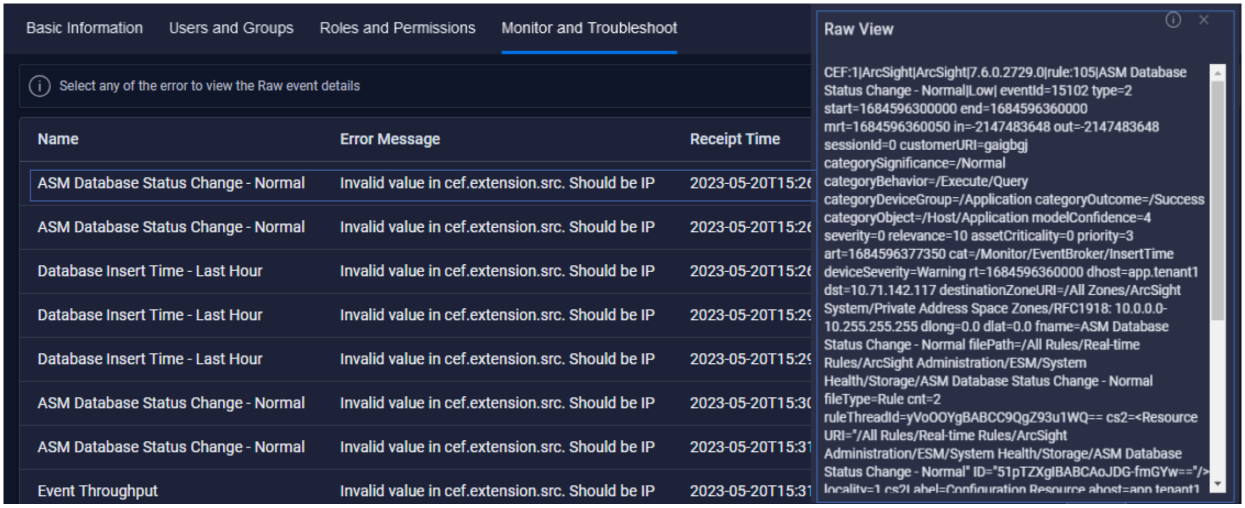
To view and troubleshoot error messages related to invalid alerts, log in to the portal as a service provider administrator and click
Administration> Tenants> <Your Tenant> Monitor and Troubleshoot. By default, you can view

invalid alerts for all tenants. To view invalid alerts for a specific tenant, select the tenant name from the tenant list in the top navigation bar.



Name	Error Message	Receipt Time	Error Src	Priority	Tenant
ASM Database Status Change - Normal	Invalid value in cef.extension.src. Should be IP	2023-05-20T15:26:18.970+00:00	VALIDATOR	● Low	gaigbgj
ASM Database Status Change - Normal	Invalid value in cef.extension.src. Should be IP	2023-05-20T15:26:18.970+00:00	VALIDATOR	● Low	gaigbgj
Database Insert Time - Last Hour	Invalid value in cef.extension.src. Should be IP	2023-05-20T15:26:18.979+00:00	VALIDATOR	● Low	gaigbgj
Database Insert Time - Last Hour	Invalid value in cef.extension.src. Should be IP	2023-05-20T15:29:38.027+00:00	VALIDATOR	● Low	bnvrx2g
Database Insert Time - Last Hour	Invalid value in cef.extension.src. Should be IP	2023-05-20T15:29:38.027+00:00	VALIDATOR	● Low	bnvrx2g
ASM Database Status Change - Normal	Invalid value in cef.extension.src. Should be IP	2023-05-20T15:30:23.509+00:00	VALIDATOR	● Low	bnvrx2g
ASM Database Status Change - Normal	Invalid value in cef.extension.src. Should be IP	2023-05-20T15:31:24.454+00:00	VALIDATOR	● Low	gaigbgj
Event Throughput	Invalid value in cef.extension.src. Should be IP	2023-05-20T15:31:24.468+00:00	VALIDATOR	● Low	gaigbgj

Click an error message in the list to view the details of the raw event associated with the message, as shown in the following image:



Name	Error Message	Receipt Time
ASM Database Status Change - Normal	Invalid value in cef.extension.src. Should be IP	2023-05-20T15:26
ASM Database Status Change - Normal	Invalid value in cef.extension.src. Should be IP	2023-05-20T15:26
Database Insert Time - Last Hour	Invalid value in cef.extension.src. Should be IP	2023-05-20T15:26
Database Insert Time - Last Hour	Invalid value in cef.extension.src. Should be IP	2023-05-20T15:29
Database Insert Time - Last Hour	Invalid value in cef.extension.src. Should be IP	2023-05-20T15:29
ASM Database Status Change - Normal	Invalid value in cef.extension.src. Should be IP	2023-05-20T15:30
ASM Database Status Change - Normal	Invalid value in cef.extension.src. Should be IP	2023-05-20T15:31
Event Throughput	Invalid value in cef.extension.src. Should be IP	2023-05-20T15:31

```
CEF:1|ArcSight|ArcSight|7.6.0.2729.0|rule:105|ASM Database
Status Change - Normal|Low| eventId=15102 type=2
start=1684596300000 end=1684596360000
mrt=1684596360050 in=-2147483648 out=-2147483648
sessionId=0 customerURI=gaigbgj
categorySignificance=/Normal
categoryBehavior=/Execute/Query
categoryDeviceGroup=/Application categoryOutcome=/Success
categoryObject=/Host/Application modelConfidence=4
severity=0 relevance=10 assetCriticality=0 priority=3
art=1684596377350 cat=/Monitor/EventBroker/InsertTime
deviceSeverity=Warning rt=1684596360000 dhost=app.tenant1
dst=10.71.142.117 destinationZoneURI=/All Zones/ArcSight
System/Private Address Space Zones/RFC1918: 10.0.0.0-
10.255.255.255 dlong=0.0 dlat=0.0 fname=ASM Database
Status Change - Normal filePath=/All Rules/Real-time
Rules/ArcSight Administration/ESM/System
Health/Storage/ASM Database Status Change - Normal
fileType=Rule cnt=2
ruleThreadId=yVoOOYgBABCC9QgZ93u1WQ== cs2=<Resource
URI="/All Rules/Real-time Rules/ArcSight
Administration/ESM/System Health/Storage/ASM Database
Status Change - Normal" ID="51pTZXgIBABCAoJDG-fmGYw=="/>
locality=1 cs2Label=Configuration Resource ahost=app.tenant1
```

Review the error message and identify fields that failed validation. Ensure that the event contains all the required fields as described in the content guidelines and that the fields contain the correct values.

Manage a Provider and Tenants, Users and Roles

Applies only when the Multi-tenancy feature is enabled. Not available to customers in the ArcSight SaaS environment.

Select Administration > Tenants.

You can view the onboarded, provider and list of tenants on this page. For the provider and each tenant, you can create users groups and also grant them roles to manage the provider or tenant. For more information, see "Managing Users" on page 182.

As an administrator of the provider you can create or assign new, users and groups, roles and permissions for the provider and each tenant; the SOC Analyst and SOC Admin are out-of-the-box roles. For example, as an administrator of the provider for Tenant-ABC and Tenant-WUV, Trent Valverde adds two custom roles A and B respectively, to each tenant. Then he grants Anna Campbell role A and Murphy Buckley role B. Anna and Murphy can now monitor and manage cases for the two tenants.

Manage Provider Details

Applies only when the Multi-tenancy feature is enabled. Not available to customers in the ArcSight SaaS environment.

Select Administration > Tenants > *<View Details of the provider>.*

You can view a Provider’s status, number of users per role and user status from the associated widgets. You also can modify the details of the provider.

1. Select Administration > Tenants.
2. Select View Details for the provider.
3. For provider details, select Show Overview or Hide Overview .
4. Click Edit to modify the required details.
5. Select Save.

Manage Tenant Details

Applies only when the Multi-tenancy feature is enabled.Not available to customers in the ArcSight SaaS environment.

Select Administration > Tenants > <your tenant>.

You can set a tenant’s status to **Active** or **Disabled** state, view the number of users per role and user status from the associated widgets. You also can modify the details of the tenant, except for the Key.

> The Tenant must be Active before you make any changes.

1. Select Administration > Tenants.
2. Select the tenant that you want to modify.
3. For status, select Enable or Disable.

4. For tenant details, select Show Overview or Hide Overview .
5. Click Edit to modify the required details.
6. Select Save.

> If a tenant is disabled and the associated SmartConnectors continue to send events, they follow the default route in ArcMC, instead of the tenant specific one.
> For more information see, Tune Tenant Topic Settings in the off-cloud deployment version of the *Administrator's Guide for ArcSight Platform.*You can find the same topics in the guides corresponding to the following deployment environments:
>
> - AWS
> - Azure
> - Google Cloud

Adding and Removing Reports Content

You must have the **System Admin** permission to use this feature.

Select REPORTS — without Multi-tenancy enabled.

Select DASHBOARD & REPORTS > REPORTS — with Multi-tenancy enabled.

The Reports **Content** enables administrators to modify the reports and dashboards in the following ways:

- Add and remove content, also known as assets, for the reports and dashboards using the Import Assets and Export Assets feature.
- Connect to data sources using the Add Data Source feature. Using this feature, you can gather content from specific sources to supply reports and dashboards.

Import and Export Content

Use the Import Assets and Export Assets options to manage the reports and dashboard available to your users. You can move assets from one server environment to another. For example, you might want to move a set of reports from a test server to a production server.

When exporting reports, it is recommended that:

- You uncheck the Overwrite assets of same name option so you do not accidentally overwrite assets of the same name on the target systems; unless you are sure you want to overwrite existing assets of the same name on the target system.
- You uncheck the Required Assets Included option as an extra precaution not to accidentally overwrite assets of the same name on the target systems. Only include any new assets that

you created with your new report. This way, even if the end user checks the Overwrite assets of same name option when importing the report, they won't accidentally overwrite their base assets.

Please review the following considerations for importing and exporting content:

- You cannot export content from the My Reports folder.
- If the report generates errors when you attempt to export assets, you should reduce the number of assets that you export concurrently.
- ArcSight SaaS users are not allowed to import or modify Data Sources, Logical Models, or Virtual Private Models.
- On non-SaaS systems, only users with the System Admin role are allowed to import and modify Data Sources, Logical Models or Virtual Private Models.

Supported Data Sources

This capability is not available in the ArcSight SaaS environment.

You can incorporate data from the following sources:

Text/Excel Directory

Connects to a specified file (text or Excel) or file location.

To access and upload this file type, you must create a new folder for your files in the /var/lib/inetsoft/ path on the reporting server. You might need assistance from your Server Admin.

REST JSON

Connects to a REST (Representational State Transfer) data source containing JSON (JavaScript Object Notation)-formatted data.

REST XML

Connects to a REST data source containing XML-formatted data.

JDBC

Connects to a relational database using Java Database Connectivity.

This source supports commercial and open source databases such as Oracle, SQL Server, DB2, Sybase, Informix, MySQL, PostgreSQL, and MS Access. Be sure to download the latest driver (https://www.inetsoft.com/support/drivers.jsp).

Elasticsearch REST

Connects to an open source search engine.
The process for adding this type of data source is the same as for adding an Elasticsearch data source.

R

Connects to an R database containing R language sources.

Managing Users

You can add users or groups of users; create roles; and assign permissions to the roles for users and groups. There are default roles with appropriate permissions to use the product. If you manage groups, you can view their assigned permissions, roles, and users.

If you have the *Manage Roles* permission, you can change the permissions of any role assigned to your account except for those of the *System Admin*.

> Ensure to see Reviewing Multi-tenancy Security Considerations in the off-cloud deployment version of the *Administrator's Guide for ArcSight Platform*. You can find the same topics in the guides corresponding to the following deployment environments:
>
> - AWS
> - Azure
> - Google Cloud

Managing Users and Groups of Users

You must have the appropriate permissions to perform these functions.

For a tenant, select Administration > Tenants > [tenant_name] > Users and Groups.

For a provider, select Administration > View Details > Users and Groups.

If Multi-tenancy is disabled, select Admin > Users and Groups.

To delegate responsibility of managing large numbers of users across multiple managers, you can create groups. You can assign one or more managers to a group of users. Then managers assign roles to users in their groups.

Import Users from ArcSight Enterprise Security Manager

This function is not available in the ArcSight SaaS environment.

To help you get started, you can import users already authorized for ArcSight ESM. You need to have at least one role available in the ArcSight Platform to assign to these users.

Click Users and Groups > group_name.

For more information, see the *Administrator's Guide for ArcSight Platform* corresponding to your deployment:

- Administrator's Guide for the ArcSight Platform 24.2 - AWS Deployment
- Administrator's Guide for the ArcSight Platform 24.2 - Azure Deployment
- Administrator's Guide for the ArcSight Platform 24.2 - Google Cloud Deployment
- Administrator's Guide for the ArcSight Platform 24.2 - Off-cloud Deployment

Move Users from a Provider to a Tenant

Applies only when the Multi-tenancy feature is enabled. This function is not available in the ArcSight SaaS environment.

Click Administration > Tenants and View Details of the provider.

When you import users already authorized for ArcSight ESM into a multi-tenant ArcSight Platform environment, these users are imported into the user pool of the provider by default. To move imported users from the default tenant to a specific tenant, do the following:

1. Navigate to the Users and Groups tab and users list of the provider.
2. Select users to move.

   > You cannot move System Admin or System Operations Administrator users.

3. Click the Move User to Another Tenant button to launch the Move User pop-up window.
   a. Select the desired tenant from the Select Tenant drop-down list to populate Groups and Role associated with the tenant.
   b. Select the desired Groups and Roles to move the user to.
4. Click the Move button.
5. Click the Yes button on the pop-up window to confirm.

> Ensure to see Reviewing Multi-tenancy Security Considerations in the off-cloud deployment version of the *Administrator's Guide for ArcSight Platform*. You can find the same topics in the guides corresponding to the following deployment environments:
>
> - AWS
> - Azure
> - Google Cloud

View Details of a Group

You can view the details of a group. As the manager of a group, you can also modify the group’s settings.

1. Click Users and Groups > group_name.
2. (Conditional) As a manager of the group, you can also perform the following actions:
   - Add or remove users from this or other groups
   - Assign or remove roles for users in the current group
   - Add or remove managers from the current group

   > If you have the *System Admin* role, you can add and remove managers regardless whether you manage the group.

Create a New Group

1. Click Users and Groups > Create Group.
2. Specify a name for the group, then press Enter.
3. To manage the new group, perform the following actions:
   - Add users to this group
   - Assign roles to the users in this group
   - Add managers to this group

Create a New User

Users must have at least one role to ensure that they can log in.

1. Click Users and Groups > Create User.
2. Specify the email ID and name of the user.
3. Select the groups to which you want to add the user.

4. Select the roles that you want to grant to the user.
5. Click Save.
6. (Conditional) In a non-SaaS environment, specify the user’s password.

> If SMTP is configured, the system notifies the new user over email to set up a password.

View a User’s Profile

The user profile provides basic details about the user. If you are a manager of the user’s account group, you can modify the user’s account. You must also have appropriate permissions to make the modifications.

1. To find the user, perform one of the following actions:
   - Click Users and Groups > Search Users.
   - Click Users and Groups > group_name.
2. Select the user that you want to view.
3. (Optional) Modify the user’s profile in one of the following ways:
   - Reset the password
   - Activate or deactivate the user
   - Change roles or permissions
   - Change group assignments

Change the User’s Password

This function is not available in the ArcSight SaaS environment.

You must have the **Change User Password** permission, and be a manager of the user’s account group.

When you reset a user’s password, the user receives a notification email automatically. The email does not include the new password. You must provide the new password to the user directly. However, if your enterprise uses an external authentication method, you cannot change your password in ArcSight Platform.

> In a SaaS environment, administrators and managers cannot create or change a user's password. Users can specify and reset their passwords by using the Advanced Authentication service.

1. Select Users and Groups > Search Users.
2. Select the user that you just created.

3. Click RESET PASSWORD.
4. Enter the password.
5. Click SAVE.
6. Notify the user of the new password.

Change the User’s Status

You must have the **Activate/Deactivate Users** permission, and be a manager of the user’s account group.

While you cannot delete a user, you can deactivate their account to prevent them from logging in to the system.

1. Adjust the User Status toggle switch to indicate Active or Inactive, as needed.
2. Click SAVE.

Change the User’s Roles

You must have the **Assign Roles to Users** permission, and be a manager of the user’s account group.

You can only assign those roles that you currently have. However, if you have the *Manage Groups* permission, you can assign any role to these users.

1. In the user’s profile, select Roles & Permissions.
2. Select Assign/Remove Roles.
3. Change the user’s roles, then select Save.

   Each role has a defined set of permissions. To change a user’s permissions, you must change the assigned role or the permissions associated with a role.

Change the User’s Group Assignments

You must have the **Assign Users to Groups** permission, and a manager of the user’s account group.

Unless you have the *Manage Groups* permission, you can only assign those groups in which you are currently a member.

1. In the user’s profile, select Groups.
2. Select Add/Remove.
3. Change the user’s group assignments.

Assigning Permissions to Roles

You must have the appropriate permissions to create roles and assign permissions.

For a tenant, select Administration > Tenants > [tenant_name] > Roles and Permissions.

For a provider, select Administration > View Details > Roles and Permissions.

If Multi-tenancy is disabled, select ADMIN > Roles and Permissions.

The system provides a set of roles that you can assign to your users. You can also create new roles with any combination of the available permissions. You can assign only the permissions and roles that you have yourself.

Understand the Available Permissions

Some permissions are available for any deployed product. Other permissions depend on the capabilities that you have deployed.

- Reports Permissions
- User Management Permissions
- ArcSight Permissions

Reports Permissions

The following table lists the permissions available when you add the Reports feature.

Function	Permissions	In the Reports Portal, allows users to...
Reports	Report Admin	View dashboards and reports Create subfolders Schedule reports Create data worksheets, dashboards, and reports View Admin reports
Reports	Design Reports	View dashboards and reports Create subfolders Schedule reports Create data worksheets, dashboards, and reports

Function	Permissions	In the Reports Portal, allows users to...
Reports	Schedule Reports	View dashboards and reports Create subfolders Schedule reports
Reports	View Reports	View dashboards and reports Create subfolders

User Management Permissions

The following table lists the permissions needed to manage users.

Function	Permissions	Allows users to...
User Management	View Users	View the list of all active and inactive users
User Management	Create Users	View users Assign roles to users Assign users to groups
User Management	Activate /Deactivate Users	View users Change the status of a user that you manage
User Management	Change User Password	View users Change the password of a user that you manage
User Management	Change User Email	View users Change the email associated with a user
User Management	Assign Roles to Users	View users Assign roles that you currently have to users that you manage

Function	Permissions	Allows users to...
User Management	Assign Users to Groups	View users View account groups Add and remove users from account groups that you currently manage Assign users who are members of account groups that you manage to any other account group
User Management	Manage Groups	View account groups Create account groups *You are automatically added to the account groups that you create.* Delete account groups that you currently manage Add and remove managers for account groups that you currently manage Add and remove users from account groups that you currently manage Assign users who are members of account groups that you manage to any other account group
User Management	Manage Roles	View roles Create roles *You are automatically added to the account groups that you create.* Add and remove users from roles that you have Add and remove any permission assigned to you from roles that you currently have Delete roles that you currently have

ArcSight Permissions

The following table lists the permissions available when you deploy an ArcSight capability such as Log Management and Compliance.

Function	Permission	Allows users to…	Available with…
ArcMC	ArcMC System Admin *Not available in the ArcSight SaaS environment*	Perform System Admin functions	Common services
ArcMC	ArcMC Operation Admin *Not available in the ArcSight SaaS environment*	Perform all Operations functions, but does not have access to System Admin	Common services
ArcMC	ArcMC System Viewer *Not available in the ArcSight SaaS environment*	Read only access to System Admin functions	Common services
ArcMC	ArcMC Operation Viewer *Not available in the ArcSight SaaS environment*	Read only access to Operations functions	Common services
Case Management	View Own Cases	Allows a user to view the cases assigned to them	Common services
Case Management	View All Cases	Allows a user to view all cases	Common services
Case Management	Work on Cases	Allows a user modify cases and trigger manual actions	Common services
Case Management	Close Cases	Allows a user to close cases	Common services
Case Management	Create Manual Cases	Allows a user to create a new manual case	Common services
Case Management	Add Scope Items	Allows a user to add a new scope item on a case	Common services
Dashboards	Share a dashboard	With the Manage Roles permission, share the current dashboard with any role Without the Manage Roles permission, share the current dashboard with any of the roles associated with the user’s role	Common services

Function	Permission	Allows users to…	Available with…
Operations Management	Get Registration URL *Available only in the ArcSight SaaS environment*	Generate a URL that the system uses to register connected components with AToMS	Real-time Threat Detection
Operations Management	Access Database Monitoring-Overview	View high-level, summary information about the workload and health of the database	Capabilities that require the ArcSight Database
Operations Management	Access Database Monitoring-Details *In the ArcSight SaaS environment, available only to the System Operations Administrator*	View details about the health of the individual components of the distributed database system	Capabilities that require the ArcSight Database
Operations Management	Manage Storage Groups	Create and manage storage groups	Common services
Operations Management	Manage Kafka *Available only in the ArcSight SaaS environment*	Access Kafka Manager for Transformation Hub	Transformation Hub
Searches	Execute Search	Execute searches using fieldsets, custom ranges dates, and search operators	Common services
Searches	Export Search Results	Export the search results in csv format	Common services
Searches	Never Expire Search Results	Configure search results to never expire	Log Management and Compliance
Searches	Never Expire Session for Real-time Searches *Available only in the ArcSight SaaS environment*	Configure the session for a real-time search to not expire while you are logged out	Real-time Threat Detection
Searches	Manage Scheduled Searches	Create and manage scheduled searches	Common services
Searches	Import / Export Search Queries	Import and export search queries	Log Management and Compliance

Function	Permission	Allows users to...	Available with...
Searches	Import / Export Search Criteria	Import and export search criteria	Log Management and Compliance
Searches	Perform Event Integrity Check *When Multi-tenancy is enabled, available only for a provider*	Run an Event Integrity Check and view the results	Log Management and Compliance
Searches	Manage Outlier Models and Scoring	Create and delete Outliers models Build and pause the scoring processes	Log Management and Compliance
Searches	Manage Lookup Lists	Add, configure, view, and delete lookup lists	Common services
Searches	Manage Fieldsets	Create, edit, and delete fieldsets	Common services
Searches	Manage Search Queries/Criteria	Create, clone, edit, delete,and view all previously saved search queries and search criteria View and clone all out-of-the-box search queries	Common services
Searches	Logger Data Migration	Execute a data migration from Logger into the ArcSight Database	Common services
SOAR Configuration	Manage SOAR Playbooks	Allows a user to view and update SOAR playbooks	Common services
SOAR Configuration	Manage SOAR Integrations	Allows a user to view and update SOAR integrations and related configurations	Common services
SOAR Configuration	Monitor SOAR System	Allows a user to view SOAR status pages and pending items in queues	Common services
SOAR Configuration	Configure SOAR Parameters	Allows a user to view and update SOAR configurations	Common services

Default Roles

The system provides several default roles. If you have the *Manage Roles* permission, you can change the permissions of any role assigned to your account except for those of the *System Admin*. You can also create additional roles that reflect your organization’s needs.

Some permissions are available with specific functionality, such as Reports or Search, or when you have a particular license, such as for ArcSight Intelligence.

> As of the ArcSight Platform 22.1 release, some roles are no longer default roles. However, the system continues to display them if you deployed your environment before the roles were deprecated. For example, *ArcMC User*, *Guest*, *User*, and *Report User* are no longer default roles.

Default Role	Permissions
System Admin *Not available to customers in the ArcSight SaaS environment.*	All permissions Add, edit, and delete data sources in the Reports Portal
Admin	All Dashboard permissions All Licensing and Usage permissions All Reports permissions All Searches permissions All User Management permissions *Access Database Monitoring-Overview* *Get Registration URL* All SOAR Configuration permissions

Default Role	**Permissions**
Analyst	All Dashboard permissions *Execute Search* *Manage Fieldsets* *Manage Search Queries/Criteria* *Schedule Reports* *View Reports* All Case Management permissions
System Operations Administrator *Not available to customers in the ArcSight SaaS environment.*	*Access Database Monitoring-Overview* *Access Database Monitoring-Details* All Dashboard permissions All ArcMC permissions *Manage Kafka*
SCIM Integration Read-Only *Not available to customers in the ArcSight SaaS environment.* *Not created in other environments*	View Users

Create a Role with Permissions

You can group multiple permissions into a role and assign the relevant role to your users. A user must have at least one role.

You can assign only the permissions and roles that you have yourself.

1. Click Roles and Permissions > Create Role.
2. In the field in the upper left corner, specify a name for the role.
3. Press Enter.
4. Select the permissions that you want to apply to the new role.
5. To add users to the role, complete the following steps:
    a. Select the USERS tab.
    b. Select Assign role to users.
    c. Choose the users you want to add to the role.
    d. Save your changes.

View Details of a Role

When you view the details of a role, you can also modify the role’s settings and permissions.

1. Click Roles and Permissions > *`role_name`*.
2. (Optional) Modify the role in one of the following ways:
   - Change the set of permissions

     > You can assign only the permissions and roles that you have yourself.

   - Add or remove users
   - Delete the role

Change Permissions for the Role

You can only assign permissions that you have yourself.

1. While viewing a role, select Permissions.
2. In the **Permissions** tab, select the permissions that you want to add or remove.

   You might need to scroll the page to see the full set of available permissions.

Add or Remove Users for the Role

You can add or remove multiple users in a role.

1. While viewing a role, select Users.
2. In the **Users** tab, select Assign role to users.
3. Select the users that you want to assign to or remove from the role.

   You can also add or remove roles for a specific user.

Delete the Role

While viewing a role, select Remove role from users.

You can delete any role except the *System Admin* role.

> You cannot remove the *System Admin* role from a user who only has that role assigned.

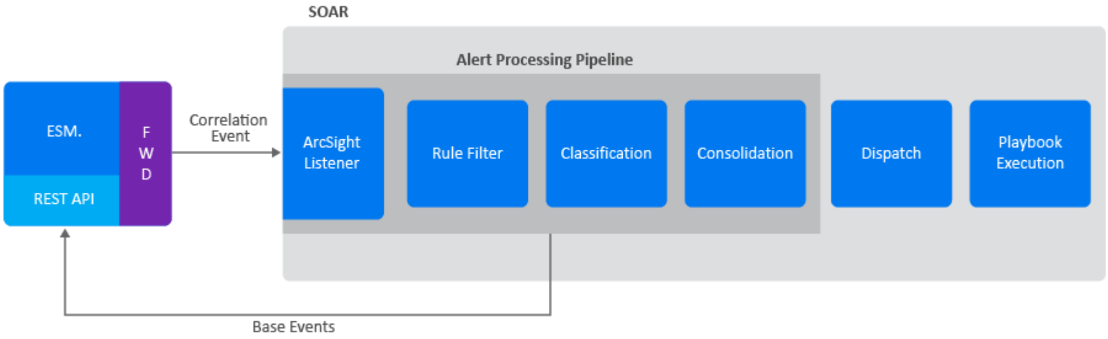
Setting Up SOAR

You can customize SOAR response to suit your organizational requirements.

Understanding SOAR Workflow

SOAR receives alerts from different sources. These alerts are processed to form cases. The newly created case are dispatched to SOCs. Most of the cases can be resolved automatically by executing associated playbooks, however, at times human interventions are needed for decision making.

Following figure presents a general workflow of ArcSight SOAR:



1. "ESM Sending Alerts to SOAR" below
2. "Processing Alerts" on the next page
   a. Receiving Alerts Through ArcSight Listeners
   b. Defining Action Plans by Rule Names
   c. Classifying Alerts
   d. Consolidating Alerts to form cases
3. "Dispatching cases" on the next page
4. "Automating case Handling by Playbooks" on the next page

ESM Sending Alerts to SOAR

The ArcSight ESM forwards alerts and their respective correlated events to SOAR to identify, analyze and resolve a probable attack. To send alerts to SOAR, ESM must be integrated and configured as an alert source on the SOAR platform. SOAR receives alerts with rule names that were defined at the ESM. The rule names are used for alert classifications during case creation.

When an alert is created, the ArcSight ESM stores various base events that produced that alert. For example, if a **Remote Port Scan Detected** alert is created, the ESM will store a number of events, each with a separate log entry received from systems under attack or probe. SOAR gets these base events since they contain useful information (for example time of each event, attacker username and attacker remote address) through correlated events. These information are displayed on the case page, created and bound with the respective alert. The correlated events are also helpful during defining the scope items for the alert analysis.

Processing Alerts

After integrating with ESM, SOAR follows a set of procedures for alerts processing as follows:

Receiving Alerts through ArcSight Listener

After configuring ESM as an alert source, the ArcSight Listeners starts listening to the configured ports and get alert messages. These alert messages are usually brief including useful information, for example the type of alert, time of event, count of base events that produced the alert, and the severity of the alert. Context of the alert messages depends on the alert source and the rules configured.

Defining Action Plans by Rule Names

A rule name is configured as pre-processor rules in the ESM for tagging and forwarding the base events to SOAR. These rule decides the action plans for the alerts. Based on the directions imposed by rules an alert can be considered as a threat alert or a normal event.

Classifying Alerts

Depending upon the conditions directed by rules, a label is added to the alerts. The labeling helps in selecting the appropriate playbook/s for the case handling and response.

Consolidating Alerts to form cases

Depending upon the configuration settings, different correlated alerts are consolidated to form cases. At this point, the ArcSight SOAR decides to consolidate alerts to form a new case or the respective alert can be added to a pre-existing case.

Dispatching cases

When a new case is created, a case severity is assigned to the case, based on the severity mapping of the alert source. After the severity assignment, the case is assigned to a user or a user group. The dispatching of the case is done by running **case Dispatch Playbook**. If the playbooks cannot find an assignee, SOAR leaves the case as unassigned. Running these playbooks may find more than one assignee, but SOAR only selects the first one.

Dispatch playbooks might also change case’s severity or add watchers or labels to the case.

Automating case Handling by Playbooks

After a case is created and dispatched, SOAR runs a playbook/s with matching conditions as defined during alert consolidation. All matching playbooks are executed sequentially and in their rank order. Higher rank playbooks are executed earlier.

Each executed playbook can run a number of enrichment operations and queue actions in an arbitrary order. Enrichments are synchronous, that is, playbook execution waits for their completion before continuing with the next operation.

Actions are always asynchronous. There is a separate queue of actions, manageable in the **Action and Rollback Queue** tab. Completed actions are moved from the queue to the **Alerts** tab of **Status** menu.

A completed action can be either automatically or manually rolled back, if the action’s capability supports rollback operation.

If playbook contains a case close element, SOAR automatically closes the case, otherwise, case remains open after all the tasks are completed.

Initial Configurations

Select RESPOND > Configuration

You need to perform some initial configurations to enable SOAR to receive and respond to alerts. The configurations include tasks such as configuring SOAR to receive alerts from different components and defining the case states that can be applied to cases generated from the alerts.

This section has the following topics:

- Configuring SOAR to Receive Alerts
- "Configuring Case States" on page 207
- "Setting Up Scope Items" on page 212
- "Configuring Rest Clients" on page 212

Configuring SOAR to Receive Alerts

Select **RESPOND** > Configuration.

To ensure seamless security resilience, you must configure SOAR solution to receive alerts from disparate security tools and platforms.

You must create a user credential in the **Credential** tab to communicate with other components. After a credential is created, you must add the alert source in the SOAR platform. Every alert in SOAR is generated through a rule in the alert source and whenever an alert is received by SOAR, it is received with the rules that were used to process the alerts.

After the Alert source is added, you must integrate the component with SOAR in the **Integration** tab.

You can enable additional configuration parameters for enrichment or to forward events by other component on a specific port number or any other configuration in the **Parameters** tab.

Creating User Credentials for Integration

Select RESPOND > Configuration > Credential.

Platform listens to alerts, forwarded from different components to identify a threat possibility. For the system to receive an alert, you must ensure that SOAR is integrated with other components. The **Credentials** tab allows you to create user credentials to interact with other components during the integration procedure.

The Credentials tab displays a list of user credentials. You can view the credential names, the last modification date and the name of the modifier.

- Searching a Credential
- Creating a User Credential
- Editing and Deleting a User Credential

Searching a Credential

You can search a specific user credential, through the **Search** option. Click the ⚙▾ button next to search, allows you to view search results based on **ID, Credential Name** and **Last Modified By**.

Creating a User Credential

Click the **Create Credential** button to create a new user credential. In the **Credential Editor** window, specify the details for following fields:

Type

Select <Internal Credential, External Condition>.
Internal Credentials are stored in SOAR’s database table. External Credentials are stored in integrations, such as Cyberark Central Credential Provider.

Name

Specify a name for the credential set.
The name that you create here is displayed in the Credentials field during alert source and integration configuration. You must select this name to ensure that SOAR communicates with other components through this name identity.

Username

Specify a username for the credential set.

Password

Specify a password for the credential set.

Private Key

Specify a private key for the credential set, if needed.

Editing and Deleting a User Credential

To edit an existing user credential, complete the following steps:

1. Click Edit in the Actions column.
2. In the Credential Editor window, specify the values as per your requirement.
3. Click Save.
4. (Optional) To delete an existing credential, click Delete.

> You cannot delete a user credential that is used in the integration with other components.

Configuring an Alert Source

Select RESPOND > Configuration > Alert Source.

To ensure seamless reception of the correlated alerts, you must configure an alert source. The **Alert Source** tab allows you to create new alert source configurations, displays a list of existing alert source configuration and options to modify the existing alert source configuration.

- Creating an Alert Source Configuration
- Editing and Deleting an Alert Source Configuration
- Configuring SOAR as an Alert Source

Creating an Alert Source Configuration

Click **+ Create Alert Source Configuration** button to create a new alert source configuration. In the **Alert Source Configuration Editor** window, specify the details for following fields:

> You might see differences in the fields of this editor for some of the alert source types (as you select it from the Type combo box list).

Name

Represents the name of the alert source.

Type

Represents the type of the alert source. It could be one of the alert source types.

Address

Represents the IP address of the alert source to which SOAR connects when it wants to get data.

Key

The key phrase is unique and it corresponds to the name of the key from the ESM pre-persistence rule.

Alert Severity

Represents the severity of alert sources. Define the severities according to the priorities of tickets produced by the alert source. Use the **Add** button to create each severity. While adding the severities, you can specify the default severity by selecting the checkbox under the **Default** column.

Configuration Content

Indicates the default configuration definitions for some type of alert sources, such as IBM Security QRadar but it is not required for many alert sources. It depends on which alert source you are trying to interact with. If there are some required data for the alert source configuration, this area shows a template and ask you to edit it if needed.

Credential

Represents the credentials defined on the system to be used for the alert source.

Show alert parameters by default

Shows the default alert parameters defined for the selected device type on the system.

Trust Invalid SSL Certificates

Instructs SOAR to connect anyways to an alert source ignoring warnings for untrusted SSL certificates. You might have installed alert sources with self-signed SSL certificates, which SOAR does not trust and deny connecting by default. Therefore, if you do not select this checkbox, SOAR still gets the brief alert, but cannot get more details on the alert.

You can click **Test** to verify if the configuration is correct.

Editing and Deleting an Alert Source Configuration

You can edit an existing alert source configuration by clicking the **Edit** button under the **Actions** column. When you click the **Edit** button, **Alert Source Configuration Editor** window is displayed. Specify the values in the window as per your requirement and click **Save** to modify.

You can delete an existing alert source configuration by clicking the **Delete** button under the **Actions** column.

For detailed information see the related *Integration Guides*.

Configuring SOAR as an Alert Source

ArcSight SOAR creates internal alerts for some cases, such as when an action is failed permanently or an integration becomes unavailable because its firewall is not reachable. These internal alerts are generated for the event types including : action and rollback failures, auto-enrichment failures, when an integration becomes offline/online, breach of ticket resolution/first response SLAs, and custom/arbitrary alerts created by playbooks.

Integrating SOAR with Other Components

Select RESPOND > Configuration > Integrations.

You can configure SOAR to integrate with other platforms and components to receive alerts. This procedure ensures streamlining the alert inflow and powers automation. The **Integrations** tab allows you to create, manage and configure security integrations and platforms. The Integrations page lists integrations configured previously along with their action and rollback queue sizes, and their availability statuses.

- Searching an Integration
- Creating an Integration
- Editing and Deleting an Integration
- Testing Integration
- Flushing Queues

Searching an Integration

You can search a specific integration, through the **Search** option. Click the ⚙▾ button next to search, to view search results based on **ID, Name, Type, Address, Availability, Last Modified By, Modification Date, Action Queue Size, Rollback Queue Size** and **Actions** filters.

Creating an Integration

Click the **Create Integration** button to create an integration. In the **Integration Editor** window, specify the details for following fields:

Name
Name of the integration.

Type
Type of the integration.

IP Address
IP address of the integration.

Configuration
Depending on the integration type, you might select and enter various configuration commands on the black window. See the below Changing Integration Configuration section for details.

Credential
Credentials to be used to connect this integration. Credentials are defined in Credentials menu.

Trust Invalid SSL Certificates
Determines whether SOAR connects to an integration and ignores warnings for untrusted SSL certificates.

Require Approval Form
Identifies the users that need to approve action items before executing it for integrations.

Notify
Identifies the users that will be notified of actions done.

Tags
Used to group integrations. This allows creating actions on a number of integrations having the same tag. You might want to create an action for all integrations that have a specified

tag such as “block offender IP address on all firewalls that are used to manage WiFi networks”.

You might prefer to specify some more parameters for some specific integrations. Select the **Show Additional Parameters** checkbox located at the very bottom of the **Integration Editor** to the additional configuration.

Maintenance
Maintenance is supported by all integrations to which SOAR connects using the SSH protocol. It is essentially a generic SSH integration action script. It is best used in conjunction with Check Point Firewall integration for activating or installing a previously saved but not activated firewall policy. You can select a maintenance frequency or type your own cron job (for a scheduled maintenance) by selecting the **Custom Cron Value** option in the combobox.

Host Key
SSH public key of the remote integration. It is only used for integrations connected with SSH. If an SSH key is provided, then it will be validated using the specified key. This check is required to prevent man-in-the-middle attacks.

Batch Size
SOAR can send multiple action queue items to the integrations in a single connection. This field specifies the maximum number of action queue items that will be sent in each execution. For example, if you provided **Batch Size** as **10** and there are 25 action queue items waiting for that integration, then SOAR will send these items in 3 separate execution (10 + 10 + 5). Its default value is 1. This is a feature to avoid causing excessive system load on remote integrations when executing actions. A bigger batch size might create overhead on the integration thus failing all entries. So, you need to be careful when increasing this value.

Max Postpone
Specifies the maximum number of action retries. If an action cannot be executed for any reason, such as connection failures, authentication problems or another SOAR internal problem, it will automatically be retried later. There are a number of global configuration parameters to configure how and when it will retry, but, after a number of retries specified in this field, SOAR will give up and mark the action as failed. Default value is 6 (in hours).

Connection Limit
Specifies the maximum number of concurrent connections for the integration. Default value is 5.

Max Action Retry
Specifies the maximum action retry count for the integration. Default value is 5

Max Rollback Retry

Specifies the maximum rollback retry count for the integration. Default value is 5.

Editing and Deleting an Integration

You can edit an existing integration by clicking the **Edit** button under the **Actions** column. When you click the **Edit** button, **Integration Editor** window is displayed. Specify the values in editor window as per your requirement and click **Save** to modify.

You can delete an existing integration by clicking the **Delete** button under the **Actions** column.

For detailed information see the related Integration Guides.

Testing Integration

Click **Test** to verify the integration configuration.

When you click the **Test** button, it triggers the availability check for integration and if anything fails, a detailed error message is displayed. For example, in the case of a Check Point Firewall integration, SOAR needs a credential to work with the integration. If a credential is not available, an error message is displayed.

If the administrator of the remote integration accidentally deletes the credential that SOAR uses, SOAR will no longer be able to create actions on the integration. In this case, the integration is shown as offline (and an internal alert is created) and the error message is logged into the error log.

You can click **Test** button to see the error message.

A successful test marks the integration as **online**.

Flushing Queues

To flush the ques, select **Flush Queue** button under the **Actions** column of the integrations list. Following is the basic flow in SOAR:

1. Alert is received.

2. Matched playbooks run.

3. Action and rollback queue objects are created (waiting for execution in the queue).

4. Actions/rollbacks in the action/rollback queues are executed and saved.

When you click the **Flush Queue** button, SOAR starts executing actions/rollbacks without waiting for the execution scheduler (which consumes action/rollback queue objects).

Configuring Additional Parameters

Select RESPOND > Configuration > Parameters.

You might require performing some additional configuration, depending on the component or platform integration requirements. The **Parameters** tab displays a list of parameter that can be used for the additional configuration. For more information about additional configuration for integrations, see the respective Integration Guides.

- Searching a Parameter
- Editing a Parameter

Searching a Parameter

You can search a specific parameter, through the **Search** option. Click the ⚙▾ button next to search, to view search results based on the following attributes:

- Parameter Name
- Parameter Value
- Default Value
- Description
- Last Modified By
- Modification Date
- Actions

Editing a Parameter

You can edit an existing parameter by clicking the **Edit** button under the **Actions** column. In the **Configuration Editor** window, specify the details for the following fields:

Parameter: Specify the parameter name.

Value: Specify the parameter value.

Description: Specify the parameter description.

Default Value: Specify the default value of the parameter.

> You can not delete a parameter as it can be used in several integrations.

Configuring Case States

Select RESPOND > Configuration > Cases.

Platform enables you to customize case states such as statuses, severities, types and labels as per your requirement. You can configure multiple options to define case states to suit your requirement.

When you click the **Cases** page, you can view the following sub tabs:

- Statuses
- Severities
- Types
- Labels

Configuring Case Statuses

Select RESPOND > Configuration > Cases > Statuses.

You can configure the status options for a case. For example, you can define a case status as open, if the resolution procedure is ongoing for the case or closed, if it is already resolved, depending on your requirement. To bring in more clarity to the case status, you can associate colors with each case status that you create.

When you click **Statuses** page, a list of predefined case statuses is displayed.

Searching a Case Status

You can search a specific case status, through the **Search** option. Click the ⚙▾ button next to search, to view search results based on **Name, Global, Open, Close, Color** and **Actions** of the case status.

Creating a Case Status

Click the **+Create Status** button to create a new case status. In the **Case Status Editor** window, specify the required details in the following fields:

Value	Description
Status Name	Name of the case status. Provide a short and explanatory name, such as, Open, Closed, InProgress.
Open Status	This allows to select whether the case will be in an open or closed state during the case progress. For example, it is in open state when the case is re-opened, or in closed state when the case is expired.
Colors	Select the color for the status from the suggested color options.

Editing and Deleting a Case Status

You can modify an existing case status by clicking the **Edit** button under the **Actions** column. When you click the **Edit** button, **Case Status Editor** window is displayed. Specify the values in editor window as per your requirement and click **Save** to modify.

You can also remove an existing case status by clicking the **Delete** button under the **Actions** column.

Configuring Case Severities

Select RESPOND > Configuration > Cases > Severities.

You can create your own case severity categories to suit your requirements. You can also set ranks to these severity categories as per the case handling priority.

When you click **Severities** page, a list of case severity is displayed.

Searching a Case Severity

You can search a specific case severity, through the **Search** option. Click the ⚙▾ button next to search, to view search results based on **Name, Response Time, Resolution Time, Color, Rank** and **Actions** filters of the case severity.

Creating a Case Severity

Click the **+Create Severity** button to create a new case severity. In the **Severity Editor** window, specify the required details in the following fields:

Value	Description
Name	Name of the case severity.
Color	Select a color from the color palette.
Response/Resolution Time	These fields are optional and they provide what should be the response and resolution periods for a case of a specific severity. For example, for the cases of severity **Critical**, you might require shorter times for response and resolution.

When you select the **Show Additional Parameters** checkbox, following additional fields are displayed:

Parameter	Description
Resolution breach alert frequency time units	It is the frequency of notifications which are sent after the resolution of the cases of this severity has passed the **Resolution Time**.
Response breach alert frequency time units	It is the frequency of notifications which are sent after the response time for cases of this severity has passed the **Response Time**.
Response Near Time	It is the time left for Response SLA time at which SOAR sends a notification.
Resolution Near Time	It is the time left for Resolution SLA time at which SOAR sends a notification.

Editing the Rank of a Case Severity

You can reassign rank to the allotted severity. Click **Edit Rank** under **Actions** column and set the rank for the severity in the **Rank** column.

Editing and Deleting a Case Severity

You can modify an existing case severity by clicking the **Edit** button under the **Actions** column. When you click the **Edit** button, **Case Severity Editor** window is displayed. Specify the values in editor window as per your requirement and click **Save** to modify.

You can also remove an existing case severity by clicking the **Delete** button under the **Actions** column.

Configuring Case Types

Select RESPOND > Configuration > Cases > Types.

You can assign case types to specific types of cases with special backgrounds. Typically, a case type is assigned when the case goes through the playbooks. Depending on the playbook outcome, a case is categorized into a specific type. If no manual operation is needed for a case (as decided by the playbooks), it is assigned case as its type.

- "Searching a Case Type" below
- "Creating a Case Type" below
- " Editing a Case Type" on the next page

Searching a Case Type

You can search a specific case type, through the **Search** option. Click the ⚙▾ button next to search, to view search results based on **Visible Name, Definition, Severities, Statuses** and **Actions** filters of case type.

Creating a Case Type

Click the **+Create Case Type** button to create a new case severity. In the **Case Type Editor** window, specify the required details in the following fields:

Value	Description
Name	
Definition	Explanation of the case type, e.g., for which cases this type can be used.
Visible Name	Provide a name for this case type to be shown when selecting a case type on the other pages of SOAR.
Severities	Select possible severities for this type.
Default Severity	When a case is opened by SOAR and related playbooks are executed, the default severity is assigned to the case.
Statuses	Select possible statuses for this type.
Default Open Status	Specify the default open status. When a case is opened by SOAR and related playbooks are executed, the default status is assigned to the case as open.
Default Closed Status	Specify the default closed status. When a case is closed, the default closed status is assifnws to the case.
Allow Case Reopen	Select this checkbox if you want to allow case of this type to be reopened after it is closed.
Custom Fields	Optionally, you can add your own fields to the case to be shown in the Cases page. Click the **Creat** button within the **Custom Fields** area, and type the name of field, select its type (text/date) and select whether this field will be visible, editable and shown on the Cases page when you select cases of this ticket type. After you provide the values for the fields click on the **Save** button, and your field will be added as a row within the **Custom Fields** area. You can edit or delete it using the **Edit** and **Delete** buttons, and add as many fields as you want.

Editing a Case Type

You can modify an existing case type by clicking the **Edit** button under the **Actions** column. When you click the **Edit** button, **Case Type Editor** window is displayed. Specify the values in the editor window as per your requirement and click **Save**.

Configuring Case Labels

Select RESPOND > Configuration > Cases > Labels.

You can mark a case with your own special tags, called label.

When you click on the **Labels** page, a list of case label is displayed.

- "Searching a Case Label" below
- "Creating a Case Label" below
- " Editing and Deleting a Case Label" below

Searching a Case Label

You can search a specific case type, through the **Search** option. Click the ⚙▾ button next to search, to view search results based on **Name, Color** and **Actions** filters of the case label.

Creating a Case Label

Click the **+Create Label** button to create a new case label. In the **Label Editor** window, specify the required details in the following fields:

Value	Description
Label Name	Specify the name of the label.
Label Color	Assign a color to the new label.

Editing and Deleting a Case Label

You can modify an existing case label by clicking the **Edit** button under the **Actions** column. When you click the **Edit** button, the **Label Editor** window is displayed. Specify the values in editor window as per your requirement and click **Save** to modify.

You can also remove an existing case label by clicking the **Delete** button under the **Actions** column.

Setting Up Scope Items

Select RESPOND > Configuration > Scope Item Property.

With ArcSight SOAR , it is possible to create your own scope item property types and use them in your workflows. In order to define a new scope item property, click **Create Scope Item Property** button and specify the **Name** and **Data Type** fields. Scope item property can possibly be a:

- Number
- Text
- Json
- Percentage
- Boolean

Configuring Rest Clients

Select **RESPOND** > Configuration > Rest Clients.

To integrate with SOAR, a third party application needs a set of credentials generated at SOAR application. You can create these credentials at Rest Client.

When you click on the **Rest Clients** page, a list of case label is displayed.

- Searching a Rest Client
- Creating a Rest Client
- Editing and Deleting a Rest Client

Searching a Rest Client

You can search a specific third party application integration details, through the **Search** option. Click the ⚙▾ button next to search, to view search results based on **ID**, **Client ID**, Description, **Last Modified By**,**Modification Date** and **Actions**.

Creating a Rest Client

Click the **+Create Rest Client** button to create a new Rest Client. In the **Rest Client Editor** window, specify the required details in the **following** field and click **Save**.

Value	Description
Client ID	Specify the rest client ID.
Description	Specify the description of the rest client.

When you create a rest client by clicking save, a client secret is created for this rest client and displayed in the **Rest Client Details** window.

Ensure to note down the rest client secret along with the credentials as these would be needed whenever you call SOAR application using the REST API.

> **Note**:If you have lost the **Client ID** and **Client Secret** that you created for the rest client then you can not call the SOAR application using the respective REST API. In such cases, you must create the **REST Client** credentials along with the **Client Secret** again.

Editing and Deleting a Rest Client

You can modify an existing rest client by clicking the **Edit** button under the **Actions** column. When you click the **Edit** button, the **Rest Client Editor** window is displayed. Specify the description in the editor window as per your requirement and click **Save** to modify.

You can also remove an existing rest client by clicking the **Delete** button under the **Actions** column.

Additional Configuration

Select RESPOND > Configuration

After the initial configurations of SOAR, you can leverage it further to suit your business needs. For example, you can customize SOAR to support a new plugin and handle cases for the new plugin. Or, you can create reference documents and automatically link them to relevant cases, providing additional context to case assignees.

This section has the following topics:

- "Customizing SOAR " below
- "Managing Case Documents" on page 215
- "Managing Lists in SOAR" on page 216

Customizing SOAR

Select RESPOND > Configuration > Customization Library.

You can customize case management through plugin scripts, email templates, query templates, scriptable integration codes, text and HTML templates (used for notifications and other capabilities) and other customizations. The **Customization Library** tab displays a list of customization, and also allows you to create a new customization content or modify an existing one. When a new plugin is uploaded through configuration/integrations/upload plugin options, you can also view and manage its code on this tab.

The list of customization can be filtered to display all integrations customizations, all integration types customization and all script types customization.

- "Searching a Customization" below
- "Creating a Customization" below
- "Filtering Integration Customizations" below
- "Filtering Integration Types Customizations" below
- "Filtering Script Types Customizations" below
- "Editing, Deleting and Reseting a Customization" on the next page

Searching a Customization

You can search a specific user customization, through the **Search** option. Click the ⚙▾ button next to **Search**, to view search results based on **ID, Name, Script Type, Integration Types, Integration, Last Modified By**, **Modification Date** and **Actions** filters.

Creating a Customization

Click the **+Create New Customization** button to create a new customization. In the **Customization Editor** window, specify customization name, description and type and enter the respective code in the black console.

Filtering Integration Customizations

Click **Show all integrations** filter to view the customization list based on the visible name of the integrations already defined on the environment.

Filtering Integration Types Customizations

The **Show all integration types** filter enables you to filter the list based on integration/plugin type.

Filtering Script Types Customizations

When you click **Show all scripts type** filter, a list of script type customizations is displayed.

Editing, Deleting and Reseting a Customization

You can edit an existing customization configuration by clicking the **Edit** button under the **Actions** column. When you click the **Edit** button, **Customization Editor** window is displayed. Specify the values in editor window as per your requirement and click **Save** to modify.

You can delete an existing customization configuration by clicking the **Delete** button under the **Actions** column.

The **Reset** button resets the content of customization to out-of-the-box version.

The **Lookup** button shows the details about where this particular customization is being used.

Managing Case Documents

Select RESPOND > Configuration > Document Repository.

The system can store your reference documents that might be linked to cases if needed. For example, you can add case handling guides for your SOC analysts and link these documents automatically when a case is created on SOAR.

- "Searching a Document" below
- "Uploading a Document" below
- "Editing and Deleting a Document From The Repository" on the next page

Searching a Document

You can search a specific document, through the **Search** option. Click the ⚙▾ button next to search, to view search results based on document's **ID, File Name, Title, Description, File Size**and **Actions** filters.

Uploading a Document

Click the **+Upload Document** button to upload a new document in the repository. In the **Document Repository Editor** window, specify details such as document **Title**, **Description** and then select the file to be uploaded.

Editing and Deleting a Document From The Repository

You can edit an existing document by clicking the **Edit** button under the **Actions** column. When you click the **Edit** button, **Document Repository Editor** window is displayed. Specify the details as per your requirement and click **Save**.

You can delete an existing document by clicking the **Delete** button under the **Actions** column.

To download a document click the **Download** button under the **Actions** column.

Managing Lists in SOAR

Select RESPOND > Configuration > Lists.

The system can store a diverse set of values in lists. The lists are used as lookup tables for referencing purpose.

- Searching a List
- Creating a List
- Editing, Deleting and Downloading a List

Searching a List

You can search a specific list, through the **Search** option. Click the ⚙▾ button next to search, to view search results based on list's **Name, Content Type**and **Size** filters.

Creating a List

Click the **+Create List** button to create a new list. In the **List Editor** window, specify the details of list as follows:

1. **List Name**: Specify the name of the list that you want to create. For Example, VIP user names.
2. Select the option **Add Column** to create a new list. You can select Delete Column option if you are modifying an existing list.
3. Select the type of the data for the list from the drop down menu, for example, user name.
4. Specify the name of the column and click **Add**. The column name is displayed in below pane.
5. Enter a list item in the text field below the column name and then click **Add List Item** to add the list item for the newly created column.

   > Enter the list item in JSON format.

6. (optional) Enter a list item and click **Search** for searching a list item.

7. Click button to display the console pane. Click **Expand JSON**, to view list item in a JSON formatted order on the console.
8. Under **Actions** tab, click **update** to add the list item in the list or click **discard** to remove the list item.
9. (optional) Select the **Restrict Actions** checkbox to ensure that any action can not be taken (even if the action is a part of the playbook instructions) on the list items defined in the newly created list.
10. (optional) Select the **Restrict Enrichments** checkbox to ensure that any enrichments can not be fetched (even if the fetching enrichment is a part of the playbook instructions) for the list items defined in the newly created list.

Example use case:

You might create a list to store the IP addresses of your data center. When you mark the list for **Restrict Actions** checkbox, SOAR will not take any actions for the servers listed in the list even if they are involved in a case. For example, your play book might contain a step to block all IP addresses on the Case scope, however it will not block those addresses defined in this list.

As another use case, you might define a list of VIP usernames. When you mark it for **Restrict Enrichments** checkbox, SOAR will not perform enrichments on these VIP users.

Editing, Deleting and Downloading a List

You can edit an existing list by clicking the **Edit** button under the **Actions** column. When you click the **Edit** button, **List Editor** window is displayed. Specify the details as per your requirement and click **Save**.

You can delete an existing list by clicking the **Delete** button under the **Actions** column.

You can also download a list as a text file (txt) by clicking the **Download** button.

Automate Case Creation

Select RESPOND > Playbooks

SOAR processes incoming alerts to automatically generate cases. You must define rules that will enable SOAR to determine which alerts need to be converted to cases and how the alerts need to be converted to cases.

> You might receive alerts from other teams over calls or emails, instead of alerts being sent to SOAR. In such scenarios, you can manually create cases in SOAR. For more information, see Creating a Case Manually.

This section has the following topics:

- "Filtering Alerts For Case Creation" below
- "Consolidating Alerts to Create Cases" on page 220

Filtering Alerts For Case Creation

Select RESPOND > Playbook > Rule Name Filters.

Initially, when a Real-time Threat Detection event is received by SOAR, the rule name filters are automatically created and must be edited as per user expectations.

At this stage, no case is formed. The rule name filters are used to decide the plan of action for an alert. The rules in this tab decide whether to register a case with the alert or not.

For example, if an alert is a possible threat, SOAR can create a case with the alert, or SOAR can receive the alert, save it, and create a case but ignore all base events, or SOAR can ignore the alert completely

The Rule Names are listed in the ascending order in the Rule Name Filters page.

- Creating an Alert Source Rule Name Filter
- Managing Scope Item Extraction
- Searching for a Rule Name
- Editing an Alert Source Rule Name Filter

Creating an Alert Source Rule Name Filter

To create an Alert Source Rule Name Filter, complete the following procedure:

1. Click the Create Alert Source Rule Name button.
2. Specify a value for Rule Name. Make sure that the specified rule name matches with the correlation event name.
3. In the **Alert Source** menu, select an alert source from the list of created alert sources.

   For example, to add Real-time Threat Detection correlation events, select Real-time Threat Detection as the alert source.
4. In **Ignore Mode** menu, select one of the following values:

Parameter	Description
Create alerts	When an alert with this rule name is received, a case is created irrespective of the alert sources and alert source types. All base events will be fetched if possible.
Ignore base events	SOAR creates a case, but ignores base events if there are any

Parameter	Description
Ignore for all alert sources	SOAR does not create cases for this rule name, irrespective of alert sources defined on the system.
Ignore for all alert sources of this type	SOAR does not create a case when an alert with this rule name is received, only for the alert sources of the type shown in the **Alert Source Type** field. It creates cases for the alert sources of other types.
Ignore for this alert source	SOAR does not create a case when an alert with this rule name is received, only for the alert source shown in the **Alert Source** field. It creates cases for the other alert sources.

> **Note**: Real-Time Threat Detection Alerts are created by default with the Ignore Mode set to Ignore for all alert sources of this type. Make sure that the Ignore Mode is set to Create Alert.

5. Click Save.

Managing Scope Item Extraction

To add a Scope Item Extraction, Click **Edit** from an existing Rule Name Filter.

Examples for creating Scope Item Extraction:

- Example for Correlated Event Scope Item Extractor:

Field	Description	Source Type	Select a category	Select a Role
/src	Source address	Correlated	Network Address	Offender
/cs2	Device Custom String 2	Correlated	Keyword	Impact

- Example for Base Event Scope Item Extractor:

Field	Source Type	Select a category	Select a Role
src/hostName	Base Event	Host	Related

You cannot edit an existing *Scope Item Extraction*. You can delete an existing *Scope Item Extraction*. To delete, click Delete in the **Actions** column. The Scope Item Extraction Section has the following information:

Parameter	Description
Field Name	Name of the field.
Select Source	Select from the list **[Base Event, Correlated**].

Parameter	Description
Select Category	Select from the list **[Computer Name, Email Address, File, File Name, Hash, Host, Keyword, MAC Address, Network Address, Process, Rule name, Unknown, URL, Username**].
Select A Role	Select from the list [**Impact, Offender, Related**].
Add	Click this button to add the scope item.

Searching a Rule Name

You can search a specific Rule Name. Click the ⚙▾ button next to search, which allows you to view search results based on **Rule Name ID, Rule Name, Alert Source, Ignore Mode, Pattern Matcher**, and **Actions**.

Editing an Existing Alert Source Rule Name Filter

You can modify an existing Alert Source Rule Name Filter to configure additional extraction from the base events or the correlated events.

> You cannot rename or delete an existing alert source rule name filter.

To edit an existing Alert Source Rule Name Filter, complete the following procedure:

1. Do one of the following:
   - Double-click the record that you want to edit.
   - Click Edit in the **Actions** column of the related record.

   For example, to edit the Alert Source Rule Name Filter for Real-time Threat Detection, make sure that the Alert Source name is Real-time Threat Detection.
2. In **Ignore Mode** menu, select a value according to your needs.

   > **Note**: Real-Time Threat Detection Alerts are created by default with the Ignore Mode set to Ignore for all alert sources of this type. Make sure that the Ignore Mode is set to Create Alert.

   You will be able to see the created tickets in the **Cases** page.

Consolidating Alerts to Create Cases

Select RESPOND> Playbook> Consolidation.

Multiple alerts are generated from different alert sources that are integrated with SOAR. These alerts are automatically consolidated to create a case as per the configuration settings. The **Consolidation** page displays a list of rules to consolidate alerts to create cases.

When an alert reaches the consolidation plugin based on the rules, all the correlated alerts are consolidated to create a case. It is after this consolidation procedure that the system decides whether to create a new case or to add the alert into an existing one.

Consolidation rules are processed from top to bottom and only the first match is executed. Any alerts that matches the same consolidation rule is gathered in to the same case until that case status is **Close**. In that instance, a new case will be created and alerts are consolidated into this case.

- "Searching a Consolidation Filter" below
- "Creating a Consolidation Filter" below
- "Editing and Deleting a Consolidation Filter" on the next page

Searching a Consolidation Filter

You can search a specific **Consolidation Filter**, through the **Search** option. Click the ⚙▾ button next to search, to view search results based on **ID, Rule Conditions, Timespan, Last Modified by, Modification Date, Rank** and **Actions**.

Creating a Consolidation Filter

Click **Create Consolidation Filter** to create a new consolidation filter. In Consolidation Filter , specify the details for following fields:

Timespan: Value in minutes, hours, weeks or days. Timespan provides time intervals to consolidate alerts into one case.

Since Last Alert: Timespan will be calculated from the last alerts creation time.

Since First Alert: Timespan will be calculated from the first alerts creation time.

Until First Response: Consolidation will stop when the case is responded by an analyst. When this checkbox is selected, Platform will track the response status of the case and timespan and stop the consolidation at whichever comes first.

Create Conditions: Select a condition for alert consolidation from the following list of condition **Types** and **Parameters**:

- **Type**: Type of the consolidation. Select from the list.
  - Alert source is
  - Alert source rule name is any of
  - Alert source rule name is in list
  - Alert source rule name matches regex
  - Scope item category is

  - Scope item role is
  - Scope item value does not equal
  - Scope item value equals
  - Scope item value is in list
  - Scope item value is not in list
- **Parameters**: It varies depending on selected consolidation type.

> The newly created Consolidation Filter is displayed on the Consolidation page and is in **Disabled** state by default. You must ensure enabling the **Consolidation Filter** before using it.

Editing and Deleting a Consolidation Filter

You can edit an existing consolidation filter by clicking the **Edit** button under the **Actions** column. When you click the **Edit** button, **Consolidation Filter** window is displayed. Specify the values as per your requirement and click **Save**.

You can delete an existing consolidation filter by clicking the **Delete** button under the **Actions** column.

Automating Case Distribution

Select RESPOND > Playbooks

After creating rules for automatic case creation, you must define rules that will enable SOAR to classify cases for playbook execution and distribute the cases to case assignees.

This section has the following topics:

- "Classifying Cases on SOAR" below
- "Dispatching Cases" on page 226

Classifying Cases on SOAR

Select RESPOND > Playbooks > Classification.

Classification tab helps you to organize or maintain your cases on the SOAR platform.

After an alert is received and a case is created with it, then it is passed for classification. On **Classification** tab, the alert is labeled depending upon the conditions. The rule names are checked depending on the rule name and a label is added to the alert. Later these classification labels help the system in choosing and executing a playbook for this case.

You can view a list of classification on this page. The Classification list is processed from top to bottom and only the first match is executed. You can edit the rank of a classification rule through the **Rank** option and created items will appear as the last item in the table.

- "Searching a Classification" below
- "Creating a Classification Rule" below
- "Editing and Deleting a Classification" on page 226

Searching a Classification

You can search a specific **Classification** through the **Search** option. Click the ⚙▾ button next to search to view search results based on **Classification ID, Rule Conditions, Rule Actions, Last Modified by, Modification Date, Rank** and **Actions**.

Creating a Classification Rule

You can create a classification with no condition, which will execute on all cases. You cannot create a classification without any action. After you select a condition, SOAR matches it with the alert conditions and automatically creates actions, that is defined under the **Actions** field.

Click the **Create Classification Rule** button to create a new classification. In the **Classification Editor** window, specify the details for following fields:

Matching Mode: Select <All condition, Any condition> to specify if the new rule allows all or any condition to be matched , similar to a logical AND /OR mode.

Create Conditions:

- **Type**: Select a condition type from the drop-down list. Following table presents the detailed condition types:

Type	Description
Address contains	An address value which will be searched in the IP address of alert sources. You can use the “*” character as the wildcard. Assume that this value is .*.*.22, then the condition will be met when a case is created for all the alert sources having IP addresses that end with “22”.
Address doesn’t contain	Condition will be met when the value typed here is not a part of alert source IP addresses.
Address is in subnet	A subnet value, which will be searched in the subnet address of alert sources. You can use the __*__ character as the wildcard.
Address is not in subnet	Condition will be met when the value typed here is not a part of alert source subnet addresses.
Address matches regex	Condition will be met when the IP address of the alert source is matched to the regular expression specified here.

Type	Description
Address doesn’t match regex	Condition will be met when the IP address of the alert source does not match the regular expression specified here.
Alert is manual	Condition will be met when the alert is created manually.
Alert is not manual	Condition will be met when the alert is not created manually.
Alert parameter matches key value pair	Pair can be given as key=value. Condition will be met when the parameter (key) is equal to the value specified here for any alert parameters.
Alert parameter doesn’t match key value pair	Condition will be met when the parameter (key) is not equal to the value specified here for any alert parameters.
Alert source is	Condition will be met when the alert source of the related case is the one selected here.
Alert source is not	Condition will be met when the alert source of the related case is not the one selected here.
Alert source rule name is any of	Condition will be met when the rule name of case’s alert source is any of the selected values here. You can select multiple rule names in the **Parameters** combo box.
Alert source rule name is not any of	Condition will be met when the rule name of case’s alert source is not any of the selected values here. You can select multiple rule names in the **Parameters** combo box.
Alert source rule name is in list	Condition will be met when the alert source rule name of the related case is in the list selected here.
Alert source rule name is not in list	Condition will be met when the alert source rule name of the related case is not in the list selected here.
Alert source rule name matches regex	Condition will be met when the alert source rule name is matched to the regular expression specified here.
Alert source rule name doesn’t match regex	Condition will be met when the alert source rule name is not matched to the regular expression specified here.
Alert time is between (day of week)	Condition will be met when the creation time of an alert is between the dates and times selected here.

Type	Description
Alert time is not between (day of week)	Condition will be met when the creation time of an alert is not between the dates and times selected here.
Alert time is between (time of day)	Condition will be met when the creation time of an alert is between the times of each day selected here.
Alert time is not between (time of day)	Condition will be met when the creation time of an alert is not between the times of each day selected here.
Assignee is	Condition will be met when the assignee of the related case is the one selected here.
Assignee is not	Condition will be met when the assignee of the related case is not the one selected here.
Assignee is set	Condition will be met when the assignee of the related case is set.
Assignee is not set	Condition will be met when the assignee of the related case is not set.
Assignee is a member of group	Condition will be met when the assignee of the related case is a member of the group selected here.
Assignee is not a member of group	Condition will be met when the assignee of the related case is not a member of the group selected here.
Classification contains	Condition will be met when the classification typed here is in classification list.
Classification doesn’t contain	Condition will be met when the classification typed here is not in classification list.
Scope item category is	Condition will be met when the scope item category of the related case is the one selected here.
Scope item category is not	Condition will be met when the scope item category of the related case is not the one selected here.
Scope item role is	Condition will be met when the scope item role of the related case is the one selected here.
Scope item role is not	Condition will be met when the scope item role of the related case is the one selected here.
Scope item value equals	Condition will be met when the scope item value of the related case is equal to the value expressed here.
Scope item value doesn’t equal	Condition will be met when the scope item value of the related case is not equal to the value expressed here.

Type	Description
Scope item value is in list	Condition will be met when the scope item value of the related case is in the list selected here.
Scope item value is not in list	Condition will be met when the scope item value of the related case is not in the list selected here.
Severity is	Condition will be met when the severity of the related case is the one selected here.
Severity is not	Condition will be met when the severity of the related case is not the one selected here.
Status is	Condition will be met when the status of the related case is the one selected here.
Status is not:	Condition will be met when the status of the related case is not the one selected here.

- **Parameters**: Appropriate value for the type. Select from the list or enter a value.

Create Actions:

- **Action**: Select an action from **Add case label** and **Change severity of Case**.
- **Parameters**: Appropriate value for the type. Select from the list or enter a value.

> The newly created Classification Rule is displayed on the Classification page and is in **Disabled** state by default. You must ensure enabling the rule before using it.

Editing and Deleting a Classification

You can edit an existing classification by clicking the **Edit** button under the **Actions** column. When you click the **Edit** button, **Classification Editor** window is displayed. Specify the values in editor window as per your requirement and click **Save** to modify.

You can delete an existing classification by clicking the **Delete** button under the **Actions** column.

> You cannot edit an existing condition or action. You have to delete the condition or action and create a new one.

Dispatching Cases

Select RESPOND > Playbook > Dispatch.

You can define a set of dispatch rules to automatically assign a case to a user or user role or a tier. After consolidation, once a case is created, you can decide to assign it to a group/ a team or a person and also add a severity to the case. If you did not assign the case to any user/group/team, the system automatically selects the playbook, based on rules and labels, and then executes it to resolve the issue.

The Dispatch page presents a list of dispatch rules that must be executed for the cases with specified conditions.

Dispatch rules are processed from top to bottom and only the first match is executed. You can view the rank of the rule (to see the order of dispatch actions to be applied to the cases), conditions of the dispatch rule, dispatch actions, and the user and date of last edits performed on the rule.

You can edit the rank of a dispatch rule through the **Rank** column and created items appears as the last item in the table.

If you do not want to remove the rule permanently, you can disable it using the **Disable** button in the list.

- "Searching a Dispatch Rule" below
- "Creating a Dispatch Rule" below
- "Editing and Deleting a Dispatch Rule" on page 231

Searching a Dispatch Rule

You can search a specific **Dispatch Rule**, through the **Search** option. Click the ⚙▾ button next to search, to view search results based on **ID, Rule Conditions, Rule Actions, Last Modified by, Modification Date, Rank** and **Actions**.

Creating a Dispatch Rule

You can create a dispatch rule with no condition, which will execute on all cases. You cannot create a classification without any action. Once you select a condition, SOAR matches it with the alert conditions and automatically creates actions, that is defined under the **Actions** field.

Click **Create Dispatch Rule** button to create a new dispatch rule. In the **Dispatch Editor** window, specify the details for following fields:

Matching Mode: Select <All condition, Any condition> to specify if the new rule allows all/any the conditions to be matched , similar to a logical AND /OR mode.

Create Conditions: : To create conditions for the rule, click on the **Create** button within the **Conditions** box.

- **Type**

  Select the condition type from the **Type** drop-down list. Following table presents the detail condition types:

  Table: Condition Types

Type	Description
Address contains	An address value which will be searched in the IP address of alert sources. You can use the “*” character as the wildcard. Assume that this value is .*.*.22, then the condition will be met when a case is created for all the alert sources having IP addresses that end with “22”.
Address doesn’t contain	Condition will be met when the value typed here is not a part of alert source IP addresses.
Address is in subnet	A subnet value, which will be searched in the subnet address of alert sources. You can use the __*__ character as the wildcard.
Address is not in subnet	Condition will be met when the value typed here is not a part of alert source subnet addresses.
Address matches regex	Condition will be met when the IP address of the alert source is matched to the regular expression specified here.
Address doesn’t match regex	Condition will be met when the IP address of the alert source does not match the regular expression specified here.
Alert is manual	Condition will be met when the alert is created manually.
Alert is not manual	Condition will be met when the alert is not created manually.
Alert parameter matches key value pair	Pair can be given as key=value. Condition will be met when the parameter (key) is equal to the value specified here for any alert parameters.
Alert parameter doesn’t match key value pair	Condition will be met when the parameter (key) is not equal to the value specified here for any alert parameters.
Alert source is	Condition will be met when the alert source of the related case is the one selected here.
Alert source is not	Condition will be met when the alert source of the related case is not the one selected here.
Alert source rule name is any of	Condition will be met when the rule name of case’s alert source is any of the selected values here. You can select multiple rule names in the **Parameters** combo box.
Alert source rule name is not any of	Condition will be met when the rule name of case’s alert source is not any of the selected values here. You can select multiple rule names in the **Parameters** combo box.
Alert source rule name is in list	Condition will be met when the alert source rule name of the related case is in the list selected here.

Type	Description
Alert source rule name is not in list	Condition will be met when the alert source rule name of the related case is not in the list selected here.
Alert source rule name matches regex	Condition will be met when the alert source rule name is matched to the regular expression specified here.
Alert source rule name doesn’t match regex	Condition will be met when the alert source rule name is not matched to the regular expression specified here.
Alert time is between (day of week)	Condition will be met when the creation time of an alert is between the dates and times selected here.
Alert time is not between (day of week)	Condition will be met when the creation time of an alert is not between the dates and times selected here.
Alert time is between (time of day)	Condition will be met when the creation time of an alert is between the times of each day selected here.
Alert time is not between (time of day)	Condition will be met when the creation time of an alert is not between the times of each day selected here.
Assignee is	Condition will be met when the assignee of the related case is the one selected here.
Assignee is not	Condition will be met when the assignee of the related case is not the one selected here.
Assignee is set	Condition will be met when the assignee of the related case is set.
Assignee is not set	Condition will be met when the assignee of the related case is not set.
Assignee is a member of group	Condition will be met when the assignee of the related case is a member of the group selected here.
Assignee is not a member of group	Condition will be met when the assignee of the related case is not a member of the group selected here.
Classification contains	Condition will be met when the classification typed here is in classification list.
Classification doesn’t contain	Condition will be met when the classification typed here is not in classification list.

Type	Description
Scope item category is	Condition will be met when the scope item category of the related case is the one selected here.
Scope item category is not	Condition will be met when the scope item category of the related case is not the one selected here.
Scope item role is	Condition will be met when the scope item role of the related case is the one selected here.
Scope item role is not	Condition will be met when the scope item role of the related case is the one selected here.
Scope item value equals	Condition will be met when the scope item value of the related case is equal to the value expressed here.
Scope item value doesn’t equal	Condition will be met when the scope item value of the related case is not equal to the value expressed here.
Scope item value is in list	Condition will be met when the scope item value of the related case is in the list selected here.
Scope item value is not in list	Condition will be met when the scope item value of the related case is not in the list selected here.
Severity is	Condition will be met when the severity of the related case is the one selected here.
Severity is not	Condition will be met when the severity of the related case is not the one selected here.
Status is	Condition will be met when the status of the related case is the one selected here.
Status is not:	Condition will be met when the status of the related case is not the one selected here.

- **Parameters**: Appropriate value for the selected condition type. Select from the list or enter a value.

Create Actions:

- **Action**: Defines case dispatch actions for the rule. Select the action from the **Action** combo box. Following are the available actions:
  - **Add a case label**: When selected, **Parameters** field toggles to a combo box listing the case labels defined in the system. You can choose a label from the list, so that when the case meeting the above conditions is created, it will be labeled as the one selected here.
  - **Assign to a user or group**: When selected, **Parameters** field toggles to a combo box listing the users/groups defined in the system. You can choose a user or group from the list, so that when the case meeting the above conditions is created, it will be assigned to the user or group selected here.

  - **Change severity of case**: When selected, **Parameters** field toggles to a combo box listing the case severities defined in the system. You can choose a severity from the list, so that when the case meeting the above conditions is created, the cases initial severity will be changed to the one selected here.

    Click the **Save** button within the **Actions** box to add your rule action. You can add as many actions as you want.

    > You cannot edit a previously created conditions or actions. You have to delete and create a new condition and action.

- **Parameters**: Appropriate value for the selected action type. Select from the list or enter a value.

> The newly created Classification Rule is displayed on the Classification page and is in **Disabled** state by default. Enable the rule before using it.

Editing and Deleting a Dispatch Rule

You can edit an existing dispatch rule by clicking the **Edit** button under the **Actions** column. When you click the **Edit** button, **Dispatch Editor** window is displayed. Specify the values in editor window as per your requirement and click **Save**.

You can delete an existing dispatch role by clicking the **Delete** button under the **Actions** column.

> You cannot edit an existing condition or action. You have to delete the condition or action and create a new one.

Automating Case Response with Playbook

SOAR enables automated response of the repetitive cases through playbooks. The system performs actions, enrichments and/or sends tasks and notifications based on the playbooks defined in the **Playbooks** menu. You can create, modify, delete, enable or disable playbooks on the **Playbook** page.

- "Filtering Alerts For Case Creation" on page 218
- "Consolidating Alerts to Create Cases" on page 220

Working with Playbooks

Select RESPOND > Playbooks > Playbooks.

A **playbook** defines the automation and orchestration capability. After a case is dispatched, playbook performs the response procedure. The system can execute a fully automated playbook as well as a semi-automated playbook.

A completely automated playbook does not require any decision making from the agents. A semi-automatic model requires agent intervention for decision making or providing some extra information to the automation. So during a semi-automation procedure, SOAR handles the case resolution automatically till some point and then the control is passed to agents for decision making task and again after the decision is made, the control is handled by automation. If needed, SOAR automation can again assign the task to agent for some decision making or extra information requirement. So basically, SOAR performs orchestration and then finally makes a **Response**.

You can specify the execution priority of playbooks by setting the **Rank** values for each playbook, the smaller the rank, the higher is the priority.

Playbooks are processed from top to bottom and when a case matches, all of the playbooks with matching conditions are executed.

While designing any playbook, you must set conditions to ensure if multiple playbooks can run on the same case or not. As the playbooks running on the same case are not aware of each other, they must be designed independently such that one playbook does not interfere with another. If possible, it is recommended that a case matches with only one playbook.

- "Searching a Playbook" below
- "Creating an Advanced Playbook" on the next page
- " Creating Workflow Playbook" on page 234
- "Executing Workflow Playbooks" on page 234
- "Workflow Playbook Elements" on page 234
- "Types of Connectors in the Workflow Playbook" on page 237
- "Importing and Exporting a Workflow" on page 238
- "Editing Rank of a Playbook" on page 238
- "Editing and Deleting a Playbook" on page 238

Searching a Playbook

You can search a specific **Playbook**, through the **Search** option. Click the ⚙▾ button next to search, to view search results based on the following attributes:

- ID
- Scenario Name
- Type
- Last Modified by
- Modification Date
- Rank
- Actions
- Disabled

Creating an Advanced Playbook

The **Advanced Playbook** allows you to write your own playbook scripts.

1. Click Create Advanced Playbook button.
2. In the **Advanced Playbook Editor** window, specify the details for following fields:

Value	Description
Name	Display name of the playbook.
Matching Mode	**All Conditions** means playbook will be executed if all the conditions are true. **Any Conditions** means playbook will be executed if any of the conditions is true.
Rollback Mode	Set if the action will be permanent or will be rolled back after a period of time.
case auto-close	From the combo box, you can select in which conditions the playbook will close the cases.
Conditions	Click Create to add a condition to this playbook. You can define multiple conditions.

3. In the black console area, you can write your playbook scripts in Python programming language.
4. To test your playbook, use the Test option:
   1. Select a defined alert source from the combo box.
   2. For Value to Block, enter a value to test your script.

      > The option Value to Block can be any parameter depending on your script, such as IP or email address.

   3. Click Test.

   Your test result is displayed on the same console.

Creating Workflow Playbook

Workflow Playbooks run automatically and follows the visual process definition. You can specify the a name to the playbook in Playbook Name.

While creating a Workflow Playbook, you can drag and drop elements from the right side of the page. You must enter appropriate and valid values depending on the element in the Properties tab. Each element must be connected to another except the last one.

When a case is created, a playbook with matching condition is executed. The match conditions of the Workflow Playbook are defined in the Start element of the playbook.

Executing Workflow Playbooks

Workflow Playbooks are run automatically when:

- **A new case is created**: cases are created by the Alert Rule Name Filter configuration.
- **A new alert is received**: Alerts are added to the cases by the Consolidation rules.
- **Rules of the case is updated**: Some alert sources update an existing alert for example, QRadar Offences and these can trigger an execution.

Workflow Playbook Elements

To create a visual process definition, you must map the executable instructions through the predefined workflow playbook elements. You can drag and drop following elements to create the workflow:

- **Automation Bit Usage**: Automation Bits are custom code created by the users to execute custom business logic. A detailed explanation for Automation Bit's can be found in Automation Bit section of this guide. While using bits, scope will be supplied from the **Start from here** element if **Scope Filter** variable is not used.
- **Actions Usage**: There are two kinds of actions:
  - Actions coming from the SOAR itself, and these actions act on cases to change it appropriately, for example, Status, Severity.
  - The action capabilities coming from integrations. There are different capabilities depending on the target device and all of them takes some input regarding their role in the workflow.

    Action elements are named as <Integration Name> - <Capability Name>. For example, Active Directory - Lock User.

  Actions usage have several standard properties including:

Properties	Descriptions
Title	Visible name of the element in the visual editor.
Continue on Error	In some cases an action on a device can return an error for example, network problems. In such cases , SOAR will stop the execution of the workflow entirely. If this option is selected, SOAR will continue execution even if the action has failed.
Rollback Mode	SOAR can undo the action after a set time if needed. In many devices there are limits to how many items can be blocked and most of these artifacts usefulness drops over time. Rollback future gives the SOAR users a way to control their actions and the health of the target device.
Scope Filter	The scope filter name can be changed from capability to capability but in essence filter will define which scope items from the alert will be included in the execution. Some actions also have other fields and these are populated from data that resides on the target device. Such as tag’s or group names.
Actions are synchronous	Therefore when a workflow processes an action element, it queues this action and after successful queueing of this action workflow will resume processing the next element. This means in an ideal SOAR, processing actions will not create a performance issue for the workflow execution. There however some edge cases that when SOAR is under heavy load or an unexpected error is present, actions might be queued but different elements are executed before these actions are finished.

- **Enrichment**: Enrichments are data gathering capabilities that will assist in case response procedures and decision making.

  Enrichments have several standard properties including:

Properties	Descriptions
Title	Visible name of the element in the visual editor.
Continue on Error	In some cases an enrichment on a device can return an error e.g network problems. In such cases SOAR will stop the execution of the workflow entirely. If this option is selected SOAR will continue execution even if the enrichment is failed.
Integration	On which integration this capability will be executed.

Properties	Descriptions
Scope Filter	This part’s name can be changed from capability to capability but in essence filter will define which scope items from the alert will be included in the execution.
Do not use cache	When a workflow processes an action element, it queues this action. After successful queueing workflow resumes processing the next element. This means in an ideal SOAR, processing actions does not create a performance issue for the workflow execution. However some when SOAR is under heavy load or an unexpected error is present, actions might be queued but different elements are executed before these actions are finished.
Enrichments are synchronous	When executed they will start immediately and hold the workflow execution on this state until a result is returned. It is important to note that not every enrichment works as fast as you expect and in some cases rate limits might apply affecting the execution time of the overall workflow. Some enrichments execute and then wait for the process to be completed in the target device. These are also called asynchronous for their update part but for workflow execution they are treated as synchronous as well and will stop the execution until the response is returned.

- **Tasks**: Tasks are elements that does not have an automatic component. These elements are dependent on SOC analysts for completion. Task properties are dependant on the configuration of the task. So one or more of these properties might not appear in **Properties** tab..

  Tasks have several standard properties including:

Properties	Descriptions
Title	Visible name of the element in the visual editor.
Scope Filter	The name can be changed from task to task but in essence filter will define which scope items from the alert will be included in the execution. Filters can occur more than once and they are restricted to the Scope Item Type defined for them. So a **Network Address** type filter only works on **Network Address** type scope items.
Timeout Span	It is when the task is due, it will be defined by this property. Task will be timed out when it is due and execution will continue. If left empty, this value will be taken from the Configuration Parameter **WorkflowTimeout** as a global value.

- **Analyst's Decision**: This is the logic element and provides true/false options to the analyst.

  Analyst's decision have several standard properties including:

Properties	Descriptions
Title	Visible name of the element in the visual editor.
Description	Description of the decision.

Timeout span	This property is defined when the task will be due. When the task is due will be defined by this property. Task will be timed out when it is due and execution will continue. If left empty, this value will be taken from the Configuration Parameter **WorkflowTimeout** as a global value.
Send Additional Email for Approva	When this is checked, SOAR will send an additional email for out of SOAR interaction to the selected Analyst.
Analyst	Recipient of the approval Email.

- **Utilities**: There are three types of utility elements:
  - **Notification**:This element supports sending notifications to different users.

    Notifications can be sent from different channels and currently on-screen, SMS, email and windows type messages are supported. Notifications use free-form subject and a pre-defined template for the message.
  - **Decision**: Decision are standard logic element of the workflow. For a given predicate group in the property section, SOAR checks the alert scope and the workflow scope. If both of the scopes match, the automation returns a **true** value and the playbook is executed.

    The alert scope is defined at the **Start from here** element and workflow scope is the enrichment data that is specific to the workflow execution gathered till this point.
  - **User Decision**: User decisions are true/false type checkpoints and they are sent to a recipient for gathering inputs.

    The difference in the **Task Decision** and **User Decisions** can be explained as, the user decision sends the decision message to a variety of recipients. It can send the notification to a free-text e-mail address, to a user, or to an the case scope.

    User decision takes a template to form the message and expects the recipient to reply with an **APPROVE** or **DENY** option. You can create more than one template to send different set of data and messages to the relevant recipients. You can find the **User Decision Notification Email Template** as a built-in template in the **Customization Library**.

    You can also define scope restricted parameters that can be filled on the fly.

Types of Connectors in the Workflow Playbook

Every element in workflow has a pre-defined connector type. There can be one, two or three output connectors.

- **Single connector**: All actions and most other types of elements, fall into this category and after the element executes workflow continue to the next element.
- **Double connector**: Elements that contain a timeout falls into this category. First connector will lead to a successful completion of the element within the given time, these are named **then** and second connector will lead to timeout.

- **Triple connector**: User and Analyst Decision falls into this category. First two connectors will lead to true and false respectively in a successful execution and third connector will lead to timeout.

Importing and Exporting a Workflow

You can import a pre-designed workflow by clicking the **Import Workflow** tab. In **Workflow Import Editor** window, navigate to the template file, add a suitable name for the template and then click **Save** to import a workflow.

To export a workflow playbook, click **Export** option under the **Actions** tab.

> You can not export an advanced playbook

Editing Rank of a Playbook

You can define the order of execution for different playbooks by assigning a rank to it. Click **Edit Rank** option under the **Actions** tab and then modify the rank of the playbook in the respective **Rank** column.

Editing and Deleting a Playbook

To edit the previously created playbooks click **Edit** option under the **Actions** tab. In the **Workflow Playbook Editor** window, modify the visual process flow to suit you requirements.

To remove a playbook from the automation, click **Delete** option under the **Actions** tab.

Additional Functions of Playbook

This section provides information about the additional functions of playbooks.

- Custom Business Logic
- Triggers
- Scheduled Playbooks for Repititive Tasks
- "Non-automated Tasks" on page 242
- Customization of Out of the Box Workflows

Custom Business Logic

Select RESPOND > Playbooks > Automation Bits.

Automation Bits are custom code created that you create to execute custom business logic. ArcSight SOAR supports Python as programming language to write an automation bit.

- "Searching an Automation Bit" below
- "Creating an Automation Bit" below
- "Editing and Deleting an Automation Bit" below

Searching an Automation Bit

You can search a specific **Automation Bit**, through the **Search** option. Click the ⚙▾ button next to search, to view search results based on **ID, Name, Language, Last Modified by, Modification Date** and **Actions**.

Creating an Automation Bit

Click the **+Create Automation Bit** button to create a new automation bit. In the **Automation Bit Editor** window, specify the details for following fields:

Name: Name of the Automation Bit.

Description: Description of the Automation Bit.

Input Parameters: Starting parameters of the Automation Bit. These can be **Date**, **String** or **Scope Filter** and named here to be used in the Automation Bit. **Date** results in current time. **String** creates a parameter input field in workflow playbooks. **Scope Filter** creates a filter field in workflow playbooks.

Automation Bit’s are **syncronous** and will hold the workflow executions until they are done.

> This capability, if used in unexpected ways, might create longer than usual workflow execution times and delays.

You can type your **Automation Bit** script at the Black Console.

Editing and Deleting an Automation Bit

You can edit an existing automation bit by clicking the **Edit** button under the **Actions** column. When you click the **Edit** button, **Automation Bit Editor** window is displayed. Specify the values in editor window as per your requirement and click **Save** to modify.

You can delete an existing automation bit by clicking the **Delete** button under the **Actions** column.

Triggers

Select RESPOND > Playbooks > Triggers.

Triggers are mini playbooks that are triggered by several events. These events are created by human interaction or passage of time where SLA is concerned. Triggers evaluate the changes in the cases and if it matches to a trigger execution condition, the trigger starts automatically. Trigger executions are done from **top to bottom** and all triggers that matches the conditions will run. Only **Event Type** condition can be used in trigger **Start Condition** and the rest of the execution is done in the workflow through **Decision** elements.

As events can not be matched to two different **Event Type**, so **AND** operator is not supported.

- "Searching a Trigger" below
- "Creating a Trigger" below
- Importing and Exporting a Trigger
- "Editing and Deleting a Trigger" below

Searching a Trigger

You can search a specific **Trigger**, through the **Search** option. Click the ⚙▾ button next to search, allows you to view search results based on **ID, Name, Last Modified by, Modification Date**, **Rank** and **Actions**.

Creating a Trigger

To create a trigger, click the **Create Trigger** button. In the **Trigger Playbook Editor** window, drag and drop the elements to create a workflow. To understand more on creating workflow, see **Creating Workflow Playbook.**

Importing and Exporting a Trigger

You can import a pre-designed trigger by clicking the **Import Trigger** tab. In **Trigger Import Editor** window, navigate to the template file, add a suitable name for the template and then click **Save** to import a trigger.

To export a Trigger playbook, click **Export** option under the **Actions** tab.

Editing and Deleting a Trigger

You can edit an existing Trigger by clicking the **Edit** button under the **Actions** column. When you click the **Edit** button, **Trigger Playbook Editor** window is displayed. Modify the properties of the Trigger Playbook elements or add or delete the element as per your requirement and then click **Save**.

Scheduled Playbooks for Repititive Tasks

Select RESPOND > Playbooks > Scheduled Playbooks.

You can use a **Scheduled Playbook** to close repetitive tasks or automate time-based mundane tasks.

- "Searching a Scheduled Playbook" below
- "Creating Scheduled Playbooks" below
- "Editing and Deleting a Scheduled Playbook" below

Searching a Scheduled Playbook

You can search a **Scheduled Playbook**, through the **Search** option. Click the ⚙▾ button next to search, to view search results based on **ID, Name, Type, Description, Last Modified by, Modification Date** and **Actions**.

Creating Scheduled Playbooks

To create a new scheduled playbook, click the **Create Scheduled Playbook** button. In the **Scheduled Playbook Editor** window, specify the details for the following fields:

Value	Description
Name	Display name of the scheduled playbook.
Trigger Frequency	For Trigger Frequency, select from Every minute, Every 5 minutes, Every 10 minutes, Every 30 minutes, Every hour, Every 2 hours, Every 3 hours, Custom chron value (to define your own frequency) options.

In the console area, you can type a script for the playbook using Python programming language.

After typing the script, you can test the playbook using the **Test** option. Select a defined alert source from the combo box, type a value into the **Value to Block** field, and then click **Test** . Your test results are displayed on the same console.

> The option **Value to block** can be any parameter depending on your script, such as IP or email address.

You can also refer to the API Documents at the top right of the **Scheduled Playbook Editor** window.

Editing and Deleting a Scheduled Playbook

You can edit an existing scheduled playbook by clicking the **Edit** button under the **Actions** column. When you click the **Edit** button, **Scheduled Playbook Editor** window is displayed. Specify the values in editor window or edit the playbook script as per your requirement and click **Save** to modify.

You can delete an scheduled playbook by clicking the **Delete** button under the **Actions** column.

Non-automated Tasks

Select RESPOND > Playbooks > Tasks.

Tasks are a way to define manual processes for Case response. The system can handle the automatic and manual elements together in a defined workflow. Analyst Task creates a task that is handled by the SOC Analysts within the SOAR Case Management.

- "Searching a Task" below
- "Creating a Task" below
- "Editing and Deleting a Task" on the next page

Searching a Task

You can search a specific **Task** through the **Search** option. Click the ⚙▾ button next to search, to view search results based on **Name, Description, Task Scopes, Task Output, Last Modified by, Modification Date** and **Actions**.

Creating a Task

You can define the **Analyst Tasks** in this window and the resulting task can then be used in the workflow as a standard element. To create a task, click the **+Create Analyst Task** button. In the **Analyst Task Editor** window, specify the details for the following fields:

Name: Visible name of the element in the visual editor.

Description: Description of the Task to be shown to the analyst.

Task Scope: Task scope is enabled here and these items will be filtered and shown to the analyst and expected to be completed by him/her.

Scope Item Categories: Input scope item types are selected here. This area supports multiselection.

Task Output: Task output is enabled here.

Scope Item Category: Expected scope item type is selected here. Scope item’s created by the analyst will have this type. This area is single selection.

Task Merge: If in a case has more than one alert or a consolidation is ongoing it is possible that the workflow will run more than once and there will be tasks recurring for the analyst to complete. **Task Merge** gathers tasks occurring from the same workflow and shows them as one task to the analyst reducing their load. **Timeout Span** will be merged as well and SOAR will update the merged tasks **Due Time** as the most current one.

Using Task Output or Analyst Decision will disable **Task Merge** capability of SOAR for that elements. **Task Scope** is limited to handle **200** scope items. A task containing more than 200 scope items will be divided into more than one task.

Editing and Deleting a Task

You can edit an existing task by clicking the **Edit** button under the **Actions** column. When you click the **Edit** button, **Analyst Task Editor** window is displayed. Specify the values in editor window as per your requirement and click **Save** to modify.

You can delete an existing task by clicking the **Delete** button under the **Actions** column.

Customization of Out-of-the-Box Playbooks

Select **RESPOND > Playbooks > Workflow Templates**

> You must be an Administrator or a Superuser to create or import playbooks.

Out of the Box Playbooks provide the templates to help you design and implement your playbook. These templates are pre-designed workflows and provide guidance to customize automated response as per your requirements.

List of Out Of the Box Playbooks

ArcSight SOAR provides the following out of the box playbook templates:

- Access Attempts on Unidentified Protocols and Ports
- Admin Account Check
- Block Malicious IPs - CheckpointFW
- Block Malicious IPs - Palo Alto Panorama
- Check IP Reputation from Multiple Sources
- Command and Control Traffic-1
- Command and Control Traffic-2
- Command and Control Traffic-3
- Command and Control Traffic-4

- Endpoint Investigation - Windows
- Internal Scanning Device
- Multiple Authentication Failure
- Outbound Traffic to Suspicious Countries, Ports, Services
- Phishing Email
- Stolen-Lost Device
- Virus Traffic in the Network
- Investigate Suspicious User Account on OKTA
- APIVoid URL Enrichment
- Email Address Enrichment and Block on Cisco Ironport
- Email Address Enrichment and Block on FortiMail
- Email Address Enrichment and Block on Sophos XG
- Email Address Enrichment and Block on Symantec GW
- Investigate File Hashes & Block on Carbon Black
- Investigate File Hashes & Block on Checkpoint R80
- Investigate File Hashes & Block on Kaspersky SC
- Investigate File Hashes & Block on McAfee NSP
- Investigate File Hashes & Block on SEP Manager
- IP Enrichment on Free TI Databases
- URL Enrichment and Block on Check Point R80
- URL Enrichment and Block on McAfee Web GW
- URL Enrichment and Block on Palo Alto Panorama
- URL Enrichment and Block on Sophos XG

Prerequisites for Out of the Box Playbook:

To configure and use out of the box playbooks, a set of integrations/analyst tasks/lists, as listed in respective playbook guides, must be configured on your environment. You can also view the overview and prerequisites of each Out of the Box Playbook in the **Workflow Template** tab in the SOAR application.

Customizing Out of the Box Playbooks

The out of the box playbooks must be customized to create a playbook as per your requirement.

To customize out of the box playbooks:

1. Click **Workflow Template** tab.
2. Click **Create Workflow** and specify a name to the workflow in **Create Workflow From Template**window.
3. After importing the playbook as a template, select it and click **Repair** to configure as per your requirements.
4. Set parameter values as specified in the respective Playbook guide, in the **Workflow Repair Wizard** window.

Checking the Integrity of Event Data

Requires the Log Management and Compliance service in ArcSight SIEM as a Service or the ArcSight Recon capability.

*You must also have the **Perform Event Integrity Check** permission to run a check. With Multi-tenancy enabled, only a provider can run a check.*

Select Configuration > Event Integrity.

The ArcSight Database stores all collected events to support event searches and analysis capabilities for the ArcSight Platform. When investigating a security incident or hunting for threats, you expect that the search results provide valid and accurate data. However, the data that you rely on could be compromised by individuals who want to hide their activities or who maliciously change content. Data also is vulnerable to human errors, transfer errors, or loss and corruption caused by hardware or software issues. To reduce the chance of data tampering, the database enforces the immutability of events once they are stored, ensuring that not even the most privileged database administrator can modify or delete an event. You can also run an **Event Integrity Check** to validate that the event information in your database matches the content sent from the SmartConnectors. The combination of an integrity check with the database's ability to resist tampering provides you an end-to-end, long-term solution for safeguarding the events to be exactly as reported by the device where the activity was observed.

When you run the check, the system searches the database for verification events received within the specified date range, then runs a series of checks to compare content in the database with information supplied by the verification events. The results of an Event Integrity Check help you identify whether event data might be compromised or incomplete. The event integrity checks can involve two different types of verification events: generated for *raw events* from SmartConnectors or for *parsed fields* from Transformation Hub. Both types of verification events can be used in the same environment for increased visibility into the integrity of the events in the database.

NOTE: At this time, the Event Integrity Check searches only the events ingested from SmartConnects to the ArcSight Database and does not include events migrated from Logger.

Understand the Event Integrity Check

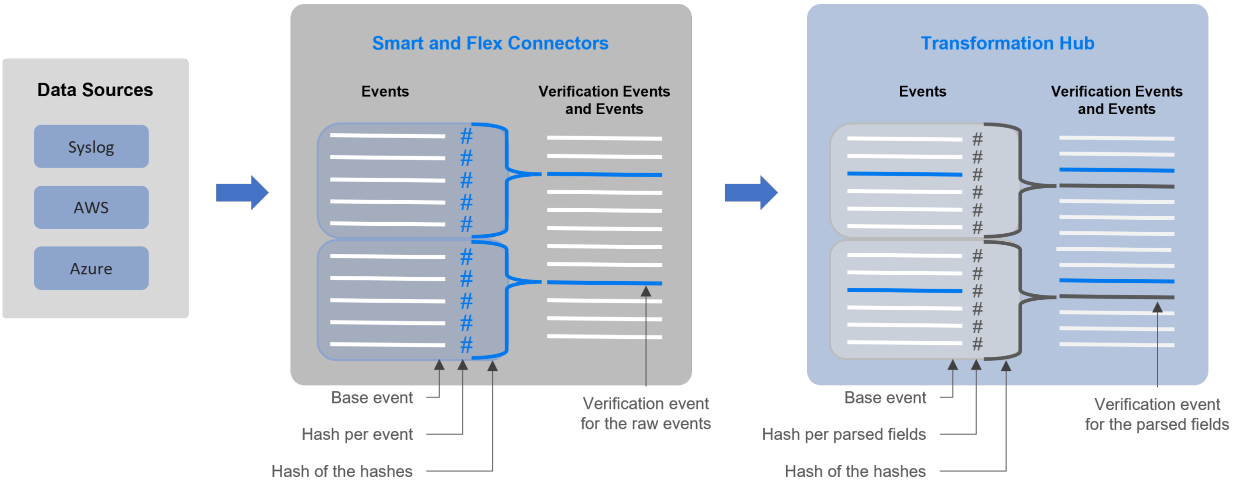
Select Configuration > Event Integrity.

Depending on how you have configured your SmartConnectors and Transformation Hub, the **Event Integrity Check** can verify whether raw event data and the parsed fields within an event, respectively, currently stored in the ArcSight Database match the data collected by the connectors. The check looks for events referenced by verification events in the database. The SmartConnectors group several events into a batch, then computes a hash for each raw event in the batch. If you use Transformation Hub as a destination, it also groups events then generates a hash for the parsed fields within each event. The SmartConnector and Transformation Hub each generates a *hash of the individual hashes* to create a **verification event**. The number of events in a batch depends on how you configure the batch size setting for each connector. Note that SmartConnectors do not store the hashes for individual events.

ArcSight SaaS does not support the ability to check the parsed fields within an event.

Figure 1 (below) shows how events flow from your data sources to the SmartConnectors, which generate the verification events for the raw events. Then Transformation Hub generates verification events for parsed fields within each event.

Figure 1. *Process for generating verification events for an Event Integrity Check*


Data Sources
Syslog
AWS
Azure
Smart and Flex Connectors
Events
Verification Events and Events
Base event
Hash per event
Hash of the hashes
Verification event for the raw events
Transformation Hub
Events
Verification Events and Events
Base event
Hash per parsed fields
Hash of the hashes
Verification event for the parsed fields

Each verification event includes the following items:

- a group of events with raw data or events with parsed fields
- an ordered list of the event IDs within the batch
- a crypto signature field representing the computed hash for that batch (the hash of hashes)

When you **run an Event Integrity Check**, the system performs the following actions for each verification event in the specified time range:

- Looks for the globally unique event ID (GEID) of each event referenced with the verification event.
- Generates hashes for the events within the base event.
- Generates a hash to represent the base events' hashes in the sequence provided by the verification event. You might call this the *generated hash of hashes*.
- Compares the generated hash of hashes to the hash of hashes in the crypto signature field that the SmartConnector or Transformation Hub created for the verification event.

> Some base events could have been deleted on purpose to comply with data retention policies, depending on how you have configured the storage groups. When performing an event integrity check, the system reports these deleted events as missing base events.

Run an Event Integrity Check

Select Configuration > Event Integrity.

An Event Integrity Check looks for verification events received within the specified date range. To reduce the chance of false-negative results, the check also searches for base events outside of the specified date range. For example, you specify a date range of 29 May to 5 June. The check finds several verification events within the date range; however, Verification Event A was created on 29 May and includes base events that occurred on 28 May. To prevent the verification event from failing, the system will expand the search for base events beyond the specified dates.

You can run one check at a time only. If the Run button is disabled, a check is running currently. The system provides a Status update for the actively running check, as well as a showing when the check began and its specified date range.

Note: The check process can take a long time if it includes large amounts of data. Therefore you should run the check during off-peak hours, and limit the date range to include only the data that you are interested in.

If you are running large jobs, or if your system resources are limited, you might consider disabling the Event Integrity Check Auto-tuning Parameter Setting and reducing Task Count and Chunk Size values. For more information, see Configuring the Deployed Capabilities in the guide corresponding to your deployment:

- Administrator's Guide for the ArcSight Platform 24.2 - AWS Deployment
- Administrator's Guide for the ArcSight Platform 24.2 - Azure Deployment
- Administrator's Guide for the ArcSight Platform 24.2 - Google Cloud Deployment
- Administrator's Guide for the ArcSight Platform 24.2 - Off-cloud Deployment

1. Select Configuration > Event Integrity.
2. Specify the Start Date and End Date for the range of data that you want to check.

   The *Start Time* for the check corresponds to the time when you select Run. For example, 5:29 pm.

   If the start and end dates encompass a time when the database is receiving events, it's possible to get a Missing Events notification. This occurs because the integrity check finds the verification events before ingesting their associated base events. We recommend that you avoid running the check against events currently being ingested by the database.

3. Select the timestamp type.
4. Click Run.
5. (Optional) To cancel the check, click Cancel.

   Run as needed.

6. View the results.

View Event Integrity Check Results

Select Configuration > Event Integrity.

The **Event Integrity Check** feature provides the following status and results:

- "View the Event Integrity Check Status" below
- "View Last Event Integrity Check Results Table" on page 250

View the Event Integrity Check Status

The **Event Integrity Check status** displays the date range from which the results are currently being checked, as well as the current status.

If the system is busy, it might take a moment for the interface to indicate whether a check is running or has been canceled.

New

Indicates that you have never performed an Event Integrity Check; therefore, no results display.

In Progress

Indicates that an Event Integrity Check is running. If Run is disabled, a check is running currently. You can run one check at a time only.

Canceled

Indicates that you canceled an Event Integrity Check, and the system has completed the cancel task.

Canceling the check might take time to end the tasks that had been in progress.

Completed

Indicates that the Event Integrity Check has completed successfully. The results display in the results table.

Failed

Indicates that the Event Integrity Check failed to complete due to an error. The following table lists the failure categories and recommended remediation.

Hover your cursor over the information icon next to "Failed" to display the corresponding error message.

For this error or warning...	Which indicates that...	You might want to...
Insufficient Disk Space...	The system does not have enough disk space either to run the check or to create a table in the database for the verification events	Run the check when the system is less busy
Insufficient Resources...	The system does not have enough memory either to run the check or to create a table in the database for the verification events	Run the check when the system is less busy
Event Integrity Running	An Event Integrity Check is already running	Wait for the current check to finish or cancel the check in progress
No events found in the specified time range	Either the events do not exist or the system cannot communicate with the data source	Check whether the SmartConnector, Transformation Hub, or Kafka Scheduler is offline

No verification events found in the specified time range	The system might not be configured correctly	Check whether SmartConnectors or Transformation Hub have been configured to support Event Integrity Checks
More than one algorithm found	The system might not be configured correctly	Ensure that only one algorithm has been specified for Event Integrity Checks in the SmartConnector and Transformation Hub
Unsupported algorithm (SHA512) found	The system is not configured correctly	Ensure that the SmartConnector or Transformation Hub have been configured to use one of the approved algorithms: MD5, SHA-1, or SHA-256
Other errors	Depends on the situation	Review the details of the error in the Search Engine log

View Last Event Integrity Check Results Table

The **Last Event Integrity Check Results table** displays the date range from the last check as well as the details of the last check, including the following information:

> The Event Integrity Check might display the last result from another user. The last result might also display after logging out.

Base events checked

Represents the number of base events referenced by verification events found in the specified date range.

Intact events

Represents the number of base events referenced by verification events that passed the Event Integrity check.

Missing events

Represents the number of base events referenced by verification events where missing base events exist.

> You might see this result when the integrity check finds the verification events before ingesting their associated base events. Try adjusting the start or end date for the check.

Tampering has been detected

Represents the number of base events referenced by verification events where the Event Integrity check failed to match the information provided by the verification events, such as due to a change in the data in the base event.

Missing hashes, incorrect hashes, or base events being out of sequence usually indicates that the data has been deliberately changed in an attempt to hide a user’s activities.

Duplicate base event IDs

Represents the number of base events referenced by verification events where the Event Integrity check failed because more than one base event has the same globally unique event ID. This situation results in the Event Integrity check of the referenced base events to fail.

Duplicate verification events IDs

Represents the number of base events referenced by verification events where the Event Integrity check failed because more than one verification event has a globally unique event ID.

Configure Data Collection to Support Event Integrity Checks

An Event Integrity Check can review both raw event data and the parsed fields within an event, depending on how you configure SmartConnectors and Transformation Hub, respectively.

Configure a SmartConnector to Generate a Verification Event

The Event Integrity Check can verify the raw data received from a SmartConnector. You must configure the connector to generate a verification event for batches of events. This configuration allows you to verify that the raw data in the database matches the event captured at the moment that it occurred in your environment.

To configure a SmartConnector, complete the steps for your environment:

- Non-SaaS environment, see Configuring a SmartConnector to Include a Verification Event for Raw Events in the guide corresponding to your deployment:
  - Administrator's Guide for the ArcSight Platform 24.2 - AWS Deployment
  - Administrator's Guide for the ArcSight Platform 24.2 - Azure Deployment
  - Administrator's Guide for the ArcSight Platform 24.2 - Google Cloud Deployment
  - Administrator's Guide for the ArcSight Platform 24.2 - Off-cloud Deployment
- SaaS environment, see "Configuring a SmartConnector to Include a Verification Event for Raw Events" in the *Quick Start for Administrators*.

Enable Transformation Hub to Generate Verification Events for Parsed Fields

ArcSight SaaS does not support the ability to check the parsed fields within an event.

The Event Integrity Check can verify the integrity of multiple parsed fields within an event that Transformation Hub received from a SmartConnector. For example, it verifies the *deviceProduct* and *sourceHostName* fields if they exist in an event. You might want to check these types of parsed fields as an alternative to verifying the raw event data. For example, your environment might not have the disk space, processing power, or network capacity to manage large amounts of raw event data forwarded from SmartConnectors.

You can configure this setting as you deploy Transformation Hub or at any time after deployment. For more information, in a non-SaaS environment, see Enabling Transformation Hub to Generate Verification Events for Parsed Fields in the guide corresponding to your deployment:

- Administrator's Guide for the ArcSight Platform 24.2 - AWS Deployment
- Administrator's Guide for the ArcSight Platform 24.2 - Azure Deployment
- Administrator's Guide for the ArcSight Platform 24.2 - Google Cloud Deployment
- Administrator's Guide for the ArcSight Platform 24.2 - Off-cloud Deployment

Managing the Quality of Your Data

Requires the Log Management and Compliance service in ArcSight SIEM as a Service or the ArcSight Recon capability.

Select Insights > Data Quality.

The **Data Quality Dashboard** provides detailed information about the gap between Device Receipt Time from the raw event itself versus the Normalized Event Time and Database Receipt Time. Data Quality Dashboard identifies the sources that cause issues with the data. Based on the information analyzed through the Data Quality Dashboard, you can accurately mitigate the problem. This feature also provides history of your data over time.

- "Understanding the Data Quality Insights" on the next page
- "Understanding How Data Quality is Calculated" on page 254
- "Analyzing Data Quality" on page 255

Understanding the Data Quality Insights

Content in the Data Quality Dashboard is divided into the following categories that represent how big the gaps are among Database Receipt Time (dBRT), Device Receipt Time (DRT), and Normalized Event Time (NET):

- Active Events
- Future Events
- Past Events

Active Events

Indicates that your events have a timestamp within the database's active time frame where `NET - DRT = 0`. The Data Quality Dashboard presents active events in sub-categories based on the following time gaps between DRT and dBRT:

Sub-category	Description	Formula
Within 1 Minute	Data received in the ArcSight database with less than a one-minute gap	`dBRT- DRT = values between -60000 and 60000` milliseconds
Hour Ahead	Data received between one minute and an hour before DRT	`dBRT- DRT = a value between -3600000 and -60001` milliseconds
Hour Behind	Data received between one minute and an hour after DRT	`dBRT- DRT = a value between 60001 and 3600000` milliseconds
Day Ahead	Data received between one and 24 hours before DRT	`dBRT- DRT = a value between -86400000 and -3600001` milliseconds
Day Behind	Data received between one and 24 hours after DRT	`dBRT - DRT = a value between 3600001 and 86400000` milliseconds
Week Behind	Data received between one day and one week after DRT	`dBRT - DRT = a value between 86400001 and 604800000` milliseconds

Future Events

Indicates that your events have a future timestamp where `NET - DRT < 0`. The Data Quality Dashboard presents future events in sub-categories based on the following time gaps between DRT and dBRT:

Sub-category	Description	Formula
Week Ahead	Data received between one and seven days before DRT	`dBRT - DRT = a value between -604800000 and -86400001` milliseconds
Far Future	Data received more than a week before DRT	`dBRT - DRT < -604800001` milliseconds

The **Far Future** critical category helps identify events that fall well outside the most accepted variance range.

Past Events

Indicates that events have a past timestamp where `NET - DRT > 0`. The Data Quality Dashboard presents past events in a sub-category based on the following time gap between DRT and dBRT:

Sub-category	Description	Formula
Distant Past	Data received more than a week after DRT	`dBRT - DRT > -604800001` milliseconds

The **Distant Past** critical category helps identify events that fall well outside the most accepted variance range.

Understanding How Data Quality is Calculated

Data Quality is calculated and aggregated every one hour, including all events that arrive in the database within the same hour. For example, the aggregated information at 10:00 AM includes all data from 10:00:00.000 to 10:59:59.999, inclusively. The time of the aggregation process depends on when the ArcSight Database was installed or upgraded.

During a fresh installation, the process creates a new table to store Data Quality over time, with source information. The feature schedules the aggregation process at the tenth minute of every hour. For example, if a fresh install or upgrade was completed at 9:15:00 AM, the aggregation would be scheduled to execute at 10:10:00 AM and every one hour after that.

If you switch to a different database, you would need to wait for a few minutes before accessing the Data Quality page again.

> The aggregation process might not be run exactly at the tenth minute of every hour. It is possible that the process might be delayed due to a lag time in the system or for other reasons.

Analyzing Data Quality

Select Insights > Data Quality.

The Dashboard provides the following visualizations to help you gain insight into quality of your data.

Date Picker Filter

Provides options to filter the time range for the entire Data Quality Dashboard page, including built-in Custom Range and Quick Ranges. By default, the Dashboard displays data per the Last week setting. If the Cron Job has not been run yet, the charts would display no data.

Data Timeseries

Represents, in a stacked area chart, how data is distributed among the Categories by percentage over time.

Source Agents

This visualization group consists of the following components:

- **Category selector**

  Displays data sources in each of the 12 Data Categories. *Far Future* is the default selection.

- **Top 10 agents from future events**

  Represents the percentages of up to 10 top agents with the greatest amount of events under the selected Data Categories. To see the IP address, host name, and number of events of each source, hover over each donut piece. If you click a donut piece, the Hourly event volume chart displays more values.

- **Hourly event volume**

  Shows, in a bar chart, the number of events from a source that contributed to the selected Data Categories. If available, the source with the highest number of events will be displayed by default.

Active List Overview

The ArcSight Platform includes a subset of the functionality that is available for active lists and rules in the ArcSight Command Center.

Active lists allow you to track traffic with IP addresses of interest. While you can manually update active lists, their real value comes when you define them in conjunction with rules specifically tailored to interact with and populate the lists dynamically. Lists that are not rule-driven are empty or contain only manual entries that have not timed out.

- Create, edit, and delete active lists
- Create and delete rules

Session List Overview

The ArcSight Platform includes a subset of the functionality that is available for session lists and rules in the ArcSight Command Center.

Session lists are similar to active lists in that they allow you to track traffic with IP addresses of interest. Session lists, however, are optimized for time-based queries and monitoring of rule-driven combinations of event attributes or custom fields.

While you can manually update session lists, their real value comes when you author automatic, rule-driven lists with dynamic content. Lists that are not rule-driven are empty or contain only manual entries that have not timed out.

- Create, edit, and delete session lists
- Create and delete rules

Managing Dashboards and Content

If Multi-tenancy is enabled, this feature is not available.

Select Dashboard.

In the ArcSight Dashboard, you can add, remove, and rearrange the order of widgets. You can also change the content of a widget then save it with a unique name. To edit a dashboard, you must be currently viewing it.

Create or Clone a Dashboard

If Multi-tenancy is enabled, this feature is not available.

You can build as many dashboards that you need either by creating a new dashboard or copying a custom or out-of-the-box dashboard.

- "Create a Dashboard" on the next page
- "Clone a Dashboard" on the next page

Create a Dashboard

You can create as many dashboards as you need.

1. (Conditional) From within an existing dashboard, select ... > Create new Dashboard.
2. (Conditional) From the Dashboards list, select +.
3. Specify a Title for the new Dashboard.

   The title can be a maximum of 150 characters, and must be unique.
4. To add a widget, select + beside **Main Context**.
5. Choose the widget that you want to add.
6. Modify the widget’s properties.
7. Continue to add widgets as needed.
8. Arrange the widgets how you prefer.
9. Save your changes.

   Alternatively, you might choose to clone an existing dashboard or import a dashboard that someone else created.

Clone a Dashboard

To quickly create dashboards, you can copy an existing dashboard. For example, Inez Bates wants to customize an out-of-the-box dashboard and share it with her APJ analyst team. She clones the dashboard, then modifies some of the widgets to include only cases that the team owns.

By default, the Dashboard copies the name of the original version and adds “Copy of” to the name. You can change that title as part of the cloning process or edit the title later.

1. From within an existing dashboard, select … > Clone.
2. Specify a unique name for the new dashboard.
3. (Optional) Indicate that you want to add the new dashboard to your Favorites.
4. Save your changes.

   Alternatively, you can import a dashboard that someone else created.

Modify a Dashboard

If Multi-tenancy is enabled, this feature is not available.

While viewing a dashboard, select ✎.

You can only change the configuration of the dashboard that you are currently viewing, such as editing a widget's properties or adding and removing widgets.

- "Add Widgets" below
- "Modify a Widget’s Properties" below
- "Rearrange the Order of Widgets" below
- "Remove Widgets" below
- "Change the Dashboard’s Name" below

Add Widgets

While viewing a dashboard, select ✎, then + in Main Context.

To find an existing widget, you can search by its name or the tags assigned to it. After choosing the widget, you can change its properties to suit your dashboard.

To group widgets in sections under the **Main Context**, select Nested Context from the widget selector or select a context that has already been added to the dashboard. Then you can add widgets in that section. You can also change the name of the sections.

Modify a Widget’s Properties

While viewing a dashboard, select ✎.

To edit the settings of a widget, select the widget. Make your changes in the Widget Properties pane. Then save your changes.

Rearrange the Order of Widgets

While viewing a dashboard, select ✎.

To rearrange the order of widgets in a dashboard, simply drag each widget to the new location. Then save your changes.

Remove Widgets

While viewing a dashboard, select ✎.

To remove a widget, select X within the widget’s boundaries. Then save your changes to the dashboard.

Change the Dashboard’s Name

While viewing a dashboard, select ✎.

The title of a dashboard can be a maximum of 150 characters, and must be unique.

Import and Export a Dashboard

If Multi-tenancy is enabled, this feature is not available.

As an alternative to sharing or copying a dashboard, you can export the dashboard as a json file for other users to import to their Dashboard. The json file contains information about the dashboard’s configuration and the included widgets. The file does not contain any data displayed in the dashboard. You can modify the exported json file or edit the imported dashboard.

For example, Inez Bates on the APJ analyst team really likes a dashboard that **Murphy Buckley,** on the EMEA team, made for his personal use. Murphy could share this dashboard with Inez. However, the widgets are configured for the AMS team’s use, so the data would not be useful for Inez. Instead, Murphy exports the dashboard and sends the json file to Inez. She imports the dashboard, then modifies some of the widgets to point to cases that she and the APJ team own.

- "Considerations for Importing a Dashboard" below
- "Import a Dashboard" on the next page
- "Export a Dashboard" on the next page

Considerations for Importing a Dashboard

Changing the json file of a dashboard can cause problems either during import or within the Dashboard. Usually, you only need to change the name of the dashboard in the file. Before importing a dashboard, please review the following considerations:

- You cannot import a dashboard whose name already exists in your Dashboard environment. Ensure that you change the title of the dashboard in the json file.

  > This caveat includes names of dashboards that other users have created and which you might not see in your list.

- You cannot import a dashboard if it contains widgets that do not exist in your Dashboard environment.

Import a Dashboard

When viewing the list of Dashboards, select … > Import Dashboard. Then browse to the appropriate json file.

Export a Dashboard

When viewing a Dashboard, select … > Export Dashboard.

Managing Your SmartConnectors

Available only to customers in the ArcSight SaaS environment

You can register, view the details of, and revoke SmartConnectors from active use.

Register SmartConnectors

Available only to customers in the ArcSight SaaS environment

Select SmartConnector.

As a Tenant Administrator, you can generate a URL that the system uses to register a SmartConnector with ArcSight Token Management Service (AToMS). The system also provides a list of unused Registration URLs that you can assign to a SmartConnector; unused Registration URLs expire, 24 hours from generation.

1. Click SmartConnector.
2. Click Get Registration URL.
3. Enter a Display Name for your SmartConnector.
4. (Optional) To select an unused registration URL, click Show unused Registration URLs.
5. Click Get Registration URL.
6. Click to Copy or Download to get the registration URL.
7. To complete the registration process, specify the generated URL as a destination parameter during SmartConnector installation.
   For more information, see ArcSight SaaS in the *Destination Parameters* section of the *ArcSight SmartConnector Installation Guide*.

Manage SmartConnectors

Available only to customers in the ArcSight SaaS environment

Select SmartConnector.

You can view detailed information about a registered SmartConnector as well as revoke its registration. The details list the SmartConnector's name, status, type, hostname, date of registration, and agent ID.

1. Click SmartConnector.
2. To view the details, select a SmartConnector.
3. Click Close.

Revoke SmartConnectors

Available only to customers in the ArcSight SaaS environment

Select SmartConnector.

You can remove the access of a registered SmartConnector to the SaaS destination for various reasons, including compromised security. To restore access you must register the SmartConnector, again.

1. Click SmartConnector.
2. To revoke SmartConnectors, select one or more from the list or while viewing the details of a SmartConnector, click Revoke.
3. Click OK to complete the revocation.

The Analyst's Path to Productivity

ArcSight Platform provides several ways for you to ensure the security of your organization, such as Search and SOAR. You can use the built-in reports and dashboards to watch for known threats and dashboards.

Check for Common Vulnerabilities

Applies only when the Multi-tenancy feature is enabled.

Select Administration > Tenants > [tenant_name] > Dashboard & Reports > Dashboard Deck.

Dashboard deck allows you to add frequently used dashboards in a tabbed view.

To add Dashboards in the Dashboard Deck

1. Click the settings icon, then click Add to add a new Dashboard.
2. Click OK to save the dashboard.

   > Do not click **Compose Dashboard** checkbox as it is not supported in this version.

3. You can also use the settings icon to edit, delete and arrange Dashboards. For more information click the **Help** icon from the respective UI screen.

Recommended Dashboards to add to your Dashboard Deck

You can find the following recommended dashboards in the Reports Portal under the Foundation directory:

Attacks and Suspicious Activity Overview

Watch for new threats and monitor devices in your environment. You can drill down to view the SSH Attacks or Web Application overview dashboards.

Malware Overview

Check for malware and infected hosts in your environment, filtering by severity or product. You can see the top reported malware, assets that have been affected, and outcomes.

Account Management Overview

View events associated with account management, such as modifications made to accounts or privileges. You can track activity by the source user, the changes made, and result of the change.

Login Activity Overview

Check login activity events by users, hosts, and source address. You can filter the data by login outcomes; distribution of the login activity; type of Windows login; and device vendor or product.

Gain Insight about Alerts

This optic is available only if ArcSight ESM is integrated with ArcSight Platform and the Multi-tenancy feature is enabled.

Select Dashboard & Reports > Optics > Alerts Outlook.

With the **Alerts Outlook** optic, you view key indicators like the alert categories that are causing a high volume of alerts, tenants and network zones that have been most affected, and entities that have been most targeted during the specified time. You can also drill down into specific areas to gather more details for further investigation, analyze the root cause, and take appropriate action.

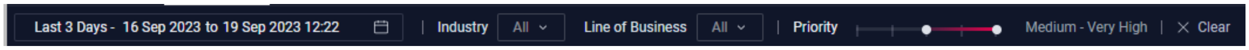
The Alerts Outlook optic consists of the widgets that display alert data for the specified time and filter criteria. By default, all widgets display alert data for the last three days for all tenants, lines of business, industries, and priority between medium to high.

To view alerts for a specific tenant, select the tenant name from the tenant list in the top navigation bar.

The images shown in the subsequent topics are for illustration purposes only.

Filter the Optics Data

In the Alerts Outlook optic, you can filter the data displayed i use a specific filter or a combination of filters that are available in the dashboard filter bar.



Last 3 Days - 16 Sep 2023 to 19 Sep 2023 12:22 | Industry All | Line of Business All | Priority Medium - Very High | Clear

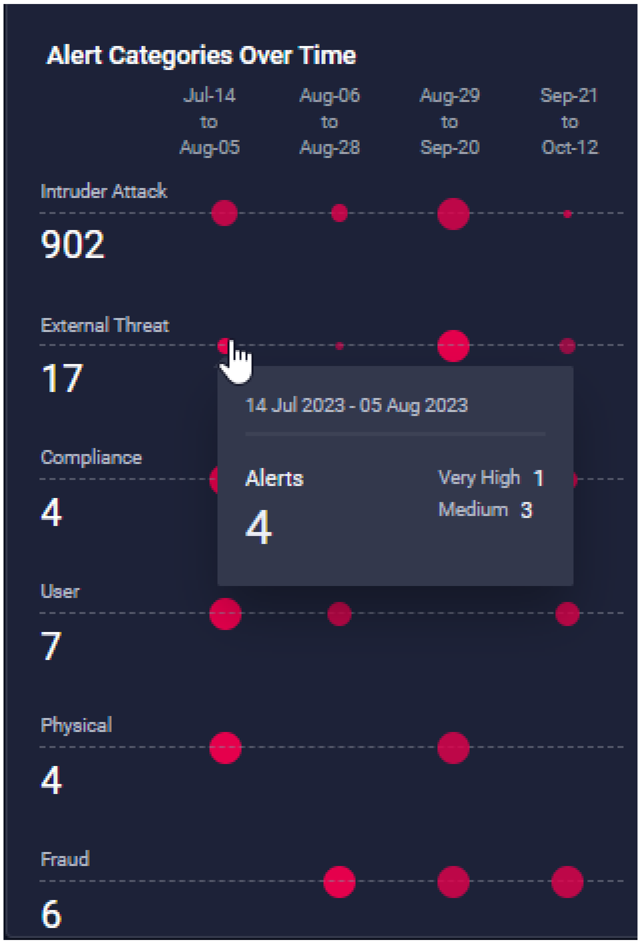
You can view alerts that occurred within a specific time range and on attributes that include industries, lines of business, and alert priority. When you specify filters, they are applied to all widgets in the dashboard. For example, if you select a specific time, all graphs display the data based on the same time. By default, the dashboard displays the alert data for the last three days.

The images shown in the subsequent topics are for illustration purposes only.

Alert Categories Over Time

The **Alert Categories Over Time** widget in the Alerts Outlook optic lists the alert categories that are contributing to the overall alert count over the specified time and filters. The alert categories are ranked by the alert count.

For each category, a horizontal line, which is divided at specific intervals in chronological order displays the distribution alerts over the selected time. The red dots on the horizontal line indicate the alert volume at that specific interval and the dot size is directly proportional to the alert volume. The higher the number of alerts at a location, the bigger the dot. The color of a dot varies depending on the priority level of the alerts at that specific interval. Mouse over a dot to view more details about alerts at that specific interval.



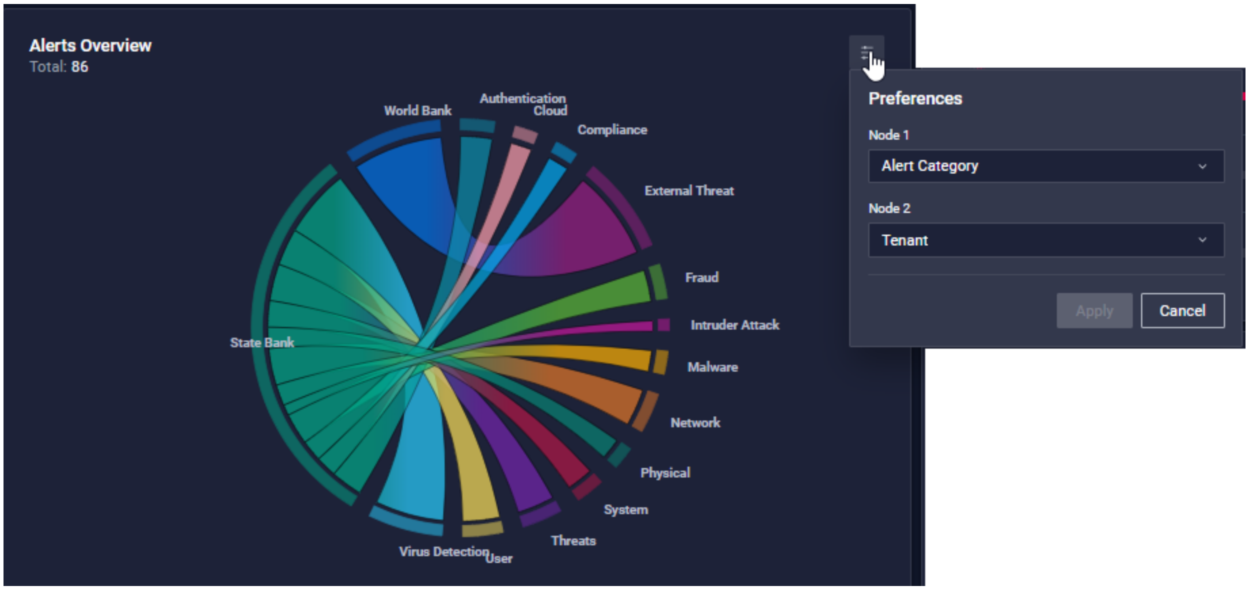
When you select an alert category in the widget, the data in the other widgets in the optic refresh to display the data for the selected category. For example, if you select the Fraud category, the Top Targeted Tenants widget lists the top three tenants that are affected by a high volume of fraud-related alerts and the Top Targeted Entities widget lists the top three entities that are targeted by fraud-related alerts.

Alerts Overview

The **Alerts Overview** widget in the Alerts Outlook optic displays a chord chart that shows the volume of alert flow between two entities for the specified time and filters.

An entity is a tenant, industry, line of business, department, alert category, country or network zone. The chart consists of entities or nodes that are arranged in a circle as different colored arcs. The length of the arc and the thickness of the chord are determined by the volume of alerts within an entity. A chord connects the entities and shows the volume of alert flow and the relationship between the entities. A thicker chord indicates a higher number of alerts. By analyzing the chart, you can not only determine the entity that has the highest or least volume of alerts but also compare alert volumes between entities to identify patterns and trends in alerts.

Click the Preferences icon ( ) and from the Node 1 and Node 2 list, select the entities for which you want to analyze the alert volume. By default, the chart displays the alert volume between alert categories and tenants.



Alerts Overview
Total: 86

Preferences

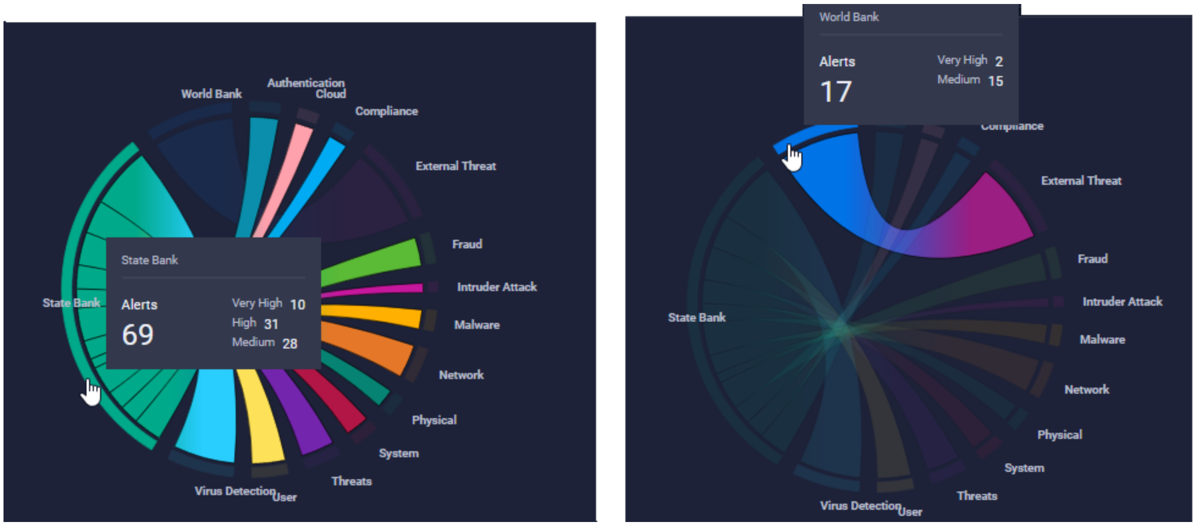
Node 1: Alert Category

Node 2: Tenant

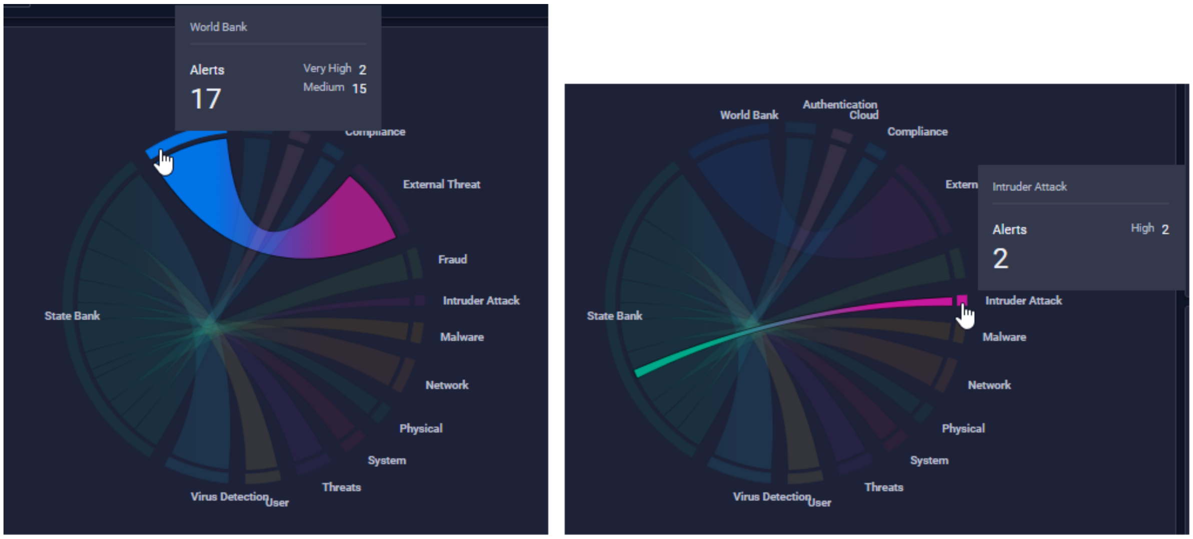
You can make the following observations based on the example shown in the preceding image:

- Node 1 represents the alert categories and node 2 represents the tenants. *Authentication*, *Cloud*, *Compliance*, *External Threats*, *Fraud*, *Intruder Attack*, *Malware* and so on are the alert categories that are impacting the tenants *State Bank* and *World Bank*.
- Overall, 86 alerts are impacting the tenants during the selected time.
- The *State Bank* tenant has the highest number of alerts and alerts from all alert categories are impacting this tenant. The *World Bank* tenant is impacted by alerts from the External Threat category only. Mouse over the arc representing the *State Bank* and *World Bank* tenants to highlight their connections and to view the total number of alerts that are affecting the tenants along with the alert count by priority as shown in the following

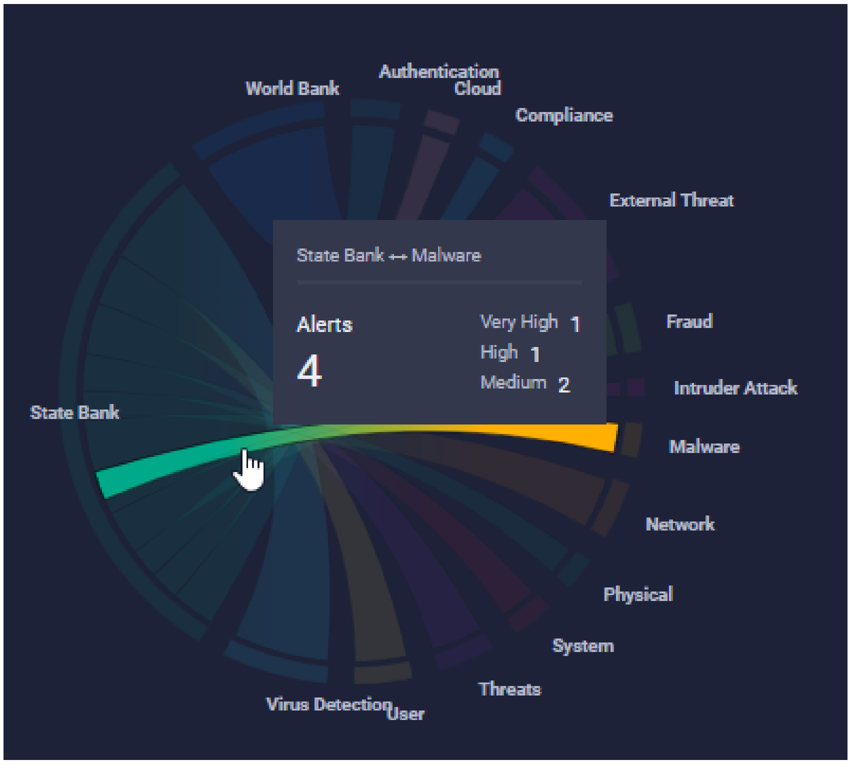
image:



- Similarly, the *External Threat* alert category has the highest number of alerts and the *Intruder Attack* alert category has the least number of alerts as shown in the following image:



- When you mouse over any chord in the circle, you can view the impact of the alert category on the tenant as shown in the following image:



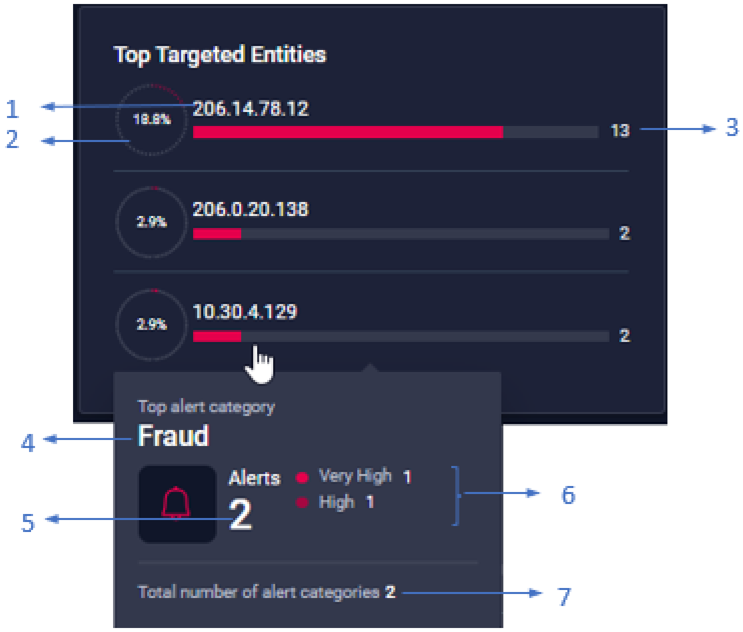
State Bank ↔ Malware

Alerts 4

Very High 1
High 1
Medium 2

Top Targeted Entities

The **Top Targeted Entities** widget in the Alerts Outlook optic lists the top three entities that have been targeted the most over the specified time and filters.



For each entity in the list, the widget displays the following information, as highlighted in the preceding image:

- 1 - IP address of the targeted entity.
- 2 - A circular progress bar that highlights the percentage of alerts contributed by the entity to the overall alert count. The color of the circle depends on the priority of alerts.
- 3 - Total number of alerts affecting the entity.

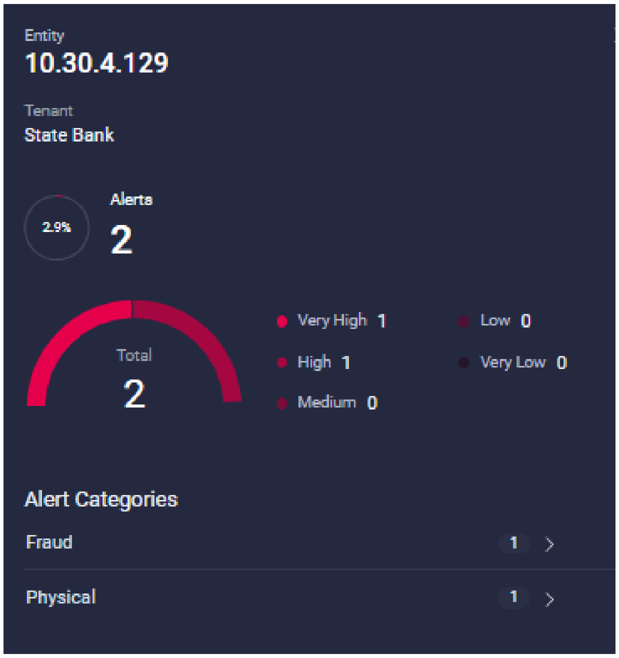
When you mouse over each entity in the widget, you can view the following information about the alert category that is frequently impacting the entity:

- 4 - Name of the alert category that is frequently impacting the entity.
- 5 - Number of alerts in the alert category.
- 6 - Distribution of alerts by priority.
- 8 - Number of alert categories affecting the entity.

To analyze entities at different levels, drill down into entities. As you drill down, more granular data is displayed.

Drill down into the top affected entities

To drill down into an impacted entity, select an entity in the widget.



Entity
10.30.4.129

Tenant
State Bank

2.9%

Alerts
2

Total
2

Very High 1
High 1
Medium 0
Low 0
Very Low 0

Alert Categories

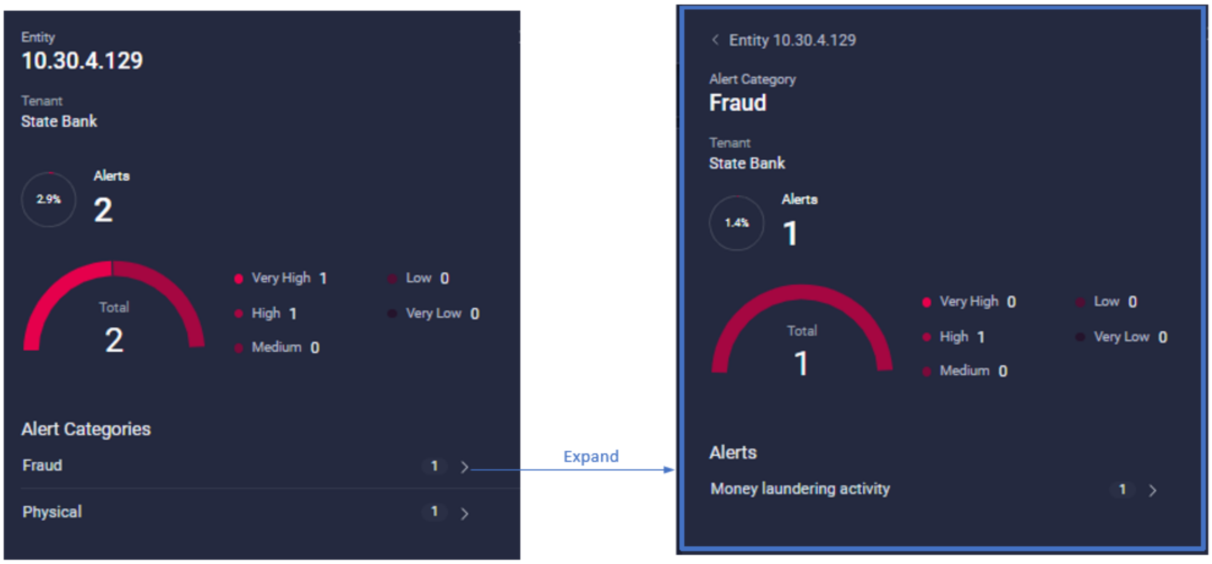
Fraud	1
Physical	1

The fly-out displays the following details:

- Targeted entity.
- Name of the tenant associated with the targeted entity.
- Total number of alerts across the alert categories that are impacting the entity along with a circular progress bar that highlights the percentage of alerts contributed by the entity to the overall alert count. The color of the circle depends on the priority of alerts.
- Distribution of alerts by priority. Depending on the priority levels existing for the selected time frame, the semi-circle donut chart is divided into segments, each of which is colored differently. Each segment represents a priority.
- List of alert categories that are impacting the entity along with the alert count.

Drill down into alert categories

Under Alert Categories, select an alert category to analyze the distribution of alerts by alert type as shown in the following image:



Entity
10.30.4.129
Tenant
State Bank
2.9%
Alerts
2
Total
2
Very High 1
High 1
Medium 0
Low 0
Very Low 0
Alert Categories
Fraud 1
Physical 1

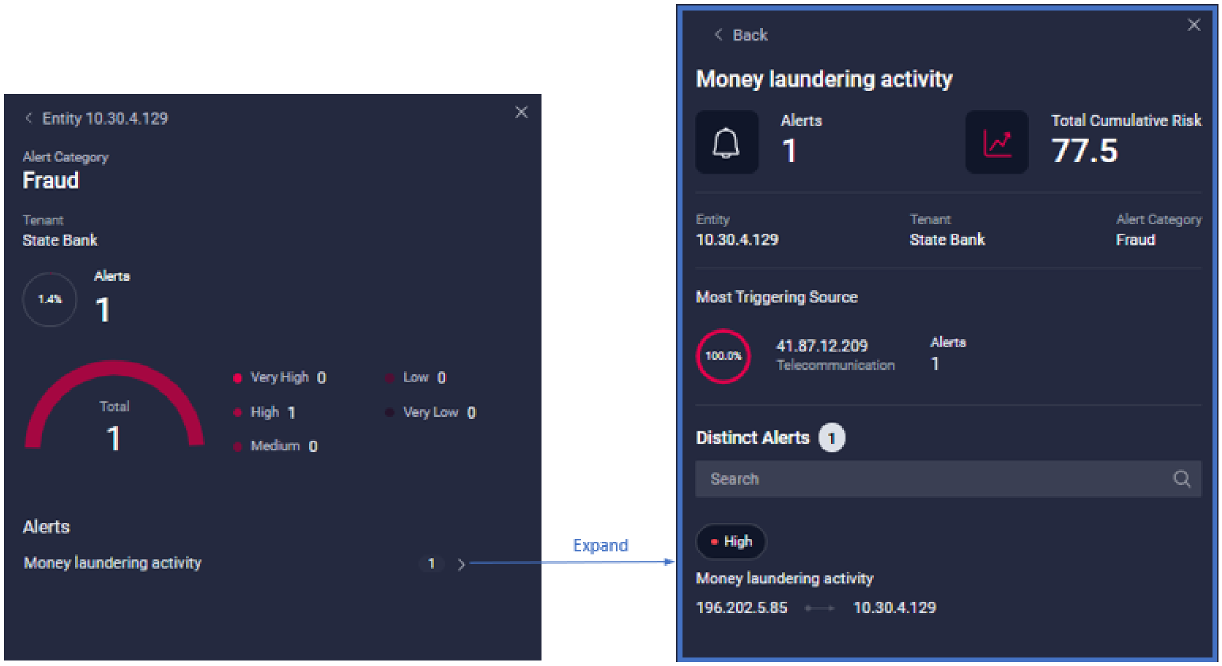
Entity 10.30.4.129
Alert Category
Fraud
Tenant
State Bank
1.4%
Alerts
1
Total
1
Very High 0
High 1
Medium 0
Low 0
Very Low 0
Alerts
Money laundering activity 1

When you click on an alert category, a fly-out displays the following information as highlighted in the preceding image:

- Targeted entity.
- Name of the alert category that is impacting the entity.
- Name of the tenant associated with the targeted entity.
- Total number of alerts in the alert category along with a circular progress bar that highlights the percentage of alerts contributed by the alert category to the overall alert count. The color of the circle depends on the priority of alerts.
- Distribution of alerts by priority. Depending on the priority levels existing for the selected time frame, the semi-circle donut chart is divided into segments, each of which is colored differently. Each segment represents a priority.
- Distribution of alerts by alert type along with the alert count.

Drill down into alert types

Under Alerts, expand an alert type as shown in the following image to explore all alert instances under the alert type:



‹ Entity 10.30.4.129 ✕

Alert Category
Fraud

Tenant
State Bank

1.4% Alerts 1

Total 1

● Very High 0
● High 1
● Medium 0
● Low 0
● Very Low 0

Alerts

Money laundering activity 1 ›

‹ Back ✕

Money laundering activity

Alerts 1

Total Cumulative Risk 77.5

Entity 10.30.4.129

Tenant State Bank

Alert Category Fraud

Most Triggering Source

100.0% 41.87.12.209 Telecommunication

Alerts 1

Distinct Alerts 1

Search

● High

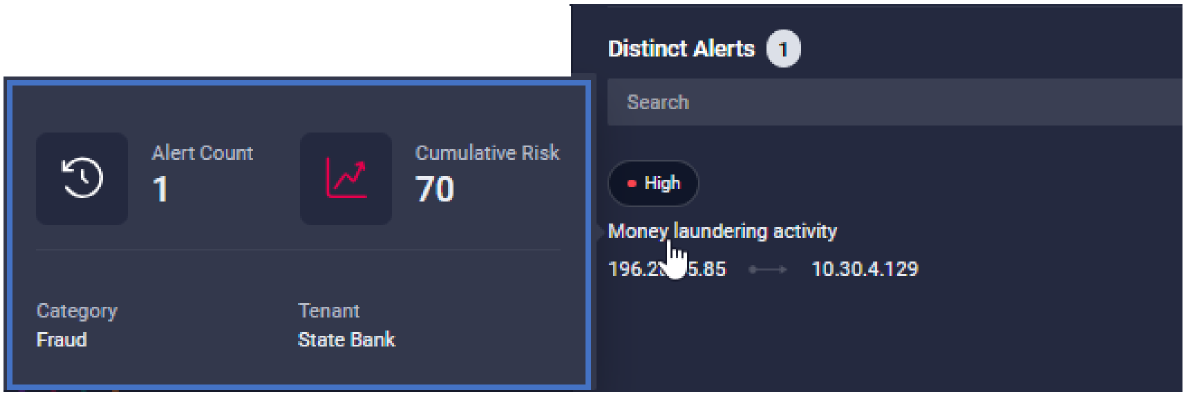
Money laundering activity

196.202.5.85 → 10.30.4.129

When you click on an alert type, a fly-out lists all alerts under the alert type along with the following information:

- Name of the alert type.
- Total number of alerts under the selected alert type and the total cumulative risk (average of all cumulative risks in alerts) for the alert category.
- Entity targeted by the alert type along with alert category associated with the alert type and the tenant associated with the entity.
- IP address and name of the source that is frequently triggering this alert type along with the number of alerts triggered. A circular progress bar highlights the percentage of alerts contributed by the source to the overall alert count. The color of the circle depends on the priority of alerts.
- List of distinct alerts along with alert priority, source IP address, and target IP address of alert.

Mouse over an alert name to view the details as shown in the following image:



Alert Count
1

Cumulative Risk
70

Category
Fraud

Tenant
State Bank

Distinct Alerts 1

Search

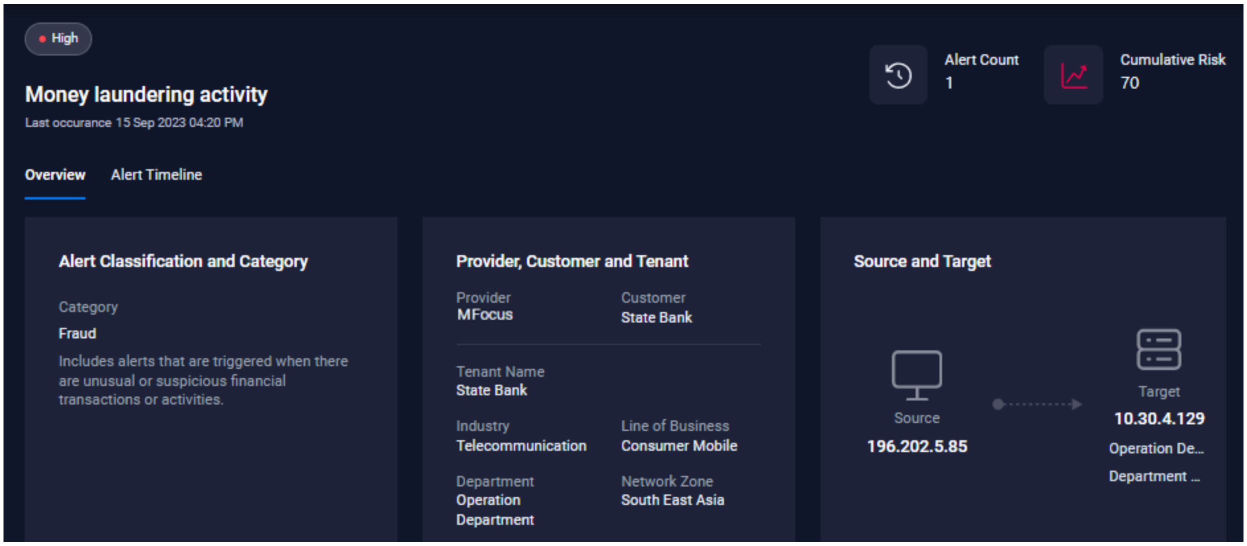
High

Money laundering activity

196.2 5.85 10.30.4.129

Viewing Alert Details

When you click an alert name under Distinct Alerts, the Overview tab provides detailed information about the alert.



High

Money laundering activity

Last occurance 15 Sep 2023 04:20 PM

Alert Count
1

Cumulative Risk
70

Overview Alert Timeline

Alert Classification and Category

Category
Fraud

Includes alerts that are triggered when there are unusual or suspicious financial transactions or activities.

Provider, Customer and Tenant

Provider
MFocus

Customer
State Bank

Tenant Name
State Bank

Industry
Telecommunication

Line of Business
Consumer Mobile

Department
Operation Department

Network Zone
South East Asia

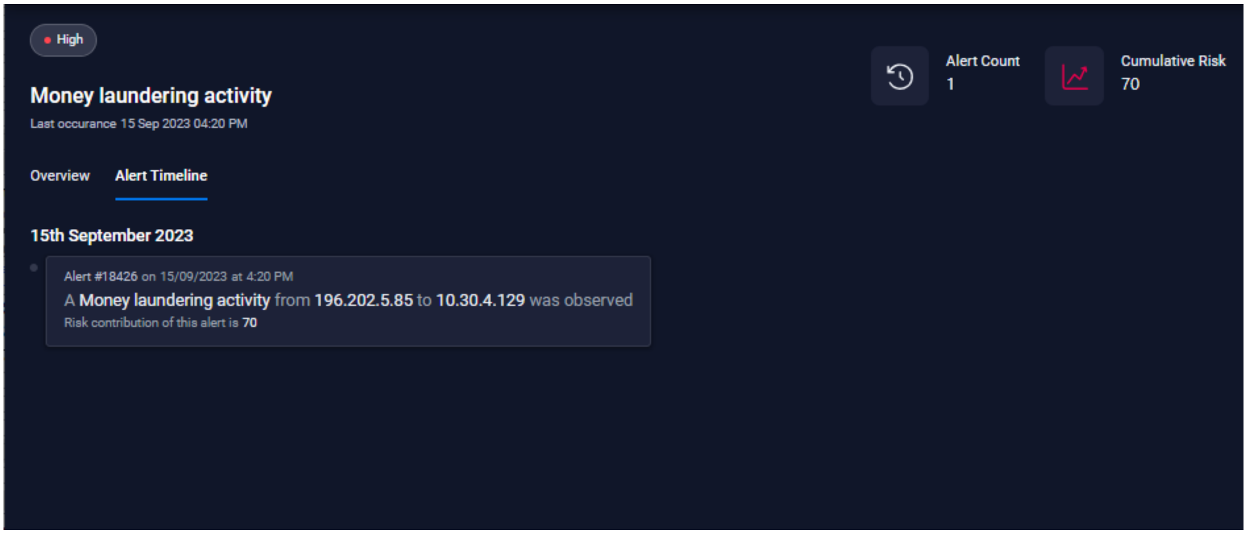
Source and Target

Source
196.202.5.85

Target
10.30.4.129
Operation De...
Department ...

Viewing Alert History

The Alert Timeline tab provides a recent history of alert activity. Each notification in the timeline includes the date and time the alert was generated, the source and destination IP address of the alert, and the risk score.



● High

Money laundering activity

Last occurance 15 Sep 2023 04:20 PM

Overview | Alert Timeline

Alert Count 1

Cumulative Risk 70

15th September 2023

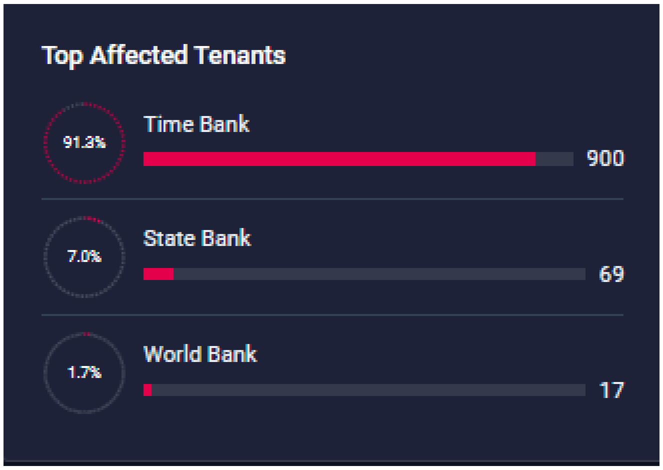
Alert #18426 on 15/09/2023 at 4:20 PM

A Money laundering activity from 196.202.5.85 to 10.30.4.129 was observed

Risk contribution of this alert is 70

Top Affected Tenants

The **Top Affected Tenants** widget in the Alerts Outlook optic lists the top three tenants that have a high volume of alerts over the specified time and filters.



Top Affected Tenants

91.3%	Time Bank	900
7.0%	State Bank	69
1.7%	World Bank	17

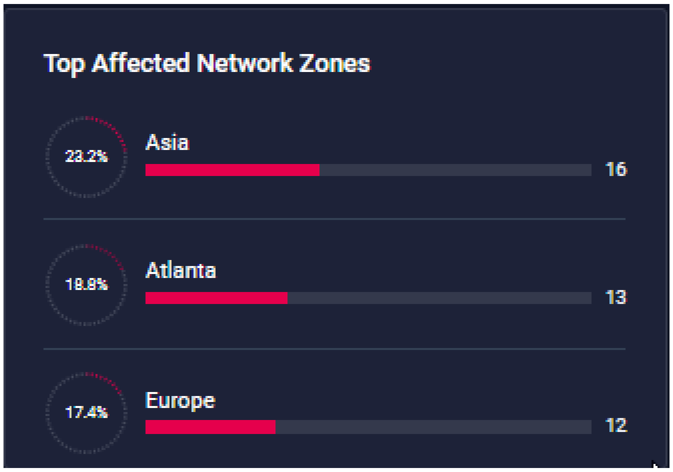
For each tenant, the widget displays the following information, as shown in the preceding image:

- Name of the tenant.
- A circular progress bar that highlights the percentage of alerts contributed by the tenant to the overall alert count. The color of the circle depends on the priority of alerts.
- Total number of alerts impacting the tenant.

To view tenants that are affected by a specific alert category, select the alert category from the Alert Categories Over Time widget.

Top Affected Network Zones

The **Top Affected Network Zones** widget in the Alerts Outlook optic is displayed when you select a single tenant from the tenant list in the top navigation bar or when you log in as a user from the tenant organization. The widget lists the top three network zones in a tenant that have a high volume of alerts over the specified time and filters.



The widget displays the following information:

- Name of the network zone that has a high volume of alerts.
- A circular progress bar that highlights the percentage of alerts contributed by the network zone to the overall alert count. The color of the circle depends on the priority of alerts.
- Total number of alerts affecting the network zone.

To view network zones that are affected by a specific alert category, select the alert category from the Alert Categories Over Time widget.

Responding to Threats

ArcSight SOAR delivers an automated case response solution for repetitive security events and imparts a seamless security management experience by performing faster threat detection and remediation.

The main value proposition of SOAR lies in assisting your organization for human and machine-led analysis of the alerts, and leveraging an automated solution for threat response and remediation.

SOAR is fully programmable and can easily integrate with the existing technology stack of your organization. This application is capable to meet security teams’ unique needs, and enables multiple forms of automation, analyst augmentation, collaborative investigation and response through an intuitive interface.

Working With Cases

ArcSight SOAR help you analyze numerous alerts, coming from an array of varied alert sources. Depending on the severity and other details, these alerts are then used by SOAR to generate cases. You can map these cases on the **Cases** tab and get a comprehensive, end-to-end understanding.

SOAR has a very user friendly interface for tracking, viewing and managing cases in a single pane of glass. The **Case** tab enables you to perform multiple operation on one page. You can view the list of cases, edit the case information such as its label, status and priority, add and edit assignees, add watchers , related cases, comments, and attach files, all on a single **Case** page. To perform a deeper analysis, you can also fetch enrichment for cases and perform desired actions. The Case Management service desk also facilitates the flexibility to create manual cases and generate reports for analysis.

A typical **Case** page is displayed as follows:

Exploring a Case

Select **RESPOND** > Case.

Viewing a case workflow is very beneficial in understanding the investigation procedure and performing end to end case management. When you select a case in the case list pane, its respective details are displayed in the panes next to it, including:

- "Case Name" below
- "Scope Item Details" below
- "Event Details" on page 278
- "Activity Details" on page 279
- "Teams" on page 279
- "Case Details " on page 280
- "Case Progress Details " on page 280

Case Name

The name of case is displayed at the top. A star icon before the case name signifies that you are set as case watcher.

Scope Item Details

You can view the list of the scope item defined for the case in the scope item pane of the **Case** page. Typically, scope items are artifacts or data that supports or relates to a particular case. These can be computer name, email address, file, file name, hash, host, keyword, MAC address, network address, process, rule name, unknown, username or a URL.

To view a specific set of scope items associated with a particular case, you can filter the scope item on the basis of their source from the **Filter** button at the top of the scope item pane.

When you click a scope item, the following details are displayed:

- Name, address and type of scope item.
- Source of the scope item. Typically, a scope item can be either created by you, registered from an Alert analysis, or be imported from the files or other attachments.
- Role and Other Roles of the scope item as Impact or Offender or Related.
- Hash Algorithms used for encrypting.
- Country of origin of the scope item.
- The list of number of alerts with the same scope item.

  This alert list helps in narrowing down the investigation by understanding the malicious intent of the scope item in question. You can click the **Show alerts with this scope item** link to view the list of alerts with the same scope item. The **Alerts** list displays **Alert ID, Case, Creation Date, Rule Name and Actions** taken for resolving the related case. To view the actions and all the information captured for a particular case, click **Actions**.

Exporting/Importing STIX file

SOAR allows you to share Cyber Threat Intelligence (CTI) information over a standard based serialization format called Structured Threat Information Expression (STIX) files. This information sharing format has accelerated the effectiveness and accuracy of SOAR solutions, as the information displayed are precise enough to be picked up by the analyst or stored as machine readable JSON bundles. SOAR creates the bundle with domain object types of indentity, indicatior, marking-definition for TLP and statement based on selected scope item.

You can export the scope items details in the STIX format to the other security applications, or import the STIX files to extract the scope items for the case analysis.

> **Note**:SOAR supports STIX format information sharing for limited scope items including network address, URL, hash, email address, user name, mac address, host name and keyword.

To export the scope items to STIX format:

1. Click **enrich** button on the top right corner of the **Case** window.
2. Enter stix in the **Launch Enrichment Plugin** window.

   The preassigned values for **Group Name**, **Enrichment Plugin**, and **Capability** fields are automatically displayed as Utilities, STIX Utilities and Export to STIX respectively.
3. Select the scope Item that you want to export in the STIX file from the **Scope Items** drop-down list.
4. Select the **Indicator Type** as applicable for the specified scope item. To know more about the scope item indicators, see STIX Indicator Type.
5. Specify the name of the STIX object in the **Name** field and add a suitable description in the **Description** field.
6. Select the appropriate **TLP Markings**. The TLP Markings are predefined specifications for standard STIX export. To understand more on TLP Markings, see STIX TLP Marking Type.
7. Mark the **Do not use cache** option as per your requirement.
8. Click the **Enrich** button. A STIX file is automatically generated and all the details of scope items can now be exported through bundled STIX file in Json format.

   Once the STIX file is generated, it gets downloaded automatically and the enrichment record is displayed in the case timelines pane at the bottom of the **Case** page.

   The STIX Json file gets its identity objects from **Customization Library**.

   You can customize the Json file fields as per your organizational details, by defining the values of the **STIXOrganizationName** parameter in the **Parameters** tab of the SOAR application user interface.

   You can modify following fields in the **STIXOrganizationName** parameter:

   ```
   {"organizationName": "Organization","sectors": ["defense"],"contactInfo":
   "contact_info@organization.com","statement": "Copyright (c) Organization
   2021."}
   ```

The values that are defined in **STIXOrganizationName** parameter is used during exporting STIX Json bundle's object of indentity type.

To import the scope items to STIX format:

1. Click **+Add New Scope Item** in the Scope Item pane.
2. In **Scope Item Form Editor** window, click **Import scope from file** button.
3. Select and open the bundled STIX file to be uploaded in the **File Upload** window.

   After opening the json bundle file, you can view the scope item name, category and the assigned role.

   > Note: If the Json file to be uploaded is not a valid STIX file, SOAR displays an error message about the invalid file format.

4. Click **Save** to extract the scope item details and add the newly fetch scope item to the case scope list.

   > Note: You can download some of the sample STIX files by clicking on **Example Files** button in the **File Upload** window.

Event Details

You can view the events that created the case and the graph of the incoming events in the **Events** pane. Typically, a case can be created by single event or by consolidation of multiple similar events based on the SOAR configuration settings.

The **Events** pane provides detailed information about the events including:

- Event Time
- Event ID
- Vendor-Product
- Name
- PID
- Source
- Destination

You can also customize the level of details displayed in the Events pane.

To customize the Events displayed on **Events** pane:

1. Click the setting icon on the top right.
2. Select the column names that you want to view in the Event details page.
3. Click **Apply**.

After selecting the case, click the binocular icon to view the extended detail for that specific event.

> When you create a rule for correlated event count, the number of returned base events is always 100.
> **Workaround**: To change the number of base events in correlated events, modify the following properties:
> rules.max.rulechain.size (default is 100)
> rules.max.unique.valuechain.size (default is 100)
> If you are using compact mode, make these changes in the server.properties file.
> If you are using distributed mode, make these changes in the aggregator.properties file.

Activity Details

After you select a case, you can view the list of activities that were performed on the case in a detailed manner in the **Activity** pane. These information are displayed at the lower middle part of the **Case** page. The **Activity** pane presents following details:

- **All**: When clicked, this option displays all the list of activities performed on the case in a chronological order along with the User/User Role/Tier names.
- **Comments**: You can click on this option to view the list of comments added for this case. If you want to add some more case handling information, click on **Add Comment** button. You can also attach a file for to further improvise the case investigation.
- **Enrichments**: This option displays the enrichments fetched and used for resolving the case.
- **Actions**: Click on this option to view all the actions performed for this case.
- **Playbook Execution**: Click this button to display the playbook name that was executed to respond the selected case.
- **Tasks**: This option displays the current task assigned from the playbook.
- **Others**: Click on this option to view other related activities.

You can also add, edit or delete comments, or attach files using the editor at the bottom of the **Activity** area.

Teams

To view the assignee, source and watchers of the case, click the **Teams** button at the bottom left of the **Case** page.

Case Details

You can view case number, status, severity, rule name, MITRE ID, description and label in the **Case Details** pane. This pane also presents a list of attached document related to case. To access these documents, the **Document** button. You can also click the **Details** button, to view the list of alerts that were consolidated to form this event.

> You can view the **MITRE ATT&CK Technique ID**, for cases with suspected MITRE attack. SOAR receives these events from the ESM alert source and when you click **MITRE ATT&CK Technique ID**, an associated attack detail is displayed.

Case Progress Details

This pane shows the count of days/hours that has passed since the creation of and last update on the case. You can also track the SLA status of response and resolution here.

Creating a Case Manually

Select **RESPOND** > Case > +New Case.

> Your user role must have **Create Manual Case** permission to manually create a case.

There are two primary ways for SOAR to receive alerts:

Automatically from the alert sources, configured during other software integrations with SOAR.

Manually by the analyst, in the scenarios where other teams inform the operator about their Cases over calls or emails.

To create the cases manually, click **+New Case** at the top right of SOAR interface and specify the various values of different fields The following list describes the fields:

Parameter	Description
Type	Rule name for the type of manual Case type that you will select in the **Case Type** field. You can also use this field to create a new rule if it is not already defined in the **Rule Names**. When you start typing the rule name, this field lists you the defined rules in this combo box matching the entered characters. If the phrase you entered is not a match, just click on the **Create New Rule** in the combo box list to create one.
Subject	Subject for this new manual case which will be the headline of the case to be created.
Case Type	Case type to be selected from this combo box which are predefined on your SOAR system.
Custom Fields	You can provide values for the custom fields which are defined on your system for the selected case type.

Parameter	Description
Description	Description for the manual case to be created.
Time	Time and date of the manual case which you can select from the calendar in this field.
Severity	Severity of this manual case, defined on your system, which you can select from this combo box.
Add Scope Item	You can add a scope for this manual case by selecting the scope category and role, and entering the scope value.
Upload	You can attach a file (original email, a scanned document explaining the alert, etc.) to this manual case using the **Choose File** button in this field.

When the **Save** button is clicked, SOAR creates a new case and displays it.

Additional Tasks on Cases

Case management is a collaborative process of streamlining case investigation and response activities to facilitate efficient remediation. When a case is registered, it is enriched with appropriate contextual information based on which, a suitable playbook is implemented to provide an effective response to the upcoming threat. Managing a case can include following tasks:

- " Editing Cases" below
- "Searching and Filtering Cases" on the next page
- "Sorting Cases" on page 284
- "Optimizing Threat Investigation through Scope Items" on page 284
- "Organizing Case Views Based on Layouts" on page 284
- " Adding Enrichments to Cases" on page 285" Performing Actions on Cases" on page 285
- " Performing Actions on Cases" on page 285
- "Closing Cases" on page 285
- "Executing Playbooks" on page 286
- "Analyzing Data Through Reports" on page 286
- SOAR Case Retention
- "Relating Other Cases" on page 287

Editing Cases

You can modify the case details to update its severity, status, label as per the different attack categories, re-assign it to new users, user groups, or tiers, add watchers and include informative descriptions.

Editing Individual Cases

When you select a case, the corresponding details appear on the right pane of case page.

To edit a case:

1. Select a case on case list to view its detail.
2. Click **Edit** and modify the following details on **Case Editor**:
   a. **Case Type**: Select the type of case.
   b. **Subject**: Specify the Subject.
   c. **Assignee**: Assign the case to selected Users or User Groups.
   d. **Watcher**: Select the watcher for the case from the displayed set of User or User Groups.

      > You can assign multiple watchers to a case.

   e. **Status**: Modify the case status as **Open** and **In Progress**.
   f. **Severity** : Set the severity of the case as **Urgent**, **Critical**, **High**, **Medium** and **Low**.
   g. **Description**: Add your comments about the case.
   h. **Label**: Select the label from the list of pre-configured labels to categorize the case.
3. Click **Save**.

Editing Multiple cases

You can also edit multiple case at the same time, through **Multiple Edit Mode**. When you click the ☑ button on the top of the case list, the case list toggles to a view where you can select multiple case using check-boxes. You can select cases not only shown in the current case list but also the ones listed in other pages using the navigation button.

The **Multiple Edit Mode** allows you to change the severity, status, label and assignees for the selected cases in one go, through the **Update All Selected Tickets** button. You can also discard your changes by clicking on **Discard** and execute the predefined playbooks for selected cases through clicking the **Run Playbooks Again** option.

If the **Multiple Edit Mode** button is clicked once, the button’s background becomes blue and the **Multiple Edit Mode** page is displayed. If the **Multiple Edit Mode** button is clicked twice, the button’s background becomes yellow, implying that all cases in the current navigated case list page are selected. When the button is clicked for the third time, up to a 1000 cases are selected for editing and the button's background turns red. To disable the multiple edit mode, click on the button for the fourth time.

Searching and Filtering Cases

To search a case, click the text field at the bottom of the case list. Enter the search query at the **Search** field.

To narrow down the search results, use the following set of predefined default filters below the **Search** text field:

- cases assigned to me
- cases I'm watching
- Open cases
- All cases

SOAR provides you an option to save your search queries. You can reuse the same saved search query, by selecting it from the **Saved Search Options**, below the **Default Search Options**.

To create a new search query:

1. Click the + button next to the search field. In the **Case Search Editor,** click **+Create**.
2. Click **Chose one of the following** and select the query criteria from the displayed list. Click the next **Chose one of the following** button and select a sub query criteria to further optimize your query.
3. To expand the search range, you can add another query criteria in the same search by clicking **+Create** button at the top of the **Case Search Editor** page.

   > You can keep including the query criteria in the same search by clicking **+Create** button.

4. Select the **Save** checkbox, then name the search query in the **Search Name** field.
5. You can clear your selections in the editor by using the **Clear Search** option.
6. Click **Close**. The newly created search will be added to the **Saved Search Options**.

You can also edit the saved search queries.

To edit the saved search queries:

1. Select a search query in the **Saved Search Options** and click the ✎ button next to the search field.
2. In the **Case Search Editor,** click **+Create**.
3. Click **Chose one of the following** button and select the query criteria from the displayed list. Based on the selection you made in the first **Chose one of the following** button, a set of related criteria list is displayed in the next **Chose one of the following** button. Select a sub query criteria to further optimize your query.
4. To further expand the search range, you can add another query criteria in the same search by clicking **+Create** button on the top of the **Case Search Editor** page.

   > You can keep including the query criteria in the same search by clicking **+Create** button.

5. Select the **Save** checkbox, then name the search in the **Search Name** field and click **Save and Search** to save it or **Delete** to delete the saved search.
6. You can clear your selections in the editor by using the **Clear Search** or close it by clicking **Close**.

Sorting Cases

You can sort cases by their creation date, last update, severity, respond and resolution times. You can sort the case list by using the **Sorting** button located on top of the case list.

Optimizing Threat Investigation through Scope Items

When investigating a possible attack, it is important to understand the scope of the anomalous behavior. Scope items are artifacts related to the case.

SOAR enables you to create scope item to see the extracted artifacts of the case such as header information, email addresses, URLs, and attachments.

> The creation of a scope item depends on your role and the nature of the case.

To create a scope item:

1. Select a case in the case list to display a scope item pane in the middle of the case page.
2. Click **+Add New Scope Item**. In the **Scope Item Form Editor** page, enter the values for the Scope item. For some scope items, you can enter multiple values, such as IP addresses, separating each value with a newline.
3. Click **Select a category** to specify the type of the scope item.
4. Click **Select a role** to specify how the scope item is related with the case. **Impact**, **Offender** and **Related** are the options used to define the scope items relationship with the case.
5. Click **Add** to link the scope item to the respective case. The list of newly added scope items is displayed in the same page. You can also delete a scope item from the list.
6. You can also import the scope items from a CSV file. Click **Import scope from file** and in the **CSV Upload window**, click **Select the file**. Navigate and open the CSV file to import.
7. Click **Selector** and specify the type of selector used in the CSV file. Click **Save** and then **Close** the page.

Click the newly created scope item to view its extended details and properties.

Organizing Case Views Based on Layouts

Following are the different layouts of SOAR application:

Tier 1 is the default layout in which case Context and Scope Items take the central focus.

Tier 2 layout is recommended for higher tier analysts who wants to handle deeper details of the cases. In this layout **Scope Items** and **Base Event** views take the central focus.

Adding Enrichments to Cases

For investigation of some cases, you might need more detailed information. Adding context makes correlation more productive, thus enhancing the investigation capabilities. SOAR presents enrichment feature to address this issue. You can use the desired plugin for the case using the **Enrich** button located at the top right corner of the **Cases** page.

When you press the **Enrich** button, the **Launch Enrichment Plugin** dialog appears to fetch more details about the case.

Enrichment plugins are grouped according to the information they provide. So, you need to first select a group from the **Group Name** area. Then, according to your group selection, related plugins appear under the **Enrichment Plugin** area. When you select an enrichment plugin from this area, its capabilities are listed under the **Capability** area. Each capability requires different information in this editor.

Performing Actions on Cases

You can trigger an action on a case at anytime using the **Action** button located at the top right corner of the cases page. These actions, such as sending a notification to a related person or blocking an IP address, might vary according to the case’s special condition.

When you click the **Action** button, select an integration with which the defined action will be triggered.

Each capability requires a different information in this editor. For more information, see Integration Guides for the action capabilities.

After selecting the capability, you must set the rollback interval for the this action. Click **Rollback Mode** to select the rollback period and select the respective host for it by clicking on **Host**.

When you click on the **Create Action** button, the action will fall into the **Approval Requests** field of the **Cases** page, if any integration approval is configured. The action will be performed after it is approved. If no integration approval is configured, then action will be performed automatically.

Exclusion list control is performed before **Approval** request.

Closing Cases

You can close a case using the **Close** button at the top right corner of the page.

Select a **Close Status** for the case, from the following options:

- Closed
- Duplicate
- False Positive
- Resolved

You can also add a comment stating the reason. Click on the **Save and Close** button to close the case.

> You cannot close a case unless all the actions are approved and performed.

Executing Playbooks

To accelerate sending response for repetitive cases, you can have the system automatically execute Playbooks. SOAR also provides decision making liberty to the analyst to re mediate the anomalous case. In scenarios where human interventions are required, you can manually execute a playbook for the selected case. Click **Execute** on the case page and select the desired playbook in **Execute Playbook and Automation Bits** window and then click **Execute** to manually implement the playbook.

Analyzing Data Through Reports

Reporting captures the detailed analysis of the respective case including:

- Case summary
- Case timeline graphs
- Scope item recurrence analysis chart
- Detailed case timeline with actions, presented in a tabular format.

To generate a **Detailed Case Report**, click **Reports** on the case page.

SOAR Case Retention

By default, SOAR stores all cases indefinitely. If needed, you can set retention parameters (inside SOAR Configuration Parameters) and set a scheduled case retention policy.

Below are the related SOAR parameters:

DataCleanupDeleteOpenCases

If this parameter is disabled, SOAR keeps the cases on the system even if they're older than DataRetentionMaxAge. If this parameter is enabled, it deletes the cases even if they're open.

DataCleanupTaskEnabled

It Allows the user to enable data cleanup of cases.

DataCleanupTaskInterval

It Allows the user to define a interval based on which the cleanup will take place.

For example if your value is 43200, then the case will be deleted after 12 hours.

DataRetentionMaxAge

It Allows the user to define a retention for keeping the cases in the system.

For example if your value is 30, the cases will be deleted which are older then 30 days.

Relating Other Cases

To add other cases that you want to relate with this case, click **Add** on the **Related** pane at the bottom right of the **Case** page. Specify the related case number and relation type (which could be **DUPLICATE,RELATED** and **DEPENDSON)** in the **Add New Relation** page and click **Save** to add the related cases.

> Please refer to the SOAR SMTP Integration Guide to configure email notifications.

Monitoring SOAR

To help you understand the system state, SOAR enable you to view the list of all alerts, action and rollback queues, action history, enrichment history, process queues and troubleshooting options.

You can monitor the system state by viewing the action and rollback queues, alerts, actions, process queues, and logs on the **Status** page.

When you click the **Status** tab, following tabs are displayed:

Alerts List

Select **RESPOND > Status > Alerts.**

To understand the SOAR system status, you can view all the alerts that the system has ingested within last 30 days. You can also customize the alerts display list using filter parameters.

Customizing the Alerts Display List

You can view selected alerts by selecting the appropriate filter option.

You can select an alert source in the **Alert Source** combo box and see the alerts only generated by the selected source. You can also narrow down the alert list by providing a time interval (Start/End Dates) and specific parameters (Alert Parameters) that are included in the alerts' context.

After selecting the alert filters, a list of alerts is displayed with following details:

Parameter Name	Description
ID	Alert ID
Created At	Date and time of the alert creation.
Alert Source	This is the visible name of the alert source. A visible name is assigned to an alert source during its configuration on SOAR platform.
Cases	The Cases related with the alert. When SOAR ingested this alert, this Case is created.
Selected Alert Parameters	Some of the parameters of the alerts.
Actions	Alert Details: Click the button to view alert details. In the **Alert Details** page you can view scope items associated with this alert along with the detailed information on alert source, time and date to create and update the alert.
	Show Parameter as Json: Click the button to view all the alert data in JSON format.
	Show Executed Playbooks: Click the button to view the playbook that was run for this alert.
	Process Again: Click the button to re-evaluate all the playbooks and if SOAR finds any new playbook or updated playbook with the matching condition, it will run the playbooks again for this alert.

Action and Rollback Queues

Select **RESPOND** > **Status** > **Action and Roll backQueue**.

SOAR has a mechanism to manage actions to be executed on the integration, called queuing. This section explains the action and rollback queues.

When SOAR receives an alert, alert is processed according to playbooks and SOAR decides the action and target integration.

SOAR adds this action process or rollback process to **Action and Rollback Queues** list which you can ignore approve or clear items. In order to filter list based on process type, Integration type, you can use buttons on the top of the list.

Action History

Select RESPOND > Status > Action History.

You can display and search logs of executed actions and rollback operations. You filter the action list by the following criteria:

- **Stage**: Stage of the action. Available values are **Executed Actions** and **Rollback Actions**.
- **Integration**: You can select an integration defined on your system to see the actions only performed on that integration.
- **Playbook**: You can select a playbook defined on your system to see the actions only performed as a result of that playbook.
- **Status**: Status of the action. Available values are **All**, **Successful** and **Failed**.
- **Start/End Dates**: You can refine the action list by providing start and end dates of actions using the calendar buttons at both fields.
- **Action Value (Contains)**: A value to filter the action list where the action text contains this value.

There is a **Refresh** button on top right of the **Stage** field. You can click on this button to update the filtered actions list at that moment, or choose one of the predefined intervals in the button’s dropdown list to update the list automatically at the selected interval.

There is also a **Download** button on top right of the list view. You can download your filtered action list as a CSV file to your computer using this button.

Enrichment History

Select **RESPOND** > **Status** > **Enrichment History**

Enrichment History tab lets you display and search logs of executed enrichments. To manage enrichment history, click on the **Enrichment History** tab in **Status** menu.

The page allows you to filter the action list by the following criteria as well as date:

- **All Integrations**: You can filter based on different integrations.
- **Submitters**: You can filter by users or automation.
- **Status**: Status of the enrichment. Available values are **All**, **Completed**, **Failed**, **Long Running**, **Not Started**, **In Progress** and **Excluded**

There is a **Refresh** button on top right. For each entry there’s also a **Result** column that will include a **Show** button to display the raw result of the enrichment.

Process Queues

Select **RESPOND** > **Status** > **Process Queues**.

Process Queues tab contains the following queue sub-tabs:

- **Alert Queue**: Lists the alerts received from any alert source that are saved in the SOAR database (including base events for applicable alert sources) and waiting to be processed (create/update Cases, execute playbooks).

You can use the **Clear** button at the very end of queue list to clear the items in the respective queue.

- **ArcSight Listener Queue** : Lists the messages received from ArcSight Enterprise Security Manager that are waiting to be processed and auto-enriched before they are added to the alert queue.

Searching for Events

The Search feature enables you to look for and investigate events that meet specified criteria so you can detect anomalies that point to security threats. You can view the results in tabular and timeline formats, as well as view the raw event data. Each search consists of specifying query input, search result fields, and the criteria for which you want to search events.

Queries are case sensitive. The query input determines the search type (full text, natural language, or contextual). As you specify the criteria for a search query, Search suggests items and operators based on a schema data dictionary. You can also choose from predefined search queries. When running a search, you can specify a fixed time or have the search results update in real-time.

Get an Overview of Your Searches

Select Search > Home.

The **Search Home** tab provides a high-level view of your Search and event activity while also offering immediate access to search features. Your Search and event activity are segmented into Widgets that show the state of specific searches and events, such as saved search queries, search criteria, and events by agent type.

To view items referenced in the search chart, such as saved search queries, scheduled searches, etc., click ↗. This opens a new tab that displays detailed information about your selection.

> The data in the events pie charts (Total Events, Total Events - 24 Hours, Events by Device Vendor - 24 Hours, etc.) refreshes every five minutes and is based on a normalized event time.

My Session Searches

Lists all recent searches. For each search, the table provides the name, search query, status, search type, timestamp, fieldsets, the ID that created the search, and the date the search was created. You can sort the table by some of the column. The table show only searches with the status Completed, Pause, Running, and Error.

To view one of the searches, click 🔍. To remove session searches from the list, select the rows to be removed. Then, click 🗑.

Search Queries

Shows the number of system, private, and public saved search queries that you can access.

Search Criteria

Shows the number of system, private, and public saved search criteria that you can access.

Search Results

Indicates whether any of your saved search results have completed, are running, or have been paused.

Scheduled Searches

Displays the number of enabled and disabled scheduled searches.

Fieldsets

Shows the number of system and private fieldsets that you can use when running a search.

Lists

Shows the number of lookup lists that you can include in a search.

Total Events

Shows the total number of all events that have occurred within your ArcSight database installation. This number refreshes every five minutes.

Events 24 Hours

Shows the total number of all events within the last 24 hours.

Events by Device Vendor – 24 Hours

Shows the total number of the first three events by Device Vendor with the highest count within the last 24 hours.

Events by Agent Type – 24 Hours

Shows the total number of the first three events by Agent Type with the highest count within the last 24 hours.

Events by Agent Severity – 24 hours

Shows the total number of the first three events by Agent Severity with the highest count within the last 24 hours.

Events by Category Technique – 24 hours

Shows the total number of the first three events by Category Technique (for example, analysis, transition, or routing) with the highest count within the last 24 hours.

Creating and Saving Searches

To execute a search, you must enter the query input, a fieldset that you want for the search results, and the time period for which you want to search events. Queries are case sensitive. The query input determines the search type (full text, natural language, or contextual). As you specify the search query, Search suggests search items and operators based on a schema data dictionary. You can also choose from predefined queries.

If you tend to use the same settings for some search parameters, you might want to configure your preferred default setting. For example, you can configure a default time range. To use the same search query or search criteria for multiple searches, you should **save** it. You can also save the results of an executed search and configure a default expiration time for searches. By default, session searches expire after 24 hours of inactivity and saved searches after seven days. Search truncates long queries, displaying **…** to indicate additional content. To see the entire query, you can **pin** the input field.

Create a Search

Select Search > +.

When creating a search, you can use the default values for the fieldset, time range of data to search, and some additional settings or specify your preferred settings. Alternatively, you can load a saved query, criteria, or dataset.

If you tend to use the same settings for some search parameters, you might want to configure your preferred default setting. For example, you can configure a default time range. To use the same search query or search criteria for multiple searches, you should **save** it. You can also save the results of an executed search and configure a default expiration time for searches. By default, session searches expire after 24 hours of inactivity and saved searches after seven days. Search truncates long queries, displaying **…** to indicate additional content. To see the entire query, you can **pin** the input field.

If you do not have Real-time Threat Detection Service in your ArcSight SaaS environment, then you can create only one type of search in UI which corresponds to fixed-time search.

Understand Fixed-time versus Real-time Searches

Search results can be based on a fixed time range or stream in real time as new events match the search query.

- "Fixed-time Searches" below
- "Real-time Searches" below

Fixed-time Searches

A **fixed-time search** receives results based on a fixed time range, such as having fixed start and end values. For example, 10:00 AM to 10:00 PM on May 29. The search also can use dynamic dates, such as last 30 minutes or the last 24 hours. However, after the system retrieves the search results, Search does not update the dataset again. To receive more recent events, you might have to reconfigure the end time if using specific end time and re-run the search.

Real-time Searches

A **real-time search** constantly updates the results of your query, starting from a beginning range, such as Last 30 Minutes. As long as there is data to satisfy the query, the data in the Events Table continues to build. Real-time search requires the *Real-time Threat Detection* service in the ArcSight SaaS environment.

Real-time searches act like session searches; their expiration time depends upon what you have in user preferences for "Session Search expires in" when the real-time search was created.

Options for creating searches:

- "Create a Fixed-time Search" below
- "Create a Real-time Search" on page 295

Create a Fixed-time Search

A fixed-time search uses a custom range with specific start and end dates. You can choose to specify dynamic dates, such as midnight on the first day of the current month.

1. Select Search > +.
2. Enter the query in one of following ways:

- To use a predefined System search, type #.

  The predefined searches might provide only a query expression or include search criteria such as a specific time range.

- To use a search operator, such as eval and wheresql, begin typing the operator's syntax.

  For example, type:

  ```
  ... | where <expression>
  ```

- To manually enter the query, begin typing the expression.

  For example, type :

  ```
  Source Address = 192.10.11.12 and Destination Address= 192.10.11.12 or
  Destination Address in Subnet 192.10.*.*
  ```

- To use a saved query, criteria, or search results, select 📁.

- To search data migrated from ArcSight Logger, select Logger from the list box next to the Search button.

- To search for a field without data, enter `[field_name] = Null`.

> In the query, Search treats a comma (,) between the search fields and values as an OR operator.

3. (Optional) To view all content in a very large query, select the Pin icon in the query input field.

   Otherwise, Search truncates long queries, displaying ... to indicate additional content.

4. Specify the fieldset that you want for displaying the search results.

   By default, Search displays your preferred default fieldset. If you have not specified one, Search displays the *Base Event Fields* fieldset.

5. Click Fixed-time.

   If you do not have the Real-time Threat Detection Service, the application automatically defaults to Fixed-time.

6. For the time range, perform **one** of the following actions:

   - From the menu, select a pre-defined value under Quick Ranges.
   - From the menu, use the Custom Range fields to specify a time range.
   - From the menu, select Dynamic, and then enter a dynamic date value.

   You can also specify the timestamp that you want to use for the retrieved events. Search uses "Normalized Event Time (NET)" on page 374 by default.

7. (Optional) To limit the number of results received from the search, complete the following steps:
   a. Select ⚙ to the right of the query input field.
   b. For Maximum search results, specify the maximum number of results that you want to receive in the dataset.
8. (Optional) If you do not want this search to expire in the default time, complete the following steps:
   a. Select ⚙ to the right of the query input field.
   b. For Search expires in, specify the number of hours that Search will store the session.

      For information about how long session searches are stored, see the "Session Search Expires In" section of Configure Your User Preferences.
9. (Optional) To more easily find this session search later, give the search a name.
10. (Optional) To run the search, click Search.

    Alternatively, you can press Enter when editing the query input field.
11. (Optional) To save the query, criteria, or search results for future use, select the Save icon.

For additional information about viewing results and saving fixed time searches, see " View the Event Inspector " on page 394 and "Save a Fixed-time Search" on page 384. For information about search limits, see Understand Search Limits. For information about real-time searches, see "Understand Fixed-time versus Real-time Searches" on page 292.

Create a Real-time Search

Requires the Real-time Threat Detection service in the ArcSight SaaS environment.

Real-time searches show live results of your query, based on a start time that you specify (for example, the last 30 minutes). As long as there is data to satisfy the query, the Results Table and Event Histogram continue to build, and the time scale below the histogram continues to show progress.

> Real-time search is not available for data imported from Logger.

1. Display the Search tab.
2. Enter a query in the search field.
3. Define the search settings.
4. Click the drop-down menu for the Timestamp interval.
5. Select the type of Timestamp for the event.

   Search uses "Normalized Event Time (NET)" on page 374 by default.

6. Click Real-time.

   The user interface displays only settings related to real-time searches. As your search results are returned, the screen, including the event histogram, refreshes every 30 seconds.

7. Select a Start time from. Your choices are Last 5 Minutes, Last 15 Minutes, Last 30 Minutes, Last 1 Hour, and Last 12 Hours.

8. (Optional) Check or uncheck the "Do not accumulate data" option, based on how you want the default histogram start time behavior to be.

   Data will be accumulated in the background, this option pertains only to the default histogram time window behavior. For more information about real-time search limits, see Understand Search Limits.

9. Click Search.

> Even if it is not selected in the current fieldset, Database Receipt Time field is automatically displayed for real-time searches.

You can run at most 25 concurrent real-time searches.

For information about viewing the results of and saving real-time searches, see "View the Results of a Real-time Search" on page 392 and "Save a Real-time Search" on page 384.

For information about creating a fixed-time search, see Create a Fixed-time Search.

Understand Search Queries

A **search query** is a set of conditions used to select events when you run a search. For example, you can enter a very simple term to match such as “login” or an IP address. Alternatively, you can specify a complex query to match events that include multiple IP addresses and reference a lookup list. In the search query, you can enter the alias, or abbreviated term, for a field name rather than entering the full name. You can also use the **presentable field names**, such as Agent Address.

Your query input determines the search type: full text, natural language, or contextual. As you specify the fields and values for the query, Search suggests search items and operators based on a schema data dictionary.

Search provides default queries, labeled as *system*. However, you can save your own queries, which you can load into another search. You have the option to clone, modify, or remove a saved query at any time.

> You need Manage Search Queries permissions and Manage Search Criteria permissions to save search queries and search criteria, but you do not need special permission to save your search results.

Understand the Query Syntax

Depending on the type of search you create, your query must meet the requirements listed in the following table. Search treats a comma (,) between search items and values as an OR operator. Additionally, there is a list of reserved words that must be enclosed in quotes (" ") to ensure the system correctly parses the query.

If you do not get the search results you expect, you might need to restate the query. For example, if the query is written with spaces, only the first word is shown in the results. A better way to write the query statement is to use explicit phrasing without any spaces.

By default, search operations are case-sensitive to support faster performance. However, you can instruct the database to support case-insensitive searches. For SaaS deployments, talk to your SaaS Admin about changing the database. For non-SaaS deployments, see the guide corresponding to your deployment:

- Administrator's Guide for the ArcSight Platform 24.2 - AWS Deployment
- Administrator's Guide for the ArcSight Platform 24.2 - Azure Deployment
- Administrator's Guide for the ArcSight Platform 24.2 - Google Cloud Deployment
- Administrator's Guide for the ArcSight Platform 24.2 - Off-cloud Deployment

When you construct a query, you can include operators, such as eval and lookup, for more robust searches.

> You cannot use multiple operators, such as *NN* and *XX*, in the same query.

- "General Syntax Rules" below
- "Implicit Operators" on page 300

General Syntax Rules

Type	Full-text	Field-based	Hashtag (predefined)
Case sensitivity	Case-sensitive	Case-sensitive	Case-insensitive
Exact Match	Keyword treated as keyword*. Example: /Execute matches: /Execute, /Execute/Start, /Execute/Response,/Execute/Query	Enclose value in double quotes. Example: `Category Behavior ="/Execute"`	n/a

Nesting, including parenthetical clauses, such as (a OR b) AND c	Allowed Use boolean operators to connect and nest keywords.	Allowed Use boolean operators to connect and nest keywords.	Allowed Use boolean operators to connect and nest keywords.
Implicit Operators	When you enter two values separated by a space, this is treated as an implicit AND condition. Example: `ssh fail`	The AND/OR treatment depends on the operator used in the search. For example, destinationAddress = 1.1.1.1, 2.2.2.2 is equivalent to destinationAddress = 1.1.1.1 or destinationAddress = 2.2.2.2 , while the query destinationAddress != 1.1.1.1, 2.2.2.2 is equivalent to destinationAddress != 1.1.1.1 and destinationAddress != 2.2.2.2	n/a
List Operations	n/a	Performs an inner join or a left join against a custom list. *Syntax for an Inner Join:*`source address in list CustomListName_CustomColumn Name` *Syntax for a Left Join:*`source address not in list CustomListName_CustomColumnName`	n/a
Time Format (when searching for events that occurred at a particular time)	No specific format The query needs to contain the exact timestamp string. Example: `"10:34:35"`	YYYY-MM-DD YYYY-MM-DD HH:mm YYYY-MM-DD HH:mm:ss.fff To narrow the time range, use the following operators: • in between (><) • greater than (>) • less than (<)	n/a

Special Characters: \ * ' "	Use the backslash (\) as an escape character.	Use the backslash (\) as an escape character.	n/a
Wildcard	Can appear anywhere in the value. Examples: *log log* lo*g* Searches for ablog, blog, long, etc.	Can appear anywhere in the field. Examples: name=*log Searches for ablog, blog, etc. in name field name="*log" name=*log Both search for *log	n/a
Escape a Wildcard Character	Can search for * by escaping the character. Example: log*	Can search for * by escaping the character. Example: log*	n/a

Implicit Operators

Implicit operators form the basic building blocks for query construction. Use them along with other operators and functions to create robust search queries.

To build queries, use the following general operators:

Operator	Alternative Operator	Examples
AND		#Firewall drop and sourceAddress equals 10.0.112.9 sourceAddress equals 10.0.112.9 and destinationAddress = 10.0.116.148

OR		fail OR ssh
		destinationAddress = 10.0.111.5 OR destinationAddress=10.0.116.148
		destinationAddress =10.0.111.5, 10.0.116.48

not equal	<> !=	destinationPort not equal 21
equals	= == is equal to equal	name equals INVALID password device vendor equals CISCO

greater than	> is greater	bytes In greater than 100
less than	< is less is lower less	bytes out less than 1000
greater equal than	>= gte greater equal	End Time greater equal than 2017-07-25 End Time greater equal than 2017-07-25 09:07 End Time greater equal than 2017-07-25 09:07:43 End Time greater equal than 2017-07-25 09:31:22.685
less equal than	<= lte less equal	Base Event Count less equal than or equal 50
starts with	startwith	message starts with FIN
does not start with		name does not start with FIN
ends with	endswith	message ends with out
does not end with		message does not end with out
contains	contain like has substring	name contains TCP
does not contain	does not have	name does not contain TCP
in list	match in list of	device vendor equals CISCO and source address in list customListName_ customColumnName device vendor equals CISCO and source address in list badGuyIpList_badGuyIp
not in list	not match not in list of	source address not in list customListName_ customColumnName source address not in list badGuyIpList_ badGuyIp
in subnet	n/a	source address in subnet 10.0.0.0/8
not in subnet	n/a	source address not in subnet 10.0.0.0/8

Understand the Types of Search Queries

Search supports the following types of search queries:

- "Full Text Search" below
- "Field-based Search" below
- "Hashtag (predefined searches)" below

Full Text Search

Searches across all fields using a ‘contains’ operation to determine if the value is found.

Syntax	Example
<value>	`ssh`

Field-based Search

Searches based on the field and operator designation to determine if the value is found in the specified field.

Your search can reference fields with the Unified Schema to either retrieve the field in results, apply a filter criteria or create a user defined expression. The **Unified Schema** defines a consistent event model that can be used across all of ArcSight family of products.

Syntax	Example
<key> <operator> <value>	`sourceAddress = 10.0.111.5`

Hashtag (predefined searches)

The Search feature includes several predefined queries out-of-the-box. In the query field, enter a hashtag, and then select the criteria to use. In addition to these predefined searches, you can use the session searches and save searches in the input field using a hashtag prefix.

To ensure the system correctly parses your query, if your search entity name includes one of the reserved words listed before, you should surround the query name with quotes (" ") in order to avoid ambiguity in the query statement.

This predefined query...	Description
#Configuration Changes	Lists configuration changes based on ArcSight categorization.
#DGA Events	Lists DGA-related events based on Microsoft Trace Log.
#DNS Events	Lists DNS-related events.
#DoS Events	Lists events indicating denial of service based on ArcSight categorization.
#ESM Correlation Events	Lists ESM correlation events.
#Failed Logins	Lists events indicating failed login activity based on ArcSight categorization.
#Failed Logins For User $Username	Lists events indicating failed login activity based on ArcSight categorization for a specific user. The user should be specified before running the search.
#Firewall Drop	Lists Drop Firewall events based on ArcSight categorization for a specific IP address. The IP address should be provided at runtime.
#Firewall Drop For $Ip	Lists Drop Firewall events based on ArcSight categorization.
#Firewall Events	Lists Firewall events based on ArcSight categorization.
#Malicious Code Activity	Lists events indicating malicious code activity based on ArcSight categorization.
#MITRE ATT&CK Events	Lists correlation events reported from ArcSight ESM content package: https://marketplace.microfocus.com/cyberres/content/esm-default-content. These events are forwarded to the ArcSight Database using ArcSight Forwarding connector, or any other flex connector which reports this information, using the following mapping: deviceCustomString6Label='MITRE ID' Where deviceCustomString6 contains the actual MITRE ATT&CK technique.
#Proxy Events	Lists Proxy events based on ArcSight categorization.
#SSH Authentication	Lists events indicating SSH Authentication events based on ArcSight categorization.
#VPN Connections	Lists events indicating VPN connections based on ArcSight Categorization.
#Vulnerabilities Events	Lists events indicating vulnerabilities based on ArcSight categorization and Vulnerability Scanner events.
#Windows Account Creation	Lists events indicating new windows accounts created based on the following event sources: • Microsoft-Windows-Security-Auditing:4720 • Security:624
#Windows New Service Created	Lists events indicating new windows services were created from the following event sources: • Microsoft-Windows-Security-Auditing:4697 • Service Control Manager: 7045

Use Reserved Words in a Query

To ensure the system correctly parses your query, if your search entity name includes one of the reserved words listed before, you should surround the query name with quotes (" ") in order to avoid ambiguity in the query statement.

For example, if your query name is: "System warnings and errors" use the following notation: #"System warnings and errors."

Reserved Words for Queries		
and	as	between
by	category	connecting to
contain	contains	custom float
distinct	does not contain	does not end with
does not start and end with	domain	ends with
endswith	equal	equals
filter	for	greater
greater equal	greater equal than	greater than
gte	has	has substring
hostname	ibt	id
in between	in cidr block	in list
in list of	in subnet	is
is between	is equal	is equal to
is greater	is greater or equal than	is greater than
is greater than or equal to	is larger	is larger than
is less	is less equal	is less or equal than
is less than	is less than or equal to	is lower
is lower than	is not	is not between
is not equal	is not equal to	ip
ip6	label	less
less equal	less equal than	less than
like	lte	mac

Reserved Words for Queries		
match	nibt	not
not between	not equal	not equals
not in between	not in cidr block	not in list
not in subnet	not match	not within subnet
or	path	pipe
port	span	starts and ends with
starts with	startswith	timestamp
username	uri	url
where	wheresql	within subnet
withinsubnet		

Include a Storage Group’s Filter in the Search Query

Search allows you to include a storage group in a query so that you can search for events only in that group. For example, you have a storage group called *Firewall Events* that has the following query: `categoryDeviceGroup='/Firewall' or categoryDeviceGroup='/IDS'`. Rather than entering that query again in Search, specify the following for your Search query: `storageGroup=Firewall Events`.

Use GlobalEventID in a Query

To help you identify an event that might be seen by multiple ArcSight components, the connectors assign the event a unique 64-bit ID. To include a GEID in your search query, enter globalEventID. You can view the GEID of the event in the Event Details.

Syntax	**Example**
global event id=<value>	`global event id= 2864991913017849867`

For events to have a GEID, use ArcSight Management Center to configure connectors to include the ID. For more information in:

- Non-SaaS environments, see "Generator ID Manager" in the guide corresponding to your deployment:
  - Administrator's Guide for the ArcSight Platform 24.2 - AWS Deployment
  - Administrator's Guide for the ArcSight Platform 24.2 - Azure Deployment
  - Administrator's Guide for the ArcSight Platform 24.2 - Google Cloud Deployment
  - Administrator's Guide for the ArcSight Platform 24.2 - Off-cloud Deployment
- SaaS environments, see " Setting Up Generator ID Management" in the *Quick Start for Administrators*.
- SmartConnectors, see "Unique Generator ID" in the *ArcSight SmartConnector Installation Guide*.

Specify an Alias for a Field

In the search query, you can enter the alias, or abbreviated term, for a field name rather than entering the full name. For the fields shown in the following table, you can also use the **presentable field names**, such as Agent Address. Search suggests presentable names.

Field	Aliases
agentAddress	agt agent ip
agentHostName	ahost
agentId	aid
agentMacAddress	amac agent mac
agentReceiptTime	art
agentTimeZone	atz
agentTranslatedAddress	agent translated ip
agentType	at
agentVersion	av
applicatonProtocol	app protocol
baseEventCount	cnt
bytesIn	in
bytesOut	out
categoryBehavior	behavior
categoryDeviceGroup	device group
categoryObject	object
categorySignificance	significance
categoryTechnique	technique

Field	Aliases
destinationAddress	dst destination ip destinationip dst ip dest ip target ip targetip target
destinationHostName	dhost destination name
destinationMacAddress	dmac destination mac
destinationNtDomain	dntdom
destinationPort	dpt destination port dstport dest port targetport target port
destinationProcessId	dpid
destinationProcessName	dproc
destinationTranslatedAddress	destination translated ip
destinationuserId	duid
destinationUserName	duser dst user dest user destination user dst usr
destinationUserPrivileges	dpriv
deviceAction	act

Field	**Aliases**
deviceAddress	dvc deviceaddr deviceip device ip
deviceCustomFloatingPoint*n* Valid values for *n* are integers between 1 and 4 For example: deviceCustomFloatingPoint1	cfp*n* For example: cfp1
deviceCustomFloatingPoint*n*Label Valid values for *n* are integers between 1 and 4 For example: deviceCustomFloatingPoint1Label	cfp*n*Label For example: cfp1Label
deviceCustomIPv6Address*n* Valid values for *n* are integers between 1 and 4 For example: deviceCustomIPv6Address2	c6a*n* device custom ipv6 *n* For example: c6a2
deviceCustomIPv6Address*n*Label Valid values for *n* are integers between 1 and 4 For example: deviceCustomIPv6Address2Label	c6a*n*Label For example: c6a2Label
deviceCustomNumber*n* Valid values for *n* are integers between 1 and 3 For example, deviceCustomNumber3	cn*n* For example: cn3
deviceCustomNumber*n*Label Valid values for *n* are integers between 1 and 6 For example: deviceCustomNumber6Label	cn*n*Label For example: cn6Label
deviceCustomString*n* Valid values for *n* are integers between 1 and 6 For example: deviceCustomString5	Cs*n* For example: Cs5
deviceEventCategory	cat
deviceHostName	dvchost
deviceMacAddress	dvcmac device mac
deviceProcessId	dvcpid
deviceReceiptTime	rt
deviceTimeZone	dtz

Field	Aliases
deviceTranslatedAddress	device translated ip
endTime	end
eventOutcome	outcome
fileNme	fname
fileSize	fsize
message	msg
requestUrl	request URL
sourceAddress	src source ip sourceip src ip
sourceHostName	shost
sourceMacAddress	smac source mac
sourceNtDomain	sntdomain
sourcePort	spt srcport src port
sourceProcessId	spid
sourceProcessName	sproc
sourceTranslatedAddress	source translated ip
sourceUserId	suid
sourceuserName	suser src user source user src usr
sourceUserPrivileges	spriv
startTime	start
transportProtocol	proto

Specify a Group of Fields

Search enables you to quickly select fields that have common groupings. In the query, you can specify a **group alias** that displays all field associated with the group. The following table provides some common group aliases.

Group Alias	Includes a list of these fields...
category	All category fields
custom float	All custom float fields
domain	All domain fields
hostname	All hostname fields
id	All ID fields
ip	All IP address fields
ip6	All IPv6 address fields
label	All label fields
mac	All MAC address fields
path	All path fields
port	All port fields
timestamp or time	All time fields (device receipt time, agent receipt time)
uri	All URI fields
url	All URL fields
username or user	All user fields

Specify IP Addresses and Subnets

Your query can include IPv4, IPv6, and MAC addresses. Search stores IPv4, IPv6, and MAC addresses in a format that provides search flexibility and enables you to perform the following actions:

Compare IP addresses for optimum performance

For example, `Agent Address > 192.10.11.12`.

Specify a range of IP addresses

For example, you can enter the following types of queries:

- `Agent Address in between 192.2.13.1 and 192.2.13.11`
- `Source Address greater equal than 192.10.11.12`
- `Destination Address less than 192.112.98.33`

Specify a range of IP addresses

For example, you can enter the following types of queries:

- `Agent Address in between 192.2.13.1 and 192.2.13.11`
- `Source Address greater equal than 192.10.11.12`
- `Destination Address less than 192.112.98.33`

Use abbreviated input search notation

You can enter the following types of queries:

- To specify IP addresses in the subnet starting with a particular value:
  `Agent Address in subnet 192.*`
- To specify an IPv4 address in a subnet that uses CIDR notation. The first eight bits are the network part of the address, leaving the last 24 bits for specific host addresses.
  `Agent Address in subnet 192.0.0.0/8`
- To specify an agent address in a subnet that uses CIDR notation. The first 24 bits are the network part of the address, leaving the last 40 bits for specific host addresses.
  `Agent Address in subnet 2001:0db8:0000:0000:0000:ff00:0042:8329/24`

Search stores MAC addresses in their original format.

To enter an IP or MAC address in a search query:

Enter the MAC addresses in the following formats:

- aa:aa:aa:aa:aa:aa
- aa-aa-aa-aa-aa-aa

The following table lists the query format and examples for the type of IP address.

Type of address	Format in a query...	Examples
IPv4	a.b.c.d	a.* a.b.* a.b.c.* a.b.c.d/8
IPv6	Full form	2001:0db8:0000:0000:0000:ff00:0042:8329
	Canonical form without leading zeroes in each group	2001:db8:0:0:0:ff00:42:8329
	Canonical form without consecutive sections of zeroes	2001:db8::ff00:42:8329
IPv6 in a subnet	Include CIDR notation	2001:0db8:0000:0000:0000:ff00:0042:8329 2001:0db8:0000:0000:0000:ff00:0042:8329/24 2001:db8::/32 **NOTE**: For the 2001:db8::/32 format, you can omit part of the IPv6 address, depending on the subnet that you are querying.
MAC	a:b:c:d:e:f a-b-c-d-e-f	94:18:82:6D:63:74 94-18-82-6D-63-74

Use an Operator in the Query

Create powerful queries with search operators and functions. You can also select several out-of-the-box system searches that contain a query plus specific criteria. Operators, such as eval, can be chained together to create complex queries.

> Search operators and functions must be entered in all lower case letters when they are used in queries.

> Do not use a raw event field as part of a query.

Use Cases for Search Operators

The following are just a few examples of the flexibility and power of search operators.

- "General Search Operator Use Cases" below
- "Operator Chaining Use Cases" on the next page

You may need to adjust a query to work with your own fieldsets.

For more information about working with operator chaining see "Use an Operator in the Query" on the previous page and "Chaining Search Operators" on page 319.

General Search Operator Use Cases

I want to see where possible brute force password guessing is happening.

Additional Information: To determine this, I want to see the top 10 devices that are responsible for the most number of failed logins.
Operator used: top

```
#FailedLogin | top 10 deviceEventClassId
```

I want to know the hourly amount of data transfer on MyWebserver.

Operators used: chart, sum, by, span

```
sourcehostname = MyWebserver.com | chart sum(bytesIn), sum(bytesOut) by
deviceVendor, deviceProduct span 1h
```

I want to see a sum of events, grouped by hostname and day.

Operator used: chart
Aggregate function: sum (This summarizes the values passed as an input, grouped by the "by" clause.)
Time bucket: 1h (Events are grouped in time increments of one hour.)

```
| chart sum(baseEvents) by hostName span 1h
```

I want to determine all account lockouts, grouped by user name.

Operators used: wheresql, top

```
(deviceVendor="Microsoft" and deviceProduct="Microsoft Windows") or
deviceProduct="Unix" | wheresql  deviceEventClassId in
["Security:539","Security:644","arcsight:66:0","Microsoft-Windows-Security-
Auditing:4740","Microsoft-Windows-Security-Auditing:6279"] and
destinationUserName is not null |top destinationUserName
```

Operator Chaining Use Cases

I want to identify the rare occurrences of Firewall events.

Additional Information: I want to determine this from 3 specific fields' data (device vendor, category device group, and name).
Operators used: rename, rare (bottom)

```
#Firewall Events | rename deviceVendor as DV | rename category device group
as CDG | rare DV , name , CDG
```

I want to isolate vulnerabilities.

Additional Information: I will base this on data from 3 significant fields (device vendor, category technique, and device group), then determine the most common occurrences found in those categories.
Operators used: rename, rare (bottom)

```
#Vulnerabilities | rename deviceVendor as DV | rename category technique as
CT | rename category device group as CDG | rare DV , name , CDG , CT
```

I want to apply filters to a set of fields and then to extract the top-50 most common occurrences of those events.

Operators used: where, top

```
source address is not null | where Bytes In >= 3000 | where Category
Outcome = /Success | top 50 source address , Category Outcome
```

I want to determine the top insecure processes on devices in my company.

Operators used: top, rename

```
destinationProcessName in ["telnetd", "ftpd", "pop3", "rsh" ,
"imapd","rexec"] | top destinationProcessName  | rename
destinationProcessName as  "Process"
```

```
deviceVendor = ArcSight | rename sourceUserName USER | top USER
```

Show me all configuration changes by product.

Operators used: top, rename

```
categoryBehavior = "/Modify/Configuration" and categoryOutcome = "/Success"
| top deviceProduct | rename deviceProduct_count_2 as "Changes" | rename
deviceProduct as "Product"
```

I want to apply filters to a set of fields and then to extract the top-50 most common occurrences of those events.

Operators used: where, top

```
source address is not null | where Bytes In >= 3000 | where Category
Outcome = /Success | top 50 source address , Category Outcome
```

Chaining Search Operators

Construct a complex query statement by chaining together multiple search operators into a single query instead of implementing separate queries. This powerful capability lets you perform robust, real-world searches while providing the flexibility to customize searches for specific scenarios. You can save these searches to reuse them in future updates.

Operator chaining is a process by which the search takes a set of results from one operation and uses these results as input for the next operation. Chaining a series of operations equips you with the options needed to "slice and dice" data to extract and analyze it on a highly granular level. Operator chaining works with all the pipeline operators (rename, eval, where/filter, wheresql, top, bottom/rare and chart/stats). The number of search operators supported in a particular query might vary, based on your database configuration and load.

During operator chaining, fieldsets become more restricted as more operators are added to the query, especially with eval and aggregation operators. For example:

```
severity!=null | top severity | stats avg (Count_1) by severity
```

For information about operator chaining workflows, see "Use Cases for Search Operators" on page 316.

Syntax Recommendations

Use the following syntax recommendations to ensure operator chained searches succeed.

- To use the fields from a **lookup list** table with the search operators, make a **join** with one of the lookup fields using the **"in list"** operator. You also should add the lookup list fields to the current fieldset. For example:

  Add a lookup list with name as **Customer** then add its field, which will be used with search operator (e.g. **Customer_Vendor**) to the current fieldset.

  ```
  Source Address in list Customer_Address | wheresql Customer_Vendor =
  'Microsoft'
  ```

- **Alias/New** field name cannot be an existing field name or a synonym of an existing field name. Also, an alias field name cannot be an existing group name or reserved word.

  In this example, "destination hostname" and its synonyms "dhost" and "destination name" cannot be used as aliases.

- **Alias/New** field name should not have spaces (like test 1), otherwise it will cause conflicts. These are examples for acceptable alias/new field names:

  ```
  name is not null| eval test1 = concat(name, "_test") | eval test_2 = upper
  (test1)
  ```

  ```
  name is not null | where name not equals ARCSIGHT | chart count (distinct
  name) as Dcount by name
  ```

- For all pipeline operators, special characters used in aliases have syntax restrictions. This includes those described in the eval, chart and stats, rename, top and bottom, and where operators.
- The following is an example of how to use a generated field with **eval** in another operator:

  ```
  | eval test = upper ( name ) | where test != "ARCSIGHT"
  ```

- **Count_<number>** cannot be used as an alias for a field name.
- The **wheresql** operator is case sensitive. Just like all other operators, the wheresql name must be stated in all lower case letters.
- Do not create new field name with spaces if these new fields will be used later with the **wheresql** operator. The where condition of wheresql operator will not recognize new field with spaces that were created by previous operators. In addition to wheresql, this is also applicable for the **eval** and **chart and stats** operators. Here are two **invalid** examples:

  ```
  | rename name as new name | wheresql new name = 'TCP'
  ```

  ```
  destination port is not null | eval convert name = upper ( Name ) |
  wheresql convert name = 'MSTYPE'
  ```

- You can use the **where** operator to filter dynamic fields, for example:

  ```
  | top 5 Name | where Count_1 > 1000
  ```

- More filters can be added to a search through the Fields Summary feature. Click on Fields Summary and select a field and a value for that field. The new filter will be appended at the end of the query in use as a |**where** clause.
- Multiple **aggregate functions** can drastically modify drastically the fieldset that is available for the next pipe operator. for example:

  ```
  name is not null | char count (Name) by Device Vendor span 1h | chart
  count (Name) by Name
  ```

  The second chart pipe cannot access to span operations because the NET, DRT, dBRT are not available for this chaining level.

  Same scenario applies to the **top** operator:

  ```
  name is not null | top Name | char count(count_Name_1) by Name span 1h
  ```

chart/stats

The **chart/stats** operators are **pipe expressions** that apply aggregate operations over a set of events and/or results from an operator chaining query. Users can specify rules about how chart and stats operations are grouped and the events are organized into summary rows. For example, chart and stats operators can group events based on any field or time period.

For information about other operators, functions, and syntax requirements, see "Use an Operator in the Query" on page 315.

Syntax and Structure for chart/stats

The **chart/stats** operators apply aggregate operations over a collection of events and/or results from an operator chaining query. They display search results for specified fields in the Search Results table.

- "Syntax" below
- "Grouping Events" on page 324
- ""Group by" Expressions" on page 326

For additional information about the construction and usage of the chart/stats operators, see the chart/stats overview, Aggregate Functions for chart/stats, and Cheat Sheet for chart/stats.

Syntax

```
...| chart <function>  ( <decorator> field ) as <customName> , …, by <field>,
<…moreFields> span <timeField> = timeBucket
...| stats <function>  ( <decorator> field ) as <customName> , …, by <field>,
<…moreFields> span <timeField> = tiemBucket
```

Operator name: | chart , | stats

> The user can use chart or stats to set an aggregation query in the search bar. Chart and stats keywords are considered synonyms, and the behavior and results will be the same.

Functions: *<function> (<decorator> field) as <customName>*

> Chart and stats operators can apply the following list of functions over a group of events:

> Query input within [ ] (straight brackets) is optional for the query syntax.
>
> Input within < > (angle brackets) indicates users may enter their own input:
> ... | rename <source_name> as <NewSourceName>

Available functions for chart/stats pipe operators

Aggregate Function	Dataype
Count Count Distinct	All datatypes
Min, Max	Numbers

Available functions for chart/stats pipe operators, continued

Aggregate Function	Dataype
Average (Agg.), Standard deviation (Stdev), Sum	Numbers
Earliest, Latest	Dates

The following examples highlight several scenarios for how events are counted.

- **Example that counts the names and sum of all Bytes in for every group of events, organized by Category Outcome**:

  ```
  ...| chart count (name), sum(bytes in) by category outcome
  ```

  This example organizes the events in groups, which have the same category outcome, then it counts the names and sums all the "bytes in" values of every group. Note that the functions enclose the field that is going to be used as an aggregation parameter for every group. More than one function should be separated by a comma. The search results table displays one column per aggregate function.

- **Example that counts the names and sum of all Bytes in for every group of events, organized by Category Outcome, and Destination Hostname**:

  ```
  ...| chart count (name), sum(bytes in) by category outcome, destination
  hostname
  ```

  This example organizes the events into groups with the same category outcome and same destination hostname. It then counts the names and sums all the "bytes in" values of every group. Note that the group fields are separated by a comma.

- **Example that counts the names and sum of all Bytes in for every group of events organized by Category Outcome and Destination Hostname**: It changes the default name for the count result to MyCount.

  ```
  ...| chart count (name) as MyCount, sum(bytes in) by category outcome,
  destination hostname
  ```

  The default name for the columns created in chart and stats operators can be renamed.

- **Example that counts the distinct names and sums all Bytes in for every group of events organized by Category Outcome**:

  ```
  ...| chart count (distinct name), sum(bytes in) by category outcome
  ```

  Using **distinct** flag for the count function makes the operator count only different names. Names that are repeated are not counted again.

Aliases that contain special characters have the following syntax restrictions:

Syntax Restrictions for Special Characters

Special Characters	Restrictions	Examples
+, *, &, !, - , = , <, >, |	Need to be enclosed in single/double quotes when they are reused and the search works as expected.	| rename file path as 'FP+DEV' | chart count ('FP+DEV') by 'FP+DEV'
@, #, +, ?, /, ^, [], {}, _ , *, ., ~, $, %	Do not need to be enclosed in single/double quotes when they are reused and the search runs as expected.	| rename file path as 'FP$DEV' \| chart count (FP$DEV) by FP$DEV
\	When a backslash is used in an alias name, add an additional backslash \ to escape the character. It does not need to be enclosed in single/double quotes when it is reused and the search runs as expected. The outcome field name should show only one backslash.	| rename file path as 'FP\\DEV' | chart count (FP\\DEV) by FP\\DEV

Grouping Events

The chart/stats pipe operators group events based on two strategies: by field and by time bucket. By default chart and stats operators need at least one "by field" in order to group data.

The chart/stats **Aggregate Functions** are discussed in detail in a separate topic.

The following examples are based on a simplified version of the Events Table below.

Simplified Events Table

Name	Category Outcome	Destination Hostname	Normalized Event Time	Bytes In
BCtType	/Interrupt	11.12.11.19	12/29/22 10:34:15.635	3404
ArstType	/Failure	45.67.89.112	12/29/22 1-:34:15.635	3022
BCtType	/Failure	10-.12.93.6	12/29/22 11:34:15.635	3009

Simplified Events Table, continued

Name	Category Outcome	Destination Hostname	Normalized Event Time	Bytes In
FtType	/Success	45.67.89.112	12/29/22 12:34:15.635	3216
MSType	/Interrupt	45.67.89.112	11/04/22 10:10:02.000	3063
MSType	/Interrupt	10.12.93.6	12/29/22 11:32:54.064	3409

- **Example of grouping by the Name field**: The events displayed in the table below will be grouped into 4 elements because there are only 4 different values for the files Name.

  Summary from the Simplified Events Table, grouped by the Name field

Name	Number of Events
ArstType	1
BCtType	2

- **Example of grouping by more than one field**: In this scenario, the chart/stats operator will group the events based on the combination of the Name and Category Outcome fields. Grouping by more than one field will create summary rows whose values of Name and Category Outcome are organized in different combinations.

  Row summary from the Simplified Events Table, grouped by the Name field

Name	Category Outcome	Number of Events
ArstType	/Failure	1
BCtType	/Failure	1
BCtType	/Interrupt	1
FtType	/Success	1
MSType	/Interrupt	2

- **Example of a Time bucket grouping by 1h**: Time bucket grouping organizes events based on time buckets (periods of time used to group events for a specific time scale). For example, if the time bucket is 1 hour, all events are going to be grouped by an hourly scale. This means that events that occurred in different minutes are considered to be part of the same group. Chart and stats operators can create bucket scales of seconds, minutes, hours, and days. Combinations of time bucket, such as 2d1h, are also allowed.

Row summary from the Simplified Events Table, grouped by a 1h time bucket

Name	Number of Events
12/29/22 10:00:00/000	3
12/29/22 11:00:00.000	2
12/29/22 12:00:00.000	1

Time bucket trouping and field grouping can be used together. However, the time bucket grouping is executed in the first group, then the operator is applied to the remaining group rules as defined by the fields.

"Group by" Expressions

Group by expressions: by *<field>, <...moreFields>*

The group by expressions are separated by commas. The fields used in this part of the query work to organize the events. There is a hierarchy for the fields used.

```
... | chart count (name), sum(bytes in)
```

This organizes the query syntax by category outcome, destination and hostname. The operator creates groups based on the combinations of category outcome and destination hostname.

Time bucket grouping: span *<timeField> = tiemBucket*

This is another way to apply grouping based on time buckets. A time bucket can be set using the following syntax:

Simple scale: 1d (one day), 2m (two minutes), 35s (thirty five seconds)

Complex scale: 1d2m (one day and two minutes). Complex scales must be organized with the highest order period of time to the lowest.

Time scales used to represent time buckets

Time Bucket	Representation
Days	1d, 20d
Hours	4h
Minutes	2m
Seconds	12s

> Time buckets only work with Normalized event Time, Device Event Time, and Database Event Time. This group strategy is optional. If used, it is applied at the beginning of the calculations before any "by expressions."

Allowed syntax to define span expressions (grouping by time)

```
...| chart count (name), sum(bytes in) by category outcome span 1h (Date-
picker field time is used)
...| chart count (name), sum(bytes in) by category outcome span = 1h (Date-
picker field time is used)
...| chart count (name), sum(bytes in) by category outcome span Normalized
event time = 1h
```

Rules and exceptions

- All chart/stats commands accept only one field in the input.
- The input field must contain a column that exists in the database.
- Span expressions can be used only once if the time column is available:

  ```
  ...| chart count (name), sum(bytes in) by category outcome | chart count
  (name), sum(bytes in) by category outcome span 1h
  ```

  In the example above, the second span expression cannot be used since the first pipe expression removed the time field from the fieldset.

  ```
  ...| top 5 name | chart count (name), sum(bytes in) by category outcome
  span 1h
  ```

  In the example above, the span expression cannot be used since the first pipe expression removed the time field from the fieldset.

For information about other operators, functions, and syntax requirements, see "Use an Operator in the Query" on page 315.

Aggregate Functions for chart/stats

The chart/stats operators offer a set of Aggregate functions that can be used over a group of events. The previous tables display the number of events that are a match in some specific grouping. This counting operation is named as the count function for chart and stats operator.

All of the examples below use data from a Simplified Events Table, described in the chart/stats topic.

- **Example of counts of all Names grouped by Category Outcome**: This aggregate function counts how many fields are in every group of events organized by Category Outcome.

  Row summary from the Simplified Events Table, showing the Names in every group organized buy Category Outcome

Category Outcome	Count of Names
/Failure	2
/Interrupt	2
/Success	1

- **Example of counts of all the Distinct Names grouped by Category Outcome**: The main difference from the previous example is the **distinct** flag, which tells the operator to count only one occurrence of the used field. If the are repeated values, the operator will consider only one of those values.

  Row summary from the Simplified Events Table of the amount of Names in every group organized by Category Outcome

Category Outcomes	Count of Distinct Names
/Failure	2
/Interrupt	2
/Success	1

- **Example of the Sum all values from (bytes in field) grouped by Category Outcome**: The **sum** function adds all the numeric values of bytes in field for every group of events.

  Row summary from the Simplified Events Table showing the sum of Bytes in field for every group organized by Category Outcome

Category Outcome	Sum of Bytes in
/Failure	3022 + 3009 = 6031
/Interrupt	3404 + 3063 + 3409 + 9876
/Success	3216

- **Example calculates the arithmetic average (avg) of the values from (bytes in field) grouped by Category outcome**: The avg function calculates the average of all the numeric values of bytes in field for every group of events.

  Row summary from the Simplified Events Table of the average number of Bytes in field for every group organized by Category Outcome

Category Outcome	Average Bytes in
/Failure	3015.5
/Interrupt	3292
/Success	3216

- **Example calculates the standard deviation (stdev) of the values from (bytes in field) grouped by Category outcome**: The avg function calculates the standard deviation of all the numeric values of bytes in field for every group of events.

  Row summary from the Simplified Events Table showing the standard deviation of Bytes in field for every group organized by Category Outcome

Category Outcome	Stdev of Bytes in
/Failure	6.5
/Interrupt	161.94
/Success	0

- **Example calculates the Minimum of the values from (bytes in field) grouped by Category Outcome**: The Min function returns the minimum value of the Bytes in field for every group of events.

  Row summary from the Simplified Events Table of the minimum value of Bytes in field for every group organized by Category Outcome

Category Outcome	Min of Bytes in
/Failure	3009
/Interrupt	3063
/Success	3216

- **Example calculates the Maximum of the values from the (Bytes in field) grouped by Category Outcome**: The Max function gets the maximum value of bytes in field for every group of events.

Row summary from the Simplified Events Table showing the maximum value of the Bytes in field for every group organized by Category Outcome.

Category Outcome	Min Bytes in
/Failure	3022
/Interrupt	3409
/Success	2316

- **Example calculates the latest date from (Normalized Event field) grouped by Category Outcome**: The latest function gets the maximum date of Normalized event time field for every group of events.

Row summary from the Simplified Events Table showing the maximum value of Normalized event time for every group organized by Category Outcome

Category Outcome	Max of Normalized Event Time
/Failure	12/29/22 11:34:15.635
/Interrupt	12/29/22 11:32:54.064
/Success	12/29/22 12:34:15.635

- **Example calculates the earliest date from (Normalized event field) grouped by Category outcome**: The earliest function gets the minimum date of Normalized event time field for every group of events.

Row summary from the Simplified Events Table showing the minimum value of Normalized event time for every group organized by Category Outcome.

Category Outcome	Min of Normalized Event Time
/Failure	12/29/22 10:34:15.635
/Interrupt	12/29/22 12:34:15.635
/Success	11/04/22 10:10:02.000

For additional information about the construction and usage of the chart/stats operators, see the chart/stats overview, Syntax and Structure for chart/stats, and Cheat Sheet for chart/stats.

For information about other operators, functions, and syntax requirements, see "Use an Operator in the Query" on page 315.

Cheat Sheet for chart/stats

The flexibility of the chart/stats operators helps you construct powerful queries. Here are some simplified examples for using them.

I want to count occurrences of a field.

Group the events by a field and **count** how many names are in each group.

```
...| chart count (name) by Destination Hostname
```

Group the events by a field and **count** how many **unique** (distinct) names are in each group.

```
...| chart count (distinct name) by Destination Hostname
```

I want to work with mathematical operations.

I want to see the **summation** of Bytes In for every group of events. The events/rows are grouped by Destination Hostname.

```
...| chart sum (Bytes In) by Destination Hostname
```

I want to see the **average** of Bytes In for every group of events. The events/rows are grouped by Destination Hostname.

```
...| chart avg (Bytes In) by Destination Hostname
```

I want to see the **minimum** of Bytes In for every group of events. The events/rows are grouped by Destination Hostname.

```
...| chart min (Bytes In) by Destination Hostname
```

I want to see the **maximum** of Bytes In for every group of events. The events/rows are grouped by Destination Hostname.

```
...| Chart max (Bytes In) by Destination Hostname
```

Use date functions to understand the timing of events.

Get the date of the **oldest** (earliest) event/row for every group of events/rows. The events/rows are grouped by Destination Hostname.

```
...| chart earliest (Normalized event time) by Destination Hostname
```

Get the date of the **newest** (latest) event/row for every group of events/rows. The events/rows are grouped by Destination Hostname.

```
...| chart latest (Normalized event time) by Destination Hostname
```

I want to use a synonym for a chart operator.

The **chart** operator can be replaced by **stats** during the execution of a queries.

```
...|chart count (name) by Destination Hostname
```

I want to use aliases of aggregated fields.

Operator Chaining Levels: The level is a number that reflects the operator chaining level of the query. Every level can be identified by how many pipes symbols are in the query.

```
Destination Hostname is not null | eval test = abs (Bytes in) | chart count
(name) by Destination Hostname
```

Level 0	Level 1 (first pipe)	Level 2 (second pipe)

The following is an example of a label's structure of an aggregate field.

```
...| chart count (name) by Destination Hostname
```

The field will be named by default as: function_field_(Operator_chaining_level)

Aliases for aggregate fields: This can be used to replace the default name of an aggregate field and to provide a meaningful description of the new field.

```
...|chart count (name) as NumberOfNames by Destination Hostname
```

I want to use combined functions for the same query.

Several functions can be applied to every group of events/rows. For every group:

- Retrieve how many Names are in each group.
- Retrieve the summation of Bytes In.
- Retrieve the newest event/row based on Normalized Event Time.

```
...| chart count (name), sum (Bytes In), latest (Normalized event time) by
Destination Hostname
```

I want to use one aggregate field and more than one "group by" field.

The events or rows that share the same Destination Hostname and the same Agent Severity will be organized in the same group.

```
...|chart count (name) by Destination Hostname, Agent Severity
```

I want to combine functions in the same query and use more than one "group by" field.

For every group of events/rows that share the same Agent Severity and the same Destination Hostname:

- Get how many Names every group has.
- Get the summation of Bytes In.
- Get the newest event/row based in Normalized Event Time.

```
...|chart count (name), sum (Bytes In), latest (Normalized event time) by
Agent Severity, Destination Hostname
```

I want to use an alias for more than one aggregate field and more than one "group by" field.

For every group of events or rows that share the same Agent Severity and the same Destination Hostname:

- Get the summation of Bytes In and rename the field as TotalBytesIn.
- Get the newest event/row based in Normalized Event Time and rename the field as: LastRegister

```
...| chart sum (Bytes In) as TotalBytesin, latest (Normalized event time) as
LastRegister by Agent Severity, Destination Hostname
```

I want to group events by time buckets.

Time bucket expressions require the fieldset used in the query to contain at least one of the following time fields:

- Normalized event time
- Device Received Time
- Database Receipt Time

How does a time bucket work? Based on an input table that contains the one of the fields described above, the algorithm organizes the events based on the time bucket. This bucket consists of a number and a time unit, (second (s), minute (m), hour(h), day (d)).

Bucket timing: Bucket timing takes this value and organizes the rows, based on the distribution of time. The following are examples of time bucket usage.

- **1h**: Rows will be grouped in chunks that are distributed hourly.
- **2d**: Rows will be grouped in chunks that are distributed every 2 days.
- **1s**: Rows will be grouped in chunks that are distributed every 1 second.

Combination of unit times: Combinations can be addressed as the following examples:

- **2d1h**: Rows will be grouped in chunks that are distributed every 2 days and 1 hour.
- **2d1s**: Rows will be grouped in chunks that are distributed every 2 days and 1 second.
- **1h1s**: Rows will be grouped in chunks that are distributed every 1 hour and 1 second.

The units respect the order of magnitude of time. For example, in **1s1h**, every 1 second and 1 hour is not valid. The correct syntax is **1hs**.

Examples of time buckets

The events/rows are grouped using the field N.E.T, distributing the events in groups of 1 hour. The events that match the sames time bucket and the same Agent Severity will be organized into the same group. Then returns how many names contains every group.

```
...| chart count (name) by Agent Severity span Normalized Event Time = 1h
```

The events/rows are grouped using the default time field selected, distributing the events in groups of 1 hour. The events that match the same time bucket and the same Agent Severity will be organized in the same group. Then, the query returns how many names every group contains.

```
...| chart count (name) by Agent Severity span = 1h
```

The events/rows are grouped using the default time field selected, distributing the events in groups of 1 hour and 2 seconds. The events that match the same time bucket and the same Agent Severity will be organized in the same group. Then, the query returns how many names every group contains.

```
...| chart count (name) by Agent Severity span 1h2a
```

For additional information about the construction and usage of the chart/stats operators, see the chart/stats overview, Syntax and Structure for chart/stats, and Aggregate Functions for chart/stats.

For information about other operators, functions, and syntax requirements, see "Use an Operator in the Query" on page 315.

rename

Use the pipeline operator **rename** to assign a new name to a portion of the search query.

- "Syntax" below
- "How Do I Use This?" below

Syntax

```
... | rename source_name as new_source_name
```

where

- *source_name* represents the field that you want to rename.
- *new_source_name* represents the new name that you want to apply to the field.

Aliases that contain special characters have the following syntax restrictions:

Special Characters	Restrictions	Examples
@, #, +, ?, /, ^, [], {}, _ , *, ., ~, $, %	Do not need to be enclosed in single/double quotes when they are reused and the search runs as expected.	| rename source address as 'source@' | rename source@ as SA
&, !, - , = , <, >, |	Need to be enclosed in single/double quotes when they are reused and the search works as expected.	| rename source address as 'source&' | rename 'source&' as SA
\	When a backslash is used in an alias name, add an additional backslash \ to escape the character. It does not need to be enclosed in single/double quotes when it is reused and the search runs as expected. The outcome field name should show only one backslash.	| rename source address as 'source\\' | rename source\\ as SA

How Do I Use This?

- Assign a new address name to an existing source address.

  ```
  ... | rename source_address as SourceAddressABC
  ```

For more information about other operators, functions, and syntax requirements, see "Use an Operator in the Query" on page 315.

top and bottom

The **top** and **bottom** operators list the search results of the most common values for the specified field. The resulting values are listed in tabular format from the highest count value to the lowest.

The fields can be event fields, available in the application menu. If multiple fields are specified, you need to separate the field names with white space or a comma.

As a convenience, top and bottom operators are included in out-of-the-box system searches. These system searches contain a query plus specific criteria.

- "top" below
- "bottom" below
- "Syntax" below
- "Parameters" on the next page
- "How Do I Use This?" on page 341

top

The **top** operator provides the most common values for the specified field(s). The values are listed from the highest count value to the lowest.

bottom

The **bottom** operator provides the least common values for the specified field(s). The values are listed from the lowest count value to the highest. The **rare** operator can be used as an alias to **bottom**.

Syntax

```
…| top [N] field1 [,field2, field3]
```

where:

- [ ] indicates optional input you may enter.
- Italicized characters indicate where a user can enter *custom* field information.

- Only *N* is optional. *N* limits the matches to the top *n* values for the specified fields. One (1) field is required, but you can specify a maximum of five (5) integers, separated by commands.
- If you do not specify *N*, the default value is 500.
- If included, *N* should be between one (1) and the search results limit.
- The operator performs a standard count (*) to retrieve the number of events.
- No search operator other than "where" can be used in a query after the top/bottom operator is used.
- Queries that use the top/bottom search operator along with fields that begin with "Device" may fail completely or partially. To avoid this behavior, select the field from the drop-down options that are available as you enter the query. This also applies to fields that are not editable.
- Aliases that contain special characters have the following syntax restrictions:

Special Characters	Restrictions	Examples
*, -	Do not need to be enclosed in single/double quotes when they are reused and the search works as expected.	Destination port <> null | rename Destination Port as 'D*P' | rename Source Port as 'S*P' | top 10 D*P , S*P
@, #, +, ?, /, ^, [], {}, _ , *, ., ~, $, %	Do not need to be enclosed in single/double quotes when they are reused and the search works as expected.	Destination port <> null | rename Destination Port as 'D#P' | top D#P
&, !, =, <, >, +, |	Need to be enclosed in single/double quotes when they are reused and the search works as expected.	Destination port <> null | rename Destination Port as 'D=P' | top 'D=P'
\	When a backslash is used in an alias name, add an additional backslash \ to escape the character. It does not need to be enclosed in single/double quotes when it is reused and the search runs as expected. The outcome field name should show only one backslash.	Destination port <> null | rename Destination Port as 'D\\P' | top D\\P

Parameters

The parameters are *N* and a list of comma-separated fields.

For the **top** operator, when multiple fields are specified, the count of unique sets for all of the fields is listed from the highest to lowest count. For the **bottom** operator, the fields are listed from the lowest to the highest count.

How Do I Use This?

The top operator is used to limit the matches to the top *N* values for the specified fields. Likewise, the bottom operator is used to limit the matches to the bottom *N* values for the specified fields. The default count number is 500 unless you specify a value for *N*. Here are a few examples:

- You want to limit your results to the 1,000 most common event categories.

  ```
  …| top 1000 deviceEventCategory
  ```

- You want to limit your search for the top 5 event categories.

  ```
  …| top 5 categories
  ```

- You want to see all products from a specific vendor that are sending the least number of events.

  ```
  deviceVendor = Vendor| bottom 10 deviceProduct
  ```

- See the "rare" user action in the organization happening using the HTTPS protocol.

  ```
  protocol=https | rare requestuseragent
  ```

For information about other operators, functions, and syntax requirements, see "Use an Operator in the Query" on page 315.

where

The **where** operator displays events that match criteria specified in a "where" expression. Where expressions act as filters to return only those results that fulfill a particular condition. In fact, **filter** is a synonym of the operator **where**. Results for where expressions are binary, satisfying either true or false.

- "Syntax" below
- "How Do I Use This?" on the next page

Syntax

```
... | where <expression>
```

where:

- The *where* operator represents the filter you want to use us on a field.
- The *expression* field represents a valid field-based query expression. Arithmetic expressions or functions are not supported.
- For *where any … contains* queries, all fields are executed, but only results for alpha (letter) IDs are displayed. For example, results for the ID “HostName” display, but results for the ID CEID-3631 will not display, even though the field is executed.
- Avoid renaming fields used implicitly in previous `where` any expressions.

  Do not use:

  |where any category is not null |rename category behavior as test

  Instead use:

  |where any category is not null |eval test=tostring(category behavior)

  where:

  The `category behavior` field is used implicitly in the where any expression when category is used.
- You can specify multiple field conditions in one query expression by using the listed operators between them. The conditions can also be nested. For example:

  `(name="John Doe" OR name="Jane Smith")AND message!="success"`
- Aliases that contain special characters have the following syntax restrictions:

Special Characters	Restrictions	Examples
@, #, +, ?, /, ^, [], {}, _ , *, ., ~, $, %	Do need to be enclosed in single/double quotes when they are reused and the search works as expected.	| rename source address as 'source@' | where source@ <> null
&, !, - , =, < , >, |	Need to be enclosed in single/double quotes when they are reused and the search works as expected.	| rename source address as 'source&' | where 'source&' <> null
\	When a backslash is used in an alias name, add an additional backslash \ to escape the character. It does not need to be enclosed in single/double quotes when it is reused and the search runs as expected. The outcome field name should show only one backslash.	| rename source address as 'source\\' | where source\\ <> null

How Do I Use This?

```
... | where eventId is NULL
```

```
... | where eventId=10006093313 OR deviceVersion CONTAINS “4.0.6.4924.1”
```

```
... | where eventId >=10005985569 OR categories= “/Agent/Started”
```

For information about other operators, functions, and syntax requirements, see "Use an Operator in the Query" on page 315.

wheresql

The wheresql operator displays events that match criteria specified in a boolean expression (satisfying either true or false). These expressions act as filters to return only those results that fulfill a particular condition. You can use the Eval functions listed in this guide in wheresql expressions. Database SQL functions that can be used in a Where clause of an SQL query can also be used in wheresql operator expressions. This allows you to construct powerful queries.

For example, to detect plain text credit card information in events, you can create the query:

```
| wheresql regexp_ilike(deviceCustomString1,
'^(?:4[0-9]{12}(?:[0-9]{3})?|[25][1-7][0-9]{14}|6(?:011|5[0-9][0-9])[0-9]
{12}|3[47][0-9]{13}|3(?:0[0-5]|[68][0-9])[0-9]{11}|(?:2131|1800|35\d{3})\d
{11})$')
```

- "Syntax" below
- "Parameters" below
- "How Do I Use This?" on the next page

Syntax

```
…|wheresql boolean_expression
```

Wheresql expressions are binary, satisfying either true or false. You must construct your queries with syntax supported by the ArcSight Database.

Parameters

You can include the following parameters:

- AND (&&)
- OR (||)
- NOT (|)
- LIKE

How Do I Use This?

- You want to construct filter your search results to display numerical data between 10 and 50.

  ```
  …|wheresql bytesOut between 10 and 50
  ```

- Match the company name of a device vendor.

  ```
  … | wheresql regexp_ilike(deviceVendor, 'Company_Name')
  ```

Syntax Recommendations

> ⚠ In a query statement, the wheresql operator treats everything following the “wheresql” name as string values. It is important that each field in the selected fieldset uses valid names (including spelling and capitalization) that matches what is present in the database. Otherwise, the search generates errors.
>
> To determine the exact spelling and capitalization of each field in your fieldset, click Manage and select the fieldset name you are using. You can use this page as a reference when you write your query or to troubleshoot if you receive an error message.

Use the following syntax to ensure searches and schedule searches that use the “wheresql” condition succeed:

- As with all search operators, the operator name must be in all lower case letters.
- Fields must have valid names as listed in the ArcSight Database.
- Enclose **string** values in single quotes. For example, use `name = ‘TCP’` instead of `name = TCP`. (Fields should be named exactly as in the ArcSight Database when using wheresql. In this case, Name with uppercase would cause an error.)
- If **mathematical operators** such as square root or pi **contain a pipe**, the wheresql condition must be enclosed in double quotes. For example:

  `|wheresql “bytesin > (|/ 25.0)”`
- The "wheresql" condition cannot contain a limit. For example, the following statement is invalid: `| wheresql Name = 'TCP' limit 1000`
- Do not use the word "wheresql" for the name of a search, a search criteria, or a search query. The "wheresql" is a reserved word for the name of the search operator only.
- Do not use a semicolon at the end of the condition.

For information about other operators, functions, and syntax requirements, see "Use an Operator in the Query" on page 315.

eval

The **eval** operator displays events after evaluating the results of a specified function. This can be a mathematical, string, or boolean operation and is evaluated when the query is run. The resulting value is assigned to a field name. Once a new field has been defined by the eval operator, it can be used in the query to further refine the search results.

For information about other operators, functions, and syntax requirements, see "Use an Operator in the Query" on page 315.

General Syntax for Eval

The **eval** operator displays events after evaluating the result of the specified function. Eval operators use the following syntax formats:

```
| eval newField = expression
```

```
EXPRESSION Evaluation of values(fields) or constants with operators
```

where

- *expression* represents a valid field-based query expression.
- Arithmetic expressions or functions are not supported.

Functions that can be used with the eval operator include:

concat, tonumber, tostring, replace(X,Y,Z), abs(X), case(X,"Y",...), ceil(X), ceiling(X), exp(X), floor (X), if(X,Y,Z), isfalse(X), istrue(X), len(X), ln(X), log(X), lower(X), tolower(X), mod(x,y), rand(), round(X), sqrt(X), substr(X,Y,Z), sum(x,y,z,...), trim(X), ltrim(X), rtrim(X), upper(X)toupper(X), urldecode(X).

Aliases that contain special characters have the following syntax restrictions:

Special Characters	Restrictions	Examples
&, !, - , = , % , <, >, |	Need to be enclosed in single/double quotes when they are reused and the search works as expected.	| rename Name as 'DP-V' | eval test = tostring ("DP-V")
@, #, +, ?, /, ^, [], {}, _ , *, ~, . $, %	Do not need to be enclosed in single/double quotes when they are reused and the search runs as expected.	| rename Name as 'DP@V' | eval test = tostring (DP@V)
\	When a backslash is used in an alias name, add an additional backslash \ to escape the character. It does not need to be enclosed in single/double quotes when it is reused and the search runs as expected. The outcome field name should show only one backslash.	... | rename Name as 'DP\\V' | eval test = tostring (DP\\V)

For more information about eval functions, see "Understand Eval Functions" on page 351.

Considerations for Using Eval Functions

Please be aware of the following considerations when using the eval functions:

- You might encounter a search error if you run a query that uses both an "All Fields" fieldset and more than five pipeline operations. To avoid this, either reduce the number of fields in the fieldset or reduce the number of pipeline operators in your query.
- The md5(X) function is not supported in a FIPS environment.

Examples

- Could be a simple constant value: "Hello world", 5.

  ```
  ... | eval test0 = 5
  ```

- Could be a simple field: Name, Destination Hostname from the current selected fieldset.

  ```
  ... | eval test1 = Name
  ```

Pipeline operators, such as eval, can use operator chaining to allow output from one pipe operator to be used as input to a subsequent one.

- Find the longest URLs from the vendor ArcSight.

  ```
  deviceVendor = ArcSight |eval urllength=length(requestUrl) |sort urllength
  ```

- There is no limit to using arithmetic and boolean operators along with data (in fields or as constants).

  ```
  ... | eval test3 = Agent Severity + 1
  ```

  ```
  ... | eval test4 = Name and Device Vendor
  ```

  ```
  ... | eval test5 = (Name and Device Vendor) / 2
  ```

  If the boolean operator is the last operation applied, the overall result will be {0,1}.

- Examples of expressions that use arithmetic and boolean operators:

  ```
  ... | eval test6 = upper(Agent Severity ) + 1
  ```

  ```
  ... | eval test6 = upper(Agent Severity ) and Name
  ```

  If the boolean operator is the last operation applied the overall result will be {0,1}.

- Example using "if" and "case" statements:

  ```
  ... | eval test = if ( deviceCustomNumber1 = 200, Success, Failure)
  … | eval test = case ( deviceCustomNumber1 = 200, Success,
  deviceCustomNumber1 = 400, Failure, Unknown)
  ```

- "Case" requires a final parameter that serves as the else condition. For example:

  ```
  case(name = 'Mandy', 'analyst', name = 'Oskar', 'operator', unknown')
  where 'unknown' is the else condition.
  ```

- Functions can receive other expressions as input:

  ```
  ...  | eval test6 = upper(Agent Severity and 1 ) and Name
  ```

Restrictions

Some functions have restrictions based on the data type:

The following expression is not allowed because two different data types (Name and 1) are not allowed in an arithmetic operation.

```
... | eval test1 = Name + 1
```

The expression below is not allowed because **replace** expects string data types for parameters.

```
... | eval test1 = Name and replace ( 1 , Name , Name )
```

For more information about syntax requirements that the query must meet, see "Understand the Query Syntax" on page 298.

Understand Eval Functions

Eval allows you to define and name an expression that is returned in the search. Use the following functions to build an eval expression:

- "Comparison and Conditional Functions" below
- "Boolean Functions" on the next page
- "Cryptographic Function" on the next page
- "Informational Function" on the next page
- "Statistical Functions" on page 353
- "Text Functions " on page 353

For more information about other operators, functions, and syntax requirements, see "eval" on page 347.

Comparison and Conditional Functions

coalesce(*X*, [*Y*, *Z*, *N*, ...])

- Returns the value of the first non-null expression in the list. If all expressions evaluate to null, then coalesce returns null. The list is up to 20 elements long.
- In the list of expressions, all elements must be of same type.
- Parameters are the values used in the test.
- The only supported types are numeric and string. X can be a number, field or expression.

```
... | eval username = coalesce (Source Username, Destination Username)
Returns: Username
```

nullif(*X*,Y)

- Compares two expressions. If the expressions are not equal, the function returns the first expression (expression1). If the expressions are equal, the function returns null.
- *X* and *Y* can be a number, field or expression. *Y* must have same data type that *X*.

```
... | eval newField = nullif(2, 3)
Returns: 2
```

```
... | eval newField = nullif(2, 2)
Returns: null
```

Boolean Functions

and (&&), **or (||)**, **not (|),** and **like**

- Results of boolean expressions are binary, meaning they satisfy conditions that are true/false, etc.
- You can connect and nest keywords. For example, (boolean_check_a) **and** (boolean_check_b).
- Use parentheses to group boolean operations.
- Each parenthesis should only do one binary "and/or" operation.
- Do not use more two boolean operators to connect keyword clauses. Instead, use parentheses to nest clauses. For example:

  Not allowed: (boolean_check_a) **and** (boolean_check_b) **and** (boolean_check_c)

  Allowed: ((boolean_check_a) **and** (boolean_check_b)) **and** (boolean_check_c)

```
| eval test_auto = (Agent Severity equals 4) and (Agent Severity equals 0)
```

```
| eval test_auto = (( Agent Severity equals 4 ) and ( Agent Severity
equals 0 )) and ( Agent Severity equals 2 )
```

Cryptographic Function

md5(*X*)

- Calculates the MD5 hash of string, returning the result as a string in hexadecimal.
- *X* must be a string.

```
... | eval usermd5 = md5 (Destination Username)
Returns: 202cb962ac59075b964b07152d234b70
```

The md5(X) function is not supported in a FIPS environment.

Informational Function

isnull(*X*)

- Returns true if the *X* is null otherwise returns false.

```
... | eval newField = isnull(2)
Returns: false
```

Statistical Functions

greatest(*X*,*Y*[,*Z*,*N*, ...])

- Returns the largest value in a list of expressions. The list is up to 20 elements long.
- In the list of expressions all elements must be of same type.
- The only supported types are numeric and string. *X* can be a number, field or expression.

```
... | eval newField = greatest(7, 5, 9)
Returns: 9
```

```
... | eval newField = greatest('sit', 'site', 'sight')
Returns: site
```

```
... | eval newField = greatest(bytesIn, 100)
Returns: 100, when bytesIn is less than 100
```

least(*X*,*Y*[,*Z*,*N*, ...])

- Returns the smallest value in a list of expressions. The list is up to 20 elements long.
- In the list of expressions all elements must be of same type.
- The only supported types are numeric and string. *X* can be a number, field or expression.

```
.. | eval newField = least(bytesIn, bytesOut)
Returns: 5
```

```
... | eval newField = least('sit', 'site', 'sight')
Returns: sight
```

```
... | eval newField = least(bytesIn, 100)
Returns: 100, when bytesIn is greater than 100
```

randomint(*X*)

- Returns a random number between 0 and *X*-1.
- *X* can be any positive integer between the values 1 and 9,223,372,036,854,775,807.

```
... | eval newField = randomint(10)
Returns: a random number between 0 and 9
```

Text Functions

length(*X*)

- Returns the character length of a string, *X*.

```
... | eval n=length(field)
Returns: the length of (field). If the field is 256 characters long, it
returns n=256.
```

```
... | eval n=length(“abc”)
Returns: n=3 (abc is a literal string, surrounded by double quotes)
```

lower(*X*)

- Takes a string argument, *X*, and returns the lowercase version.

```
... | eval name=lower("USERNAME" )
... | eval name=tolower("USERNAME" )
Returns: the value of the field username in lowercase. If the username
field contains FRED BROWN, it returns name=fredbrown.
```

substr(*X*,*Y*,*Z*)

- This function returns a new string that is a substring of string *X*.
- The substring begins with the character at index *Y* and extends up to the character at index *Z*-1.
- The index is a number that indicates the location of the characters in string *X*, from left to right, starting with zero.
- *Y* can be negative.
- *Z* cannot be negative.

```
...| eval n=substr("ArcSight", 5, 6)
Returns: “g”
```

```
...| eval n=substr("ArcSight", 2, 6)
Returns: “cSig”
```

```
...| eval n=substr("ArcSight", 0, 3)
Returns: “Arc”
```

trim(*X*)

- trim(*X*) removes all spaces from both sides of the string *X*.

ltrim(*X*)

- ltrim(*X*) removes all spaces from the left side of the string *X*.

rtrim(*X*)

- rtrim(*X*) removes all spaces from the right side of the string *X*.

  For the sake of these following examples, assume that *X* is a literal string and _ represents any number of space characters.

```
... | eval trimmed=ltrim(“_string_”)
Returns: trimmed=“string_”
```

```
... | eval trimmed=rtrim(“_string_”)
Returns: trimmed=“_string”
```

```
... | eval trimmed=trim(“_string_”)
Returns: “string”
```

upper(*X*)

- Takes one string argument and returns the uppercase version.

```
... | eval name=upper(“username”)
... | eval name=toupper(“username”)
Returns: the value of the field username in uppercase. If username
contains fred brown, it returns name=FRED BROWN.
```

For more information about syntax requirements that the query must meet, see "Understand the Query Syntax" on page 298.

concat

The **concat** function creates a new string field that concatenates (or links together) strings from fields. It concatenates any user-defined strings that are separated by a comma (“,”).

Search converts IP and MAC binary fields into a more user-friendly string format and then concatenated. Date fields are converted to the user format that is configured in your user preferences. Search converts NULL values to empty string fields. The maximum limit for concat results is 6,000 characters. Anything longer than this will be truncated.

- "Syntax" below
- "Parameters" below
- "How Do I Use This?" on the next page

Syntax

Syntax for concat should look like this:

```
... | eval newField = concat([field|value]*)
```

where:

- *newField* represents the field that you want to evaluate or test.
- *field* represents a string field in the result.

Parameters

The concat function can receive from 1 to 20 parameters, which can be expressions, user defined strings, or fields from the fieldset.

```
| eval test0 = concat('Event Name: ',  'Name')
```

```
| eval test1 = concat ( 'Event Name: ' , upper ( Name ) )
```

```
| eval test0 = concat ( 'Event Name: ' , ceil ( 2 ) )
```

```
| eval test0 = concat ( 'Event Name: ' , ceil ( 2 ) , replace ( Name , 'HTTP' , 'MQTT' ) )
```

How Do I Use This?

- Create an eval search that concatenates fields related to a Host:

  ```
  | eval Host = concat(destinationHostName, ':' ,destinationPort)  - sample
  output - mf.com:9000
  ```

- Create an eval search that concatenates fields related to the identity of an employee:

  ```
  | eval Employee = concat(FirstName,' - ', LastName,  ' - ', DeptName,'(',
  srcUserName, ')')
  ```

For information about other operators, functions, and syntax requirements, see "Use an Operator in the Query" on page 315.

if and case

If() and **case()** are both eval operators that expect specified conditions be met (are True). An **if statement** returns a value when the given condition is met (is True), or returns another value when the given condition is not met (is False). A **case expression** runs through a set of given conditions and returns a value when the first condition is met (is True). Once the condition is met, the application stops any further searching for that condition. If no conditions are met (is False), then the software returns NULL.

When if() and case() are used together and the case expression is met (is True), the if statement returns that condition’s values accordingly. If the case expression is not met (is False), then the application searches for the next condition given for the case expression.

- "Syntax" below
- "How Do I Use This?" below

Syntax

if

```
| eval test = if ( deviceCustomNumber1 = 200, Success, Failure)
```

case

```
| eval test = case ( deviceCustomNumber1 = 200, Success,
deviceCustomNumber1 = 400, Failure, Unknown)
```

The operators support conditional expressions, such as >, >=, <, <=, =, etc.

How Do I Use This?

Less than

if

- I want to determine if incoming bytes are less than 5000 and to identify the lowest and highest values of incoming bytes.

  ```
  bytes in != null | eval test = if ( bytes in < 5000 , Low , High )
  ```

case

- I want to identify instances where incoming or outgoing bytes are below 3000 and return the lowest and highest values for each category.

  ```
  bytes in != null AND bytes out is not null | eval test = case ( bytes in <
  3000 , Low , Bytes out < 3000, Low, High )
  ```

Equals

if

- I want to know all instances with an agent severity of 3.

  ```
  agent severity != null | eval test = if ( agent severity = 3 , Success ,
  Failure )
  ```

case

- Show me the device with the identification number 170011; otherwise show me the device with the identification number 3.

  ```
  deviceCustomNumber1 is not null | eval test = case ( deviceCustomNumber1 =
  170011 , Success , deviceCustomNumber1 = 3 , Failure , Unknown )
  ```

Contains numbers

if

- I want to identify all instances with a severity rating of zero (0) or one (1).

  ```
  agent severity is not null  | eval test = if ( agent severity = 1 , 1 , 0
  )
  ```

case

- Show me which devices have encountered a severity level of four (4); otherwise show me the highest and lowest severity levels.

  ```
  agent severity is not null AND priority is not null | eval test = case (
  agent severity = 4 , SHigh , priority > 5 , PHigh , other )
  ```

Three conditions

case

- I want to test three conditions (username, category outcome, and category technique) to identify ArcSight user names, any failed category outcomes, and any category techniques that might be exploited or represent vulnerabilities.

  ```
  source username != null AND category outcome != null AND category
  technique is not null | eval test = case ( source username = ArcSight ,
  ArcSight , category outcome = '/Failure' , Failure , Category Technique =
  '/Exploit/Vulnerability' , Vulnerability , other )
  ```

For information about other operators, functions, and syntax requirements, see "General Syntax for Eval" on page 348, "Understand Eval Functions" on page 351, and "Use an Operator in the Query" on page 315.

replace

The **replace** is a function of the eval operator that provides a mechanism to replace the content (expressed as string) of a field and to return the value in a new field. Before using replace, create a query that contains string values in its fields. When using replace, the process transforms the data into temporary tables so that the transformation occurs after the main query is executed.

- "Syntax" below
- "Parameters" below
- "How Do I Use This?" below

Syntax

```
Name is not null | eval test = replace(Name, “Response”, “Returned Value”)
```

where

- Name, Response, and Returned Value are the parameters used in the replacement function
- The replace function is case sensitive. For example, "This," "THIS," and "this" are considered three different words. Match the exact string in order to replace it

Parameters

Replace has three parameters:

- **Name**, the source string value
- **Response**, the match value that will be substituted with the returned value in the results
- **Returned Value**, the replacement value

How Do I Use This?

Use replace when you want to obfuscate data, improve the context of a field, or make reading the text more intuitive.

You can also use the replace function to replace an entire string.

- In this example, use replace to substitute a device’s vendor name with OpenText.

  ```
  | eval newDeviceVendor = replace ( deviceVendor, "HPE", "OpenText")
  ```

  where:

- `DeviceVendor` is the source name for the string value.
- `HPE` is the response value.
- `OpenText` is the returned value.

For information about other operators, functions, and syntax requirements, see "Use an Operator in the Query" on page 315.For information about other operators, functions, and syntax requirements, see "Use an Operator in the Query" on page 315.

tonumber

The **tonumber** eval function converts string fields into floating point numbers so that the data can be applied to additional calculations. If a result cannot be expressed as a number, Search leaves the field empty.

- "Syntax" below
- "Parameters" below
- "How Do I Use This?" below

Syntax

```
suboperator : tonumber
```

```
search_criteria | eval alias_name = tonumber one_field)
```

where:

- search_criteria represents a non-pipe operator query statement, such as “deviceVendor IS NOT NULL.”
- alias_name represents a valid field alias.
- one_field represents a valid field as a parameter for "tonumber."

Parameters

There can be only one *fieldName* such as a device vendor or a version.

How Do I Use This?

Use tonumber to convert string values to numbers.

- Create a search query that converts log messages to numbers:

  ```
  | eval messagesAsNumber = tonumber ( message )
  ```

- Create a search query that converts vendor devices to numbers:

  ```
  | eval x = tonumber ( deviceVendor )
  ```

- Create a search query that checks for vendor device data that is not NULL and convert the data from version fields to numbers:

  ```
  deviceVendor IS NOT NULL | eval test = abs ( 10 ) + 10 | eval
  toNumberAlias = tonumber(version) | eval test2 = abs (13)
  ```

- Filter the data for those entries where ArcSight is the device vendor. Transform the version to a number and the device's custom number to a string value:

  ```
  Device Vendor = "ArcSight" | eval toNumberAlias = tonumber(version) | eval
  numberToString = tostring (deviceCustomNumber1)
  ```

For information about other operators, functions, and syntax requirements, see "Use an Operator in the Query" on page 315.

tostring

The **tostring** function is used in an eval operation to convert fields into string values. The input for tostring can be string values, numbers, integers, double point, float, IP/MAC address, and dates. All of these inputs must come from a field in the ArcSight Database.

- "Syntax" below
- "Parameters" below
- "How Do I Use This?" below

Syntax

```
search_criteria [pipe_operator]* eval alias_name = tostring (one_field) [pipe_
operator]*]*
```

where:

- *search_criteria* represents the criteria being tested in the query.
- *pipe_operator* represents the pipe operation for the query.
- *alias_name* represents the field to be converted to a string value.

Parameters

The function only accepts one parameter. More than that will cause an error. The parameter can be a field that represents a string, number, IP address, MAC address, and date. If the parameter is null, it returns a null input.

How Do I Use This?

Here are examples of queries using tostring:

```
... | eval testString = tostring(Name)
```

```
Name not equal null | eval testNumber = tostring(AgentSeverity)
```

```
... | eval testmac = tostring(Agent Mac Address)
```

```
... | eval testData = tostring(Device Receipt Time)
```

```
Agent Address not equal null | eval testIp = tostring(Agent Address)
```

For information about other operators, functions, and syntax requirements, see "Use an Operator in the Query" on page 315.

Understand the Search Criteria

The search criteria defines the parameters of your search: the time range in which to find data and the fieldsets that you want to use for displaying the results. Search provides system searches with specific criteria that you can view and load, such as DoS Events, MITRE ATT&CK Events, and Failed Login Event.

You can also save your search criteria for future use, such as loading the criteria into another search. However, you must have the required permissions for saving search criteria. For example, you must have the *Manage Search Criteria* permission to save criteria such as fieldsets. You have the option to clone, modify, or remove a saved criteria at any time.

Manage the Fields Displayed in Search Results

You must have the Manage Fieldsets permission.

You can specify a **fieldset** that determines a group of search result fields (such as IP address, URL, etc.) that the system displays in the search Results Table. In the table, each field can provide the ten most and less common values. Multiple searches can share a fieldset, and new searches display a default fieldset that contains the most common event fields. Use the fieldsets window to view and add the customize and system fieldsets, including lookup lists.

- **System Fieldsets**: Predefined fieldsets provided by the system.
- **My Fieldsets**: Customize the default fieldsets and lookup list fields for individual purposes.

New searches display the user´s default fieldset. These will remain selected in the fieldsets list box even when moving to other search tabs. If you select another fieldset, the pop-up window closes to display the new option. You can revert the change to the previously selected fieldset.

> Whenever you replace or update the fieldset, your search becomes out of sync, since the fields shown might differ from the new selection. Rerun the search with the new selection to correct this.

Create a Fieldset

You must have the **Manage Fieldsets** *permission.*

1. From the Search page, click the icon to the left of the search name.
2. From the selected search's tab, click the menu and select a fieldset from the list in the My Fieldsets panel.
3. Click Manage.
4. Click + to add a new fieldset.
5. Enter a Fieldset Name.
    - Each fieldset should have a unique name.
    - Fieldset names are not case sensitive.
    - The fieldset is used only for your search results and does not affect other users connecting to the same system.
    - Creating a fieldset that does not contain any fields causes an error in the application.
6. Select a Category and drag and drop any of the Fields to the to the Selected Fields column.
7. Click Save to save the fieldset.
8. (Optional) To customize the original fieldset without overwriting or saving it, select Apply to This Search.
9. To execute the query again, click Search.

Edit a Fieldset

You must have the **Manage Fieldsets** *permission.*

You can edit custom fieldsets only. You cannot modify system fieldsets, and you can only edit one fieldset at the time.

- "Editing the Selected Fieldset" below
- "Editing a Different Fieldset" below
- "Cloning a Fieldset" on the next page

Editing the Selected Fieldset

1. From the Search page, click the icon to the left of the fieldset name.
2. From the fieldsets window, click the fieldset menu and select a fieldset from the list in the My Fieldsets panel.
3. From the fieldsets window, select Edit.

   The Edit Fieldset window displays.
4. Drag and drop any field to the Selected Fields column OR select Text Editor to write the fields you need.
5. To locate a specific field, use the Search field.
6. In the Fieldset Name field, update the fieldset name as needed. The fieldset is used only for your search results and does not affect other users connecting to the same system.
7. Click Save and enter a unique name to save the fieldset.
8. (Optional) Select Apply to This Search to customize the existing fieldset without overwriting or saving it.

   The temporary fieldset will not be visible to other users, and it will only remain available on that session. After you log out, the system removes the temporary fieldset. You can have one temporary custom fieldset at a time.

Editing a Different Fieldset

1. From the Search page, click the icon to the left of the fieldset name.
2. From the fieldsets window, click the fieldset menu and select a fieldset from the list in the My Fieldsets panel.

3. Click Manage.
4. Select the fieldset checkbox.
5. Click the Edit fieldset(s) icon.

   The Edit Fieldset window displays.
6. Drag and drop any field to the Selected Fields column OR select Text Editor to write the fields you need.
7. To locate a specific field, use the Search field.
8. In the Fieldset Name field, update the fieldset name as needed. The fieldset is used only for your search results and does not affect other users connecting to the same system.
9. Click Save and enter a unique name to save the fieldset.
10. (Optional) Select Apply to This Search to customize the existing fieldset without overwriting or saving it.

    The temporary fieldset will not be visible to other users, and it will only remain available on that session. After you log out, the system removes the temporary fieldset. You can have one temporary custom fieldset at a time.

Cloning a Fieldset

You can make a copy of a fieldset you have created. Edit this copy to save you from creating a completely new fieldset.

1. From the Search page, click the icon to the left of the fieldset name.
2. From the fieldsets window, click the fieldset menu and select a fieldset from the list in the My Fieldsets panel.
3. Click Manage.
4. Select the fieldset checkbox.
5. Click the Clone fieldset(s) icon to make a copy of the selected fieldset.

Delete a Fieldset

You must have the ***Manage Fieldsets*** *permission.*

You can delete a fieldset that you have created. If you delete a fieldset that’s used in an active search, Search changes the fieldset name to **Custom** for that search. If you delete a fieldset used in a saved search query or saved search criteria, Search will use the default fieldset saved in your user preferences. You cannot delete a system fieldset.

1. From the Search page, click the icon to the left of the fieldset name.
2. From the fieldsets window, click the fieldset menu and select a fieldset from the list in the My Fieldsets panel.
3. Click Manage.
4. Select the fieldset checkbox.
5. Click the Remove fieldset(s) icon.
6. Click Yes to proceed.

Configure the Time Range

A search query can either have a fixed start and end date, where you cannot refresh data, or a time range that captures the most recent data. For example, if you choose the predefined **Last 30 minutes** setting, Search updates data upon re-executing the search based on the most recent 30 minutes. Alternatively, you can create a dynamic date range.

The time range that you specify in the time range selector is inclusive. Search includes the whole second as the end time. For example, if you specify a time range between *2018-01-01 12:00:00* and *2018-01-01 12:59:59*, Search includes all data from 2018-01-01 12:00:00.000 to 2018-01-01 12:59:59.999, inclusive.

- "Specify a Dynamic Date Range " on the next page
- "Understand the Search Timestamps for Events" on page 374
- "Understand How Time Zones Affect Search Results" on page 376

Specify a Dynamic Date Range

Search offers a flexible, dynamic setting for the time range where you can enter the desired time stamp without using the calendar to specify days, hours, and minutes. The dynamic date range uses the following syntax:

<*dynamic_time*>

or

<*dynamic_time*> `[+/- `<*units*>`]`

For example, to search for events that have occurred in the last two hours, you can specify `$Now – 2h` for **Start time** and `$Now` for **End time**. To find events that have occurred this week, you can enter `$CurrentWeek` for **Start time** and `$Now` for **End time**.

To enter a dynamic date range:

When viewing a search or starting a query, select the currently specified time range.

For the start or end time under **Custom Range**, select **Dynamic**.

To specify the **dynamic_time**, enter one of the following values:

Value	Represents
$Now	The current minute
$Today	Midnight of the current day
$CurrentWeek	Midnight of the previous Monday (or same as $Today if today is Monday)
$CurrentMonth	Midnight on the first day of the current month
$CurrentYear	Midnight on the first day of the current year

To specify the **units**, enter one of the following values:

Value	Represents
m (lowercase)	Minutes
h	Hours
d	Days
w	Weeks
M (uppercase)	Months

Understand the Search Timestamps for Events

Search can display results based on the timestamp associated with each event. The database stores three different timestamps for each event. For peak performance, Search automatically uses the Normalized Event Time setting. However, you can specify any timestamp setting for a search. You can also choose to make the timestamp the default setting.

> **NOTE**: The Date Picker displays this Timestamp setting when searching for events.

Database Receipt Time (dBRT)

Represents the time when the database received the event. The database considers this timestamp as the *persisted time* of the event.

Device Receipt Time (DRT)

Represents the time when the connected device claims the event occurred. This timestamp preserves the original time recorded by the device. However, this timestamp might not be credible in all cases. For example, it is possible that the time settings for the connected device are not configured correctly or the clock on the server that hosts the connected device might gain or lose time, which causes the timestamp to be out of sync with the actual time the event occurred.

Normalized Event Time (NET)

Represents the best known time for an event. Ideally NET is the time when the connected device reported that the event occurred (the DRT) because the device is the most direct known observer of the event occurrence. However, when the DRT for an event is not within a credible time range compared to the database’s time, NET represents the time when the database received the event (the dBRT). For example, the time on a connected device was configured incorrectly such that DRT for an event is May 29 1975 when the current date in the database when the database received the event is June 29 2020. The database recognizes that the event’s May 29 1975 timestamp for DRT is outside the credible time range. Based on the discrepancy with DRT, the database sets NET to June 29 2020 (same as the dBRT).

By default, the DRT value must be within a boundary of -7 days in the past and +1 days in the future from the dBRT. To configure the boundary criteria in a non-SaaS environment, see the guide corresponding to your deployment:

- Administrator's Guide for the ArcSight Platform 24.2 - AWS Deployment
- Administrator's Guide for the ArcSight Platform 24.2 - Azure Deployment
- Administrator's Guide for the ArcSight Platform 24.2 - Google Cloud Deployment
- Administrator's Guide for the ArcSight Platform 24.2 - Off-cloud Deployment

Understand How Time Zones Affect Search Results

Searches for events in a time range are based on the timestamps of matching events and use the time zone of the local browser by default. You might need to account for the time zone offset from UTC and from other time zones, including Daylight Savings Time.

You can configure Search results to adjust the time for events to a specific time zone. For example, it’s possible that you might create a search while in a one time zone, then view the search from a different computer set to a different time zone. When this occurs, the Events Histogram converts the time segments to the specified time zone. If the Events table includes a time attribute, Search converts the time. However, the aggregation reflects the original time zone. For example, if the Events Histogram has seven bars in the original time zone, the number of bars could increase or decrease to reflect the currently specified time zone.

Extend the Search with a Lookup List

You must have the Manage Lookup Lists permission.

Select Search > Home > Lists > ✎.

You can make **lookup lists** from CSV files that contain common fields that you might want to include in your searches. The system stores the data in the CSV file in a database table, which then becomes available for use in a search. You can add fields from a lookup list to fieldsets and use them in search queries.

- "Understand the Considerations for the Lookup List File" on the next page
- "Create a Lookup List " on page 379
- "Append a Lookup List " on page 380
- "Replace a Lookup List " on page 381
- "Delete a Lookup List " on page 382

Understand the Considerations for the Lookup List File

Select Search > Home > Lists > ↗.

The CSV file for your lookup list must meet the following requirements:

- The first row must be a comma-separated list of field names.
- The field names cannot exceed 40 characters. The names can only contain alphanumeric characters and underscores. They must start with an alpha character.
- For search operations, the corresponding data types for lookup lists with variable characters (or varchars) are short text (VarShort) and long text (VarLong).
- The remaining rows must be comma-separated values for the fields in the first row.
- Do not include spaces before, after, or within a field name.
- All rows must contain the same number of values.
- You must select one of the columns as the desired key field, and the values of that field must be unique.
- The **key field** is the field that you can use with the `in list` operator in queries.
- The file cannot exceed 25 fields and 2 million rows.
- The file cannot exceed 150 MB.

Create a Lookup List

1. Select Search > Home > Lists > ↗.
2. Click +.
3. Specify a name for the lookup list.

   Once you have added the lookup list, you cannot change the name of the list. The name must meet the following requirements:

   - Does not exceed 20 characters
   - Contains only alphanumeric characters and underscores
   - Starts with an alpha character
4. To specify the CSV file, complete ONE of the following actions:
   - Drag and drop the file to the Lookup Lists page.
   - Select Choose File to navigate to the file.
5. Click Continue.
6. Specify the Field Name from your CSV file that will represent the key field.
7. For the Value Type, either accept the recommended value type or specify a different one.

   The following are possible values:

Value Type	Specifies
domain	The name of the lookup list
float	A number whose radix point can be placed anywhere relative to the significant digits of the number
hostname	Fully qualified domain name
int	Integer value
ipv4	IPv4 address
ipv6	Ipv6 address
mac	MAC address
short text	Text that cannot exceed 1K of space
long text	Text that cannot exceed 4K of space
time	Time stamp
url	A URL address that cannot exceed 4K
username	A string type
8. To upload the file as a table in the database, click Upload.

Append a Lookup List

Use the **Append** feature to add more rows to a current lookup list. The file you want to append must have the same structure as the one that you uploaded. For example, the same amount of columns. The file you want to append should not have an empty value in any of its rows.

1. Select Search > Home > Lists > ↗.
2. Select the list that you want to append.
3. Click ≡+ (append).
4. Select the CSV file that you want to use to append the existing list.
5. Click Upload.

Replace a Lookup List

Replacing the contents of a lookup list does not affect queries that use the original lookup list. You cannot change the name of a lookup list. The field names in the replacement file must match the field names in the original file.

1. Select Search > Home > Lists > ↗.
2. Select the list that you want to replace.
3. Click ⇄ (replace).
4. Select the CSV file that you want to use to replace the contents of the existing lookup list.
5. Click Upload.

Delete a Lookup List

1. Select Search > Home > Lists > ↗.
2. Select the list that you want to delete.
3. Select the trash can icon.

Save a Search

You have the ability to save searches that you want to run or review often. You can save the search query; the query plus the criteria for the search; or the results of the search, which includes the query and criteria.

> You need Manage Search Queries permissions and Manage Search Criteria permissions to save search queries and search criteria, but you do not need special permission to save your search results.

Understand Session Search versus Saved Search Results

The system enables you to initiate temporary searches, as well as save searches to run again. The Home tab lists all your current searches. Therefore, if you close the search tabs or lose the search tabs by logging out, you can open them again from the Home tab. However, if the search results have expired, you cannot re-open the search.

- "Session Searches" below
- "Saved Search Results" on the next page
- "Expired Searches" on the next page
- "User Activity With Real-time Searches" on the next page

Session Searches

As you initiate a search, your activity is automatically preserved in case you need to navigate to another search tab or to a different feature in the ArcSight Platform. Search temporarily maintains these **session searches** after you close the search tabs, exit your browser, or log out. The system might automatically log you out if you have not interacted with the interface for longer than an idle time specified by your system administrator.

The session search expires once the specified expiration time is reached, regardless of the level of activity in the session.

Saved Search Results

For long-term use of a search, you must save the query, criteria, or results. Note that, for a real-time search, you cannot save the query. You can review and manage your **saved searches** at any time:

- Saved queries
- Saved criteria
- Saved search results

Expired Searches

Session and saved searches usually **expire** after a specified amount of time.

When a search expires, the system deletes all information about the search. If this occurs when you have the search open in a tab, you will receive a notification that the search has expired and be instructed to close the tab.

The session search expires once the specified expiration time is reached, regardless of the level of activity in the session. You may reset the expiration time by running the search again or by modifying the query or criteria. However, if the search has already expired, you cannot reset the expiration clock. You can also override the default expiration time by changing the Search expires in setting for a particular session search.

By default, search results expire after seven days. (You may modify this value in your user preferences.)

User Activity With Real-time Searches

After a certain number of minutes, the application will log you out and redirect you to a Login page if the system does not detect any user activity in an open search tab that contains a running real-time search.

To avoid the logout behavior, you can request your system administrator to activate the **Never Expire Session for Real-Time Searches** permission. This allows the user to leave a running real-time search opened in a tab and prevents the logout if there is no interaction with the user interface. User interface activities include scrolling, mouse movements, mouse drags, clicks, zooming in or out, and keystrokes.

Save a Fixed-time Search

In a Search tab, select Save.

You can save a fixed-time search, including its query and criteria, to rerun at your convenience. To save just the query or the query and criteria, you do not need to execute the search.

1. In the Search tab, select the Save icon.
2. Select which part of the search you want to save:
   - Search Query
   - Search Criteria
   - Search Results (Dataset)
3. Specify a name for the saved search.
   - Each saved search must have a unique name.
   - We do not recommend using the same names for saved search queries, criteria, and results.
4. (Conditional) When saving the search results, specify how long you want to store the dataset.

   For example, if you have the *Never Expire Search Results* permission, you can configure the search results to never expire.
5. Select Save.

For information about creating and viewing results of fixed-time searches, see "Create a Fixed-time Search" on page 293 and " View the Event Inspector " on page 394.

Save a Real-time Search

Requires the Real-time Threat Detection service in the ArcSight SaaS environment.

You can save the results of your real-time search. The saved dataset can include all received events or just the events associated with the current histogram range. You must pause the search to save the current dataset. However, the system continues to receive events for the search in the background. Thus the number of saved events might be slightly greater than events in the Results Table at the moment you paused the search.

1. In the Search tab, pause the search.
2. Click the Save icon 💾.
3. Select Search Results (Dataset).

   You also can choose to save just the search criteria.

4. Specify a name for the saved search.
   - Each saved search must have a unique name.
   - We do not recommend using the same names for saved search queries, criteria, and results.
5. Specify the time range of the events that you want to save:

   Histogram time range

   Saves only the events associated with the time range currently displayed in the Event Histogram. For example, 7:30 AM to 9:12 AM.

   Entire time range

   Saves all results received for the search.
6. Specify how long you want to store the dataset.

   For example, if you have Log Management and Compliance (Recon) and the *Never Expire Search Results* permission, you can configure the search results to never expire. By default, saved results expire after 7 days or your preferred setting.
7. Select Save.

For more information about creating and viewing the results of a real-time search, see "Create a Real-time Search" on page 295 and "View the Results of a Real-time Search" on page 392.

Load a Saved Search

If you have saved a query, criteria, or search results, you can load that saved item in a Search tab. You can also load the predefined search queries and criteria.

1. Select Search > +.
2. Select 📁 above the query input field.
3. Select the tab relevant to the saved search that you want to load:
   - Search Query
   - Search Criteria
   - Search Results
4. Select the saved search that you want to load.
5. Select Load.
6. (Optional) Modify the search settings as needed, then run the search.

7. (Optional) To more easily find this session search later, give the search a name.
8. (Optional) To save your changes as a new search, select 💾.

Run a Search

When you run a search, Search begins populating the Events histogram and Events table. Depending on the number of events retrieved, the search might pause to indicate that the amount of data could impact the search performance. You might want to select a smaller time range. To resume a search, click the play button in the progress bar.

1. Create or load the search that you want to run.
2. Click Search.
3. (Optional) To more easily find this search later, give the search a name.
4. (Optional) To save the query, criteria, or search results for future use, select the Save icon.
5. Click the pause or stop icons if you need to interrupt the search. Click the resume icon to continue the search.

Initiate a Search from Enterprise Security Manager

From Enterprise Security Manager (ESM), you can initiate a search in the ArcSight Platform for a maximum of five fields, based on the available columns on the active channel. Within ArcSight Platform, you can filter ESM data for more specific results. ESM generates a URL, opens a browser, and creates the new search in ArcSight Platform.

To perform this action, you must enable this feature in ESM. For more information, see the *ESM Installation Guide*.

Modify the Search Query or Criteria

You must have the Manage Search Criteria or Manage Search Queries permission.

When viewing a search, you can change the query, a fieldset, and the time range selection.

1. In the Search tab, change the query, fieldset, or time range.
2. To return to your original settings, select Revert Changes.
3. To update the search results with the modified settings, select Search Now or Search.

Name a Search

By default, Search gives each session search the title *Search <N>*. You can apply a custom name to the search at any time.

1. Right-click the name of the tab.
2. Select Rename.
3. Type the custom name.
4. Press Enter.
5. (Optional) To save the search, click the Save icon.

Search Event Data from Logger

You can search Logger archived events using the same parameters as in regular searches.

Before running a search on the Logger data, review the following considerations:

- The query uses only the specific set of operators available in the Search feature. If you are used to the query format in Logger, we recommend that you review the query functionality in Search.
- Your searches can include data from Logger storage groups even if the Logger storage groups do not display as part of the ArcSight Database's configuration.
- Before searching for Logger events from a particular Logger, metadata from that Logger must have already been imported, and at least one data migration from that Logger must have been completed.

1. Select Search > +.
2. From the list box next to the Search button, select Logger.
3. Add the required query details.

   You must use the search operators supported in ArcSight Platform.
4. Click Search.

> Note: If UTC time wasn't specified in the time range for importing events, you will need to convert the archive UTC timestamp shown in the **Import Logger Data** tab to your browser time/selected time zone, and enter that value as search time to fetch events from that time range.

Use a URL to Create, Update, and Navigate Searches

Search lets you create, navigate, and update searches by modifying a URL. This is a quick way to integrate with other applications or to simply save your current search for future use.

Creating Searches

Open Search and create a new search with default values:

```
/rec/search
```

Create a new search with given criteria.

```
/rec/search?query=Name+not+equals+null&fieldsetId=3223931b-b439-4951-a2d2-
d83f9506c109&startDate=1673567387483&endDate=1673569187483
```

Opening Searches

Open a specific search by the ID. The app will automatically add criteria to the URL after opening the search.

```
/rec/search/:searchId
```

```
/rec/search/home
```

Updating Searches

Open a specific search by the ID and update the values. The app will ask you if your choice is the desired behavior.

```
/rec/search/:searchId?query=Name+not+equals+null
```

Opening a Search in the Event Inspector

Open a specific event by GEID, ID, and Event Table in the Event Inspector tab:

```
/rec/search/eventsInspector?eventsDetail=
[{"geid":":globalEventId","id"::Id,"eventsTable":":table"}]
```

> Sometimes, the timestamp for the DBRT (Database Receipt Time) is not selected correctly, as in the case for the URL <FQDN>/re/search?query=Name%20<>%20null&timeColumn=persistedTime . This happens when you navigate to the URL from some (but not all) features in the system. Additionally, if you are not signed in and try to navigate to this URL, the search is not created, and the timestamp is not selected.

Viewing and Managing Your Searches

The dataset for your **search results** reflect events that match the search query and criteria settings that you specify. Search displays the results in an Events Histogram, Results Table, and Event Inspector. You can save the queries, parameter sets, and results datasets for future use.

If the connectors are configured to send raw events, the table and inspector panel can include raw event data. Also, the maximum number of events that a search can return is 10 million, but you can specify a preferred **search results limit**. If your searches regularly stop at the maximum limit, consider splitting the query into separate searches. Alternatively, you can refine the results by adding an operator such as *where* to the query.

You can export the search results to a .csv file or export a single result to a .pdf file.

Understand Search Limits

For real-time searches, once a search reaches the search limit, the oldest events are removed as new events are added.

For fixed-time searches, if you exceed the global search limit, the system displays an error message when you create a new search: *An error occurred while creating search. Exceeding the limit of 1000 searches*. You cannot create more searches if this error displays.

You can either delete some existing searches or contact your Administrator to increase the search limit.

- If you are an ArcSight SaaS customer, reach out to Support to increase the search limit.
- For more information about increasing the search limit in a non-SaaS environment, see "Core Components" in the "Configuring the Deployed Capabilities" section of the guide corresponding to your deployment:
    - Administrator's Guide for the ArcSight Platform 24.2 - AWS Deployment
    - Administrator's Guide for the ArcSight Platform 24.2 - Azure Deployment
    - Administrator's Guide for the ArcSight Platform 24.2 - Google Cloud Deployment
    - Administrator's Guide for the ArcSight Platform 24.2 - Off-cloud Deployment

View the Events Histogram

The **Events Histogram** displays data in a segmented graph where the y-axis presents the number of events per bars of time segments in the x-axis. The time range on the x-axis might not match the time range specified in the search query because the start and end times on the x-axis are determined by the event times of the first and last matching events of the search query.

Click the Settings icon (⚙) and select either Linear Scale or Log Scale to display the data in your preferred format. You may also select Hide Histogram if you do not wish to display the histogram. As you hover your pointer over the histogram, the bar color directly below the pointer changes and displays a tooltip of the day/date/time of that event range. Click a bar to view event information for a specific time range. Click again to deselect the bar.

Note that some search activities do not require the histogram, and thus it will not be displayed. For example, if you perform an aggregation operation, such as "top" or "bottom," Search will not display the histogram because the Search Results table contains the aggregation of results, not events in a timeline.

How Search builds the histogram

> Search progressively builds the histogram as it receives events that match the search settings. If the search needs to scan a large amount of data or a large time period, the histogram displayed initially might refresh multiple times while the search is running. To view the complete histogram of a search, wait until the search has finished running.
>
> Search plots the first one million matching events on the histogram. If a search results exceed one million events, Search displays an informational message. If you need to use the histogram view for event analysis of a search that matches more than one million events, we suggest that you adjust the time range to retrieve fewer than one million events. This will allow you to obtain a complete and meaningful histogram. You can also use a pipeline operator to further refine search results so that the total number of hits is under one million events.

Narrow the scope of the search

> If you have a large number of data points or a wide time range, you can see the big, overall picture, but you might not be able to clearly identify specific data points. To narrow the scope of the displayed data, adjust the boundaries of the displayed bars. As you adjust the time range within the Histogram, the Events table displays corresponding events.

Drill down to events

> You can drill down to events in a specific time period by clicking the bar on the histogram that represents that time period. The bar you drilled down to is highlighted and the events matching that time period are listed below the histogram. To deselect the time period, click the bar again. When you **hover over a histogram bar**, the matching events listed below the histogram do not change, and the histogram continues to display all matching events.
>
> If you are performing a real-time search, zooming or clicking in the histogram automatically pauses a real-time search. For additional information about how a real-time search affects histogram behavior, see "Create a Real-time Search" on page 295.

View the Results Table

The search **Results Table** contains all the fields specified in the fieldset. The dataset contains events associated with the search query and criteria. You can choose to display the table in

Grid View or Raw View. You can perform the following actions while viewing the table:

View all details for an event

To view details of a specific event, right-click the event and select Open In Event Inspector. This action opens the Event Inspector in a panel on the right where you can view additional details on the event.

Raw View option for event data

When you click the Raw View icon, the Search Results table replaces the fieldset with a Raw Data column, which displays the whole raw event. Although the Raw Event field is most applicable for syslog events, you can also display the raw event associated with CEF events.

To do so, make sure the connector that is sending events to the database populates the *rawEvent* field with the raw event.

Field Summary option to filter the search based on a specific field

Clicking the Field Summary icon, Search will display all the fields contained in the search on the left Fields panel, and the number of events returned for each field on the right Summary panel.

The Summary panel contains options to:

- Display events containing your chosen field. Clicking the ↗ icon will automatically run the original query with an added AND filter of the chosen field **not equal to NULL**
- Filter the search results based on a specific field value: select the field on the left panel, and the value on the right panel. The original query will be re-run with an added AND filter of the chosen field **equal to the selected value**

  For example, select `Source Port` (the field), then select one of the listed port numbers (8081). Search will add the field and value to the query, then automatically filter the displayed results.
- Top 50 values, which displays the 50 most common values for a field

  For example, the *Device Vendor* field might have a top value of “bluecoat” with a count of 3,000 hits, accounting for 30 percent of 10,000 results.
- Bottom 50 values, which displays the 50 least common values for a field

Export all of the search results

You can export all of the results to a .csv by clicking the 🗎 icon.

Export a single event

You can export a single event as a .csv or a .pdf by right-clicking the event and selecting either Export to PDF or Export to CSV.

Copy a value from an event

To use a value from an event elsewhere, simply right-click and copy the value.

Compare data in columns

Hover over a column heading, then click the Pin icon to pin or unpin a column.

By pinning a column, you can compare the column’s values against those of other columns. Search moves the pinned column to the extreme left location in the table. You can pin multiple columns.

Reorder columns

To rearrange the order of the columns, drag each column to new position by clicking and dragging the column header.

Sort the data in columns

Select the up or down arrow in the column heading to change the sort order.

View the Results of a Real-time Search

As with a fixed-time search, a real-time search displays events that satisfy the query and criteria in the Search Results Table, Events Histogram, and Event Inspector. However, some aspects about pausing and manipulating the display are specific to real-time searches.

1. When you **pause** a real-time search, the interface freezes, but events continue to build in the background as long as there is data to satisfy the search.

   - Clicking the Pause ⏸ icon temporarily suspends the search.
   - Automatically pause a real-time search by clicking ⊕ to zoom in.

     Drag the cursor over histogram bars to examine an area of interest. Zooming in automatically freezes the histogram and the search table results. Other ways to automatically pause a real-time search are to click a histogram bar or to scroll in the results table.
   - Observe specific details of the histogram by clicking ⊕ and ⊖ to zoom in and out and click ↔ to pan across multiple bars in the histogram. The real-time search will continue to be paused while you perform these actions.
   - Move forward and backward in the histogram by clicking the Back ‹ and Forward › icons. The increment of backward or forward time is based on the current zoom range.

     For example, if you are zoomed in to a range of 40 minutes, clicking the Back arrow once will move the histogram backward 40 minutes. Similarly, clicking the **Forward** arrow once will move the histogram forward by 40 minutes at that same zoom level.

As desired, you can pan the histogram up to the earliest start time or the latest (or current time.)

2. To reset the histogram and results table to the starting point when you first paused the real-time search, click the Reset ↻ icon. Note that this does not resume the real-time search; the histogram and results table remain paused.

3. To resume the real-time search, click the Go to Now ✓ icon. This search displays the current search results in the histogram and results table.

   Another way to resume a real-time search is to click the Play ▶ icon. For more information about the search's start time behavior, see Understanding Start Time and Go to Now Behavior.

4. Click 🗎 to export real-time search data to a .csv file or a .pdf file. For real-time searches, only data within the time range of the current zoom state in the histogram will be exported.

For information about creating and saving real-time searches, see "Create a Real-time Search" on page 295 and "Save a Real-time Search" on page 384.

For information about viewing the fixed-time search results, see " View the Event Inspector " on the next page.

Understand Start Time Behavior for Real-time Searches

Requires the Real-time Threat Detection service in the ArcSight SaaS environment.

The following sections provide a deeper discussion about how the start time of a real time search histogram is calculated, what happens when a real time search reaches its search results limitand go to now behavior.

- "Understand Start Time of the Histogram" below
- "Start Times if the Search Reaches the Search Results Limit" on the next page
- "Understand Go-to-Now Behavior" on the next page

Understand Start Time of the Histogram

To find events that match the query, Search needs a time range, particularly a starting time. If you selected a time range of Last 1 hour and began the search at 8 am, the initial time range for the search will be from 7 to 8 am.

If you create a real-time search with the Do not accumulate data option as time proceeds and data continues to be added, the start time of histogram time window also continues to move forward. For example, if 30 minutes has passed since you created real time search at 8 am, the histogram will show data for 7:30 am to 8:30 am.

> The Do not accumulate data option only pertains to histogram display. Data will continue to accumulate in the backend. You can always pan backward to see the older data.

If you had deselected Do not accumulate data when you created your real-time search, the histogram will show all of the data from the time you created the search. Therefore, if you created the search at 8 am and selected Last 1 hour, at 8:30 am, the histogram will show data from 7 am to 8:30 am.

Start Times if the Search Reaches the Search Results Limit

For real-time searches, the start time never changes if your search does not reach the search results limit. If the search does reach the search limit, the oldest events are dropped to make space for the new events.

Since the oldest events are dropped, the system now sets the start time based on the earliest events that are available in the search results table. For example, if the search limit was reached at 6 pm and system has dropped some events; even though the initial start time was 7 am, if the earliest data present in search results table is now for 8:45 am, the histogram shows data for 8:45 am to 6 pm (assuming Do not accumulate data was unchecked). If this option was selected, the histogram will display data for 5 pm to 6 pm, but you can only pan backwards to 8:45 am, not the initial 7 am.

Understand Go-to-Now Behavior

For real-time searches, Now is always the present time, which continues to change as the time of day progresses. If you select a start time of Last 1 hour and begin the search at 8 am, the Now time will change as the search progresses. Therefore, if you pause the search for 1.5 hours and then click the ✓ icon (only available for real-time searches), the Now time becomes 9:30 am.

The beginning of your time range is indicated by a vertical dotted line topped by a solid circle. Now or the end of the time range is indicated by a vertical dotted line topped by the ✓ icon.

View the Event Inspector

The **Event Inspector** displays additional details for any event you select from the Results Table. This panel allows you to scroll through the specific details of the event and groups the details by categories such as Agent and Source. To open the Event Inspector, right-click any event in the search Results Table.

> To view events migrated from Logger, select Logger before creating a search.

You can perform the following tasks with the Event Inspector:

Search for fields and values

To search for fields and values in the details of an event, enter a string in the search box at the top of the Event Inspector. The Event Inspector will filter the fields and values to match your search criteria.

Add fields and values to current or new search

You can add event fields and values in the Event Inspector to your current search query or a new search query.

Hover over a field (for example, `Agent Hostname`) to display a check box next to the field. Then, select the check box to select the field and its value. Then, either click the magnifying glass icon at the top of the Event Inspector or right-click your selected field. Both actions display a pop-up menu with the following options:

- Create New Search

  Allows you to create a new search query with the selected event fields and their values.

  For example, if you selected the field `Name` and its value equals `"failed login"`, then it would display as follows in the new search query: `...| where Name = "failed login"`. The new search will open in a new tab on your web browser. If a field is not already present in the fieldset, it will be added to a temporary fieldset.

- Add to Active Search

  Adds your selected event fields and their values to the current search query in the search input field.

  For example, if you selected the field `Name` and its value equals `"failed login"`, the field and value would display as follows in the current search query: `<current search query> | where Name = "failed login"`. If a field is not already present in the fieldset, it will be added to a temporary fieldset.

Create a dashboard based on a host or user profile

You can create a dashboard in the Reports Portal that lets you view host and user profile information:

- View Host Profile

  To view the details of a host, right-click a host name or an IP address.

  For example, right-click a value in the Agent Hostname column. The system launches a dashboard in the Reports Portal for your selection.

- View User Profile

  To view the details of a user, right-click a source or destination username. The system launches a dashboard in the Reports Portal for your selection

Copy and share event detail URL

To share event details with another Analyst, click the Copy URL icon at the top of the Event Inspector. This action copies the URL to your clipboard so you can share it as needed.

Export event details to .pdf or .csv files

You can export event details from the Event Inspector to store or share information. You have the option to export events in .pdf or .csv format. Additionally, you can include or exclude null fields in the exported file.

Expand/collapse and show/hide data fields

The top of the Event Inspector contains an arrow icon that expands and collapses the event details. There is also an eye icon that can show or hide null fields. If you select to display null fields and export the event details to PDF or CSV, the exported file will contain the null fields.

View and Use the Details of an Event

To open the Event Inspector, right-click any event in the search Results Table.

The **Event Inspector** opens in a panel that lets you to scroll through the details of an event and groups them by categories such as Agent and Source. Use this panel when you want to research specific details on an event. You can view the raw data details for the event, as well as instruct the panel to include fields with *null* data. For example, you could view details about the agent, category, device, source, or severity. You can only open one event in the Event Inspector at a time.

- Search for Event Details
- Copy and Share Event Detail URL
- Export Event Details to PDF or CSV
- Apply Event Details to Current or New Search
- View Null Data Fields
- Expand or Collapse All Data Fields

> To view events migrated from Logger, select Logger before creating a search.

Search for Event Details

The top of the Event Inspector contains a search box that allows you to search through the fields in the event details. Use this feature to quickly locate specific details on an event without the need to scroll through the entire Event Inspector.

To search for fields and values in the details of an event, enter a string in the search box at the top of the Event Inspector. The Event Inspector will filter the fields and values to match your search criteria. For example, if you searched the term “device” the panel will display all fields with the name “device” and any fields containing the value “device”.

Copy and Share Event Detail URL

You might want to share the selected event’s details with an Analyst or use the details in a report or other media. You can export all content in the Event Inspector with or without empty values. The **Event Inspector URL** contains the event's ID (id field in the Search Results table) and global event ID (geid field in the Search Results table). See the table below for an example and variations of the Event Inspector URL format. Use these formats to create the URL.

Click the Copy URL icon at the top of the Event Inspector to copy the Event Inspector URL to your clipboard. Then, you can share the URL as needed. When you load the URL, the Event Inspector open in the browser with the event details related to the search. This action is helpful in situations where you need to research an event further or for reporting purposes.

> If the geid is missing in the URL, an error message will display.

Event Inspector URL	Example
Full Event Inspector URL	/rec/search/eventsInspector/?eventsTable=Recon&id=5139791690&geid=3009625190352082178
geid and id only	/rec/search/eventsInspector/?id=5139791690&geid=3009625190352082178
geid only	/rec/search/eventsInspector/?geid=3009625190352082178

Export Event Details to PDF or CSV

There may be situations where you need to use event details for reporting purposes. Or you might need to share the event details with an analyst who does not have access to the Event Inspector. You can do so by exporting the event details to .pdf or .csv files.

Apply Event Details to Current or New Search

You can add event fields and values in the Event Inspector to your current search query or a new search query. This action is helpful in situations where you need to research more data on a specific event.

Hover over a field in the Event Inspector (for example, `Agent Hostname`) to display a check box next to the field. Then, select the check box to select the field and its value. From here, do one of the following actions:

- Right-click the selected event field
- Click the magnifying glass icon at the top of the Event Inspector

Both actions display a pop-up menu with the following options:

- Create New Search**:** Selecting this option allows you to create a new search query with your selected event fields and their values. For example, if you selected the field `Name` and its value equals `"failed login"`, then it would display as follows in the new search query: `...| where Name = "failed login"`. If a field is not already present in the fieldset, it will be added to a temporary fieldset.
- Add to Active Search**:** Selecting this option adds your selected event fields and their values to the current search query in the search input field. For example, if you selected the field `Name` and its value equals `"failed login"`, the field and value would display as follows in the current search query: `<current search query> | where Name = "failed login"`. If a field is not already present in the fieldset, it will be added to a temporary fieldset.

Once you’ve performed a new search with the selected field and value pairs, the Event Timeline and Search Results table will filter to display data related to your new search.

Create a Dashboard Based on a Host or User Profile

You can create a dashboard in the Reports Portal that lets you view host and user profile information.

- View Host Profile: To view the details of a host, right-click a host name or an IP address. For example, right-click a value in the Agent Hostname column. The system launches a dashboard in the Reports Portal for your selection.
- View User Profile: To view the details of a user, right-click a source or destination username. The system launches a dashboard in the Reports Portal for your selection.

View or Hide Null Data Fields

To show or hide fields with null data, click the eye icon at the top of the Event Inspector. Hiding the null fields filters your view of the event details to show only fields with data. Use this feature if you want to see only fields with data in the event details.

Expand or Collapse All Data Fields

Next to the eye icon at the top of the Event Inspector is an Expand All/Collapse All icon. Click this icon to expand the fields in the Event Inspector to show all values related to the fields. Or click it to hide the values related to the fields and display only the field names.

Identify Fields without Data

If an event does not have data for a schema field, Search represents the absence of data (*null*) in the results in the following ways:

Affected Field	Displayed Result
Search field	Null, NULL and null query formats
Search Results table	Empty cell
Empty field from Enterprise Security Manager (for example, name=')	name = ‘’, NULL
Event Inspector	--- in the cell

Refresh Search Results

If the time range for your search is based on a predefined range, such as Last 30 minutes, you can refresh the search results as desired. However, refreshing the browser as you update a search does not save your changes. You must save the refreshed results.

Export the Search Results

You must have the Export Search Results permission.

Once you have created search queries and criteria, run searches, and viewed results or event details, you can choose to export information to retain or share with colleagues.

- "Export Search Results" below
- "Export Event Details" on the next page
- "Export Scheduled Searches" on the next page
- "Export Search Queries and Search Criteria" on page 401

Export Search Results

You can export the Search Results table to a .csv file. Search exports the data, based on the specified fieldset for the search. The export process limits the file to one million event records.

1. In the search toolbar above the histogram, select .
2. In the resulting Export Options dialog box, select either:
   - Current time range to export the results shown in the current histogram and search results table.
   - Original start time to export the results retrieved from the original start time you selected for the search.
3. Select either PDF or CSV.
4. Click Export to export the result to the selected file format.

Additionally, you can export a single result from the results table by right-clicking the row and selecting .pdf as the file format.

> Saved .csv files of search queries sometimes contain syntax that uses "name= a special character" (such as "name=+" or "name=_"). In Excel, if the file is not opened properly, you might see formatting issues where the fields display as a generic "#NAME".
>
> To avoid this, open the file by selecting From Text/CSV on the Excel Data ribbon. Navigate to the .csv file you downloaded and click Import. Preview the file to ensure the fields display correctly, then click Load to view the full file.

Export Event Details

There may be situations where you need to use event details for reporting purposes. Or you might need to share the event details with an analyst who does not have access to the Event Inspector. You can do so by exporting the event details to .pdf or .csv.

1. At the top of the Event Inspector, click the Export icon.
2. Click Export to PDF or Export to CSV.

   The system starts a download of the event details to your selected format.
3. Share or use the .pdf or .csv as needed.

If you select to show null values, the system includes null values in the exported .csv or .pdf file.

You can also export a single event to a .pdf or .csv file from the Search Results Table. Right-click an event in the Search Results table to open a pop-up menu with the options Export to PDF and Export to CSV. If you use this method to export the event details, null values will be included in the exported file.

Export Scheduled Searches

You have the option to export the completed run of a scheduled search to .csv format.

Export Search Queries and Search Criteria

You can export search queries and search criteria to a gzipped JSON file. (You must have the correct Import and Export permissions to do this.)

Build a Report Using Search Results

Search assigns a unique **Search Results ID**, which is a link to the temporary table containing the dataset that you see in the Events table and in the saved Search Results.

- You can copy the ID to build a report around those events.
- You can also build a report based on the Search Results ID for a completed run of a scheduled search.

To copy the Search Results ID for a report:

1. View the search results dataset that you want to use in the report.
2. To get the *Search ID*, click the Copy icon in the table's header.
3. (Optional) To view or save the copied ID, paste the ID in a text editor.
4. In the Reports Portal, complete the steps for building a dashboard or report based on the dataset.

Manage Searches

Select Search > Search <*saved_search_type*>.

If you have saved a search query, criteria, or dataset, you can manage the saved items individually or in bulk; import and export search results in a CSV file; or delete them.

Manage Your Search Queries

You must have the Manage Search Queries permission.

Select Search > Home > Search Queries > ↗.

The saved search queries contain only the specified query expression, ready for you to load into a new search at any time. The list of saved queries includes both the queries that you have saved and the built-in System queries.

> You need Manage Search Queries permissions and Manage Search Criteria permissions to save search queries and search criteria, but you do not need special permission to save your search results.

If you have the *Import and Export Search Queries* permission, you can **clone**, **import**, or **export** one or more queries to a JSON file.

- "Modify and Delete " below
- "Clone" below
- "Import " below
- "Export " below

Modify and Delete

You can modify or delete your queries at any time. However, you cannot delete or edit a System query. Rather, to change a System query, you should clone it, then make and save your changes.

Clone

1. Select Search > Home > Search Query > ↗.
2. Select the query entries that you want to clone.
3. Click the ↗ (Clone) icon.

   The selection is copied with a new name, appended with a number. For example, entityName becomes entityName(1).

Import

You can import a search query as a gzipped JSON file. An imported file cannot exceed 100 MB, and must contain only search queries with valid information.

1. Select Search > Home > Search Query > ↗.
2. Click the Import icon.
3. Browse to the desired file.
4. Click Import.

Export

You can export one or more queries to a gzipped JSON file. Click the Export icon.

Manage Your Search Criteria

You must have the Manage Search Criteria permission.

Select Search > Home > Search Criteria > ↗.

Saved search criteria combine a query expression and other Search elements, such as fieldsets and the time range of the data you want to retrieve. The list of saved criteria includes both the criteria that you have saved and the built-in System criteria. You can **modify** or **delete** your criteria at any time. However, you cannot delete or edit a System criteria. Rather, to change a System criteria, you should clone it, then make and save your changes.

The saved search criteria is ready to load into a new search at any time.

> You need Manage Search Queries permissions and Manage Search Criteria permissions to save search queries and search criteria, but you do not need special permission to save your search results.

By default, search criteria are sorted alphabetically by name. Maximum search results and date fields (such as search expiration) are stored as part of the search criteria, as indicated by a message from the application. They are displayed in the Manage Search table, where you can visualize saved the search criteria.

If you have the *Import and Export Search Criteria* permission, you can **import**, **clone**, or **export** one or more criteria to a JSON file.

Import

1. Select Search > Home > Search Criteria > ↗.
2. Click the Import icon.
3. Select the gzipped JSON file (or files) that you want to import.
4. Click the Import icon.

Clone

1. Select Search > Home > Search Criteria > ↗.
2. Select the criteria entries that you want to clone.
3. Click the Clone icon.

   The selection is copied with a new name, for example, entityName becomes entityName(1).

Export

1. Select Search > Home > Search Criteria > ↗.
2. Select the entries that you want to export.
3. Click the Export icon.

Manage Your Search Results

Select Search > Home > Search Results > ↗.

When you save search results, Search stores the dataset until the search expires or you delete search from the saved list. You can sort the list by the search's name, query, event time stamp, or date of the search.

> You do not need special *Manage Search Queries* and *Manage Search Criteria* permissions to save your search results.

If you load the saved dataset in a Search tab, you can update the query and criteria as needed, then save those changes as a new search query, criteria, or results. Note that for a real-time search, you cannot save the query.

You can share the results with colleagues. Export all of the results to a .csv or .pdf file. You can also share a single event as a .csv or a .pdf file.

Map Database Names to their Appropriate Search Fields

When creating a fieldset, Search displays the coding-style name for the fields instead of the human-readable names that you see when creating a query. For example, in a query you can enter or select Agent Address. However, in the fieldsets selection, this same field appears as agentAddressBin. This issue also occurs when you’re adding queries to a report.

The following tables provide the coding-style names that appear in the fieldset and report configurations, so that you can easily map them to their human-readable names.

Agent Fields

Substitute the following labels in the agent category:

For the field that you want to add...	You should choose...
Agent Address	agentAddressBin

Agent DNS Domain	agentDnsDomain
Agent Hostname	agentHostName
Agent ID	agentId
Agent Mac Address	agentMacAddressBin
Agent NT Domain	agentNtDomain
Agent Receipt Time	agentReceiptTime
Agent Severity	agentSeverity
Agent Timezone	agentTimeZone
Agent Translated Address	agentTranslatedAddressBin
Agent Translated Zone External ID	agentTranslatedZoneExternalID
Agent Translated Zone URI	agentTranslatedZoneURI
Agent Type	agentType
Agent Version	agentVersion
Agent Zone External ID	agentZoneExternalID
Agent Zone URI	agentZoneURI

Category Fields

Substitute the following labels in the category:

Category Behavior	**categoryBehavior**
Category Device Group	categoryDeviceGroup
Category Device Type	categoryDeviceType
Category Object	categoryObject
Category Outcome	categoryOutcome
Category Significance	categorySignificance
Category Technique	categoryTechnique
Version	version

Correlation Fields

Substitute the following labels in the `correlation` category:

Substitute the following labels in the correlation category:	**You should choose...**
Base Event Ids	correlated_event_id

Correlated Event Id	generatorURI
Generator External ID	generatorExternalID
Generator URI	base_event_ids
Priority	priority

Destination Fields

Substitute the following labels in the `destination` category:

For the field that you want to add...	You should choose...
Destination Address	destinationAddressBin
Destination DNS Domain	destinationDnsDomain
Destination Geo Country Code	destinationGeoCountryCod
Destination Geo Latitude	destinationGeoLatitude
Destination Geo Longitude	destinationGeoLongitude
Destination Geo Postal Code	destinationGeoPostalCode
Destination Geo Region Code	destinationGeoRegionCode
Destination Geolocation Info	destinationGeoLocationInfo
Destination Hostname	destinationHostName
Destination Mac Address	destinationMacAddressBin
Destination NT Domain	destinationNtDomain
Destination Port	destinationPort
Destination Process ID	destinationProcessId
Destination Process Name	destinationProcessName
Destination Service Name	destinationServiceName
Destination Translated Address	destinationTranslatedAddressBin
Destination Translated Port	destinationTranslatedPort
Destination Translated Zone External ID	destinationTranslatedZoneExternalID
Destination Translated Zone URI	destinationTranslatedZoneURI
Destination User ID	destinationUserId
Destination User Privileges	destinationUser Privileges
Destination Username	destinationUserName
Destination Zone External ID	destinationZoneExternalID
Destination Zone URI	destinationZoneURI

Device Fields

Substitute the following labels in the device category:

For the field that you want to add...	You should choose...
Device Action	deviceAction
Device Event Class ID	deviceEventClassId
Device Address	deviceAddressBin
Device Asset ID	deviceAssetID
Device Direction	deviceDirection
Device DNS Domain	deviceDnsDomain
Device Domain	deviceDomain
Device Event Category	deviceEventCategory
Device Inbound Interface	deviceInboundInterface
Device Event Class ID	deviceEventClassId
Device External ID	deviceExternalId
Device Facility Hostname	deviceFacility
Device Hostname	deviceHostName
Device Mac Address	deviceMacAddressBin
Device NT Domain	deviceNtDomain
Device Outbound Interface	deviceOutboundInterface
Device Process ID	deviceProcessId
Device Process Name	deviceProcessName
Device Product	deviceProduct
Device Receipt Time	deviceReceiptTime
Device Severity	deviceSeverity
Device Timezone	deviceTimeZone
Device Translated Address	deviceTranslatedAddressBin
Device Translated Zone External ID	deviceTranslatedZoneExternalID
Device Translated Zone URI	deviceTranslatedZoneURI
Device Version	deviceVendor
Device Version	deviceVersion

Device Zone External ID	deviceZoneExternalID
Device Zone URI	deviceZoneURI
Normalized Event Time	normalizedEventTime

Device Custom Fields

Substitute the following labels in the `device custom` category:

For the field that you want to add...	You should choose...
Device Custom Date 1	deviceCustomDate1
Device Custom Date 1 Label	deviceCustomDate1Label
Device Custom Date 2	deviceCustomDate2
Device Custom Date 2 Label	deviceCustomDate2Label
Device Custom Descriptor ID	deviceCustomDescriptorId
Device Custom Floating Point 1	deviceCustomFloatingPoint1
Device Custom Floating Point 1 Label	deviceCustomFloatingPoint1Label
Device Custom Floating Point 2	deviceCustomFloatingPoint2
Device Custom Floating Point 2 Label	deviceCustomFloatingPoint2Label
Device Custom Floating Point 3	deviceCustomFloatingPoint3
Device Custom Floating Point 3 Label	deviceCustomFloatingPoint3Label
Device Custom Floating Point 4	deviceCustomFloatingPoint4
Device Custom Floating Point 4 Label	deviceCustomFloatingPoint4Label
Device Custom Number 1	deviceCustomNumber1
Device Custom Number 1 Label	deviceCustomNumber1Label
Device Custom Number 2	deviceCustomNumber2
Device Custom Number 2 Label	deviceCustomNumber2Label
Device Custom Number 3	deviceCustomNumber3
Device Custom Number 3 Label	deviceCustomNumber3Label
Device Custom String 1	deviceCustomString1
Device Custom String 1 Label	deviceCustomString1Label
Device Custom String 2	deviceCustomString2
Device Custom String 2 Label	deviceCustomString2Label
Device Custom String 3	deviceCustomString3

For the field that you want to add...	You should choose...
Device Custom String 3 Label	deviceCustomString3Label
Device Custom String 4	deviceCustomString4
Device Custom String 4 Label	deviceCustomString4Label
Device Custom String 5	deviceCustomString5
Device Custom String 5 Label	deviceCustomString5Label
Device Custom String 6	deviceCustomString6
Device Custom String 16 Label	deviceCustomString6Label
Device CustomIPv6 Address 1	deviceCustomIPv6Address1Bin
Device CustomIPv6 Address 1 Label	deviceCustomIPv6Address1Label
Device CustomIPv6 Address 2	deviceCustomIPv6Address2Bin
Device CustomIPv6 Address 2 Label	deviceCustomIPv6Address2Label
Device CustomIPv6 Address 3	deviceCustomIPv6Address3Bin
Device CustomIPv6 Address 3 Label	deviceCustomIPv6Address3Label
Device CustomIPv6 Address 4	deviceCustomIPv6Address4Bin
Device CustomIPv6 Address 4 Label	deviceCustomIPv6Address4Label

Event Fields

Substitute the following labels in the `event` category:

For the field that you want to add...	You should choose...
Application Protocol	applicationProtocol
Base Event Count	baseEventCount
Bytes In	bytesIn
Bytes Out	bytesOut
Crypto Signature	cryptoSignature
Customer External ID	customeExternalID
Customer URI	customerURI
End Time	endTime
Event ID	eventId
Event Outcome	eventOutcome
External Id	externalID

For the field that you want to add...	You should choose...
Locality	locality
Message	message
Name	name
Originator	originator
Reason	reason
Start Time	startTime
Transport Protocol	transportProtocol
Type	type

Extension Fields

Substitute the following labels in the `extension` category:

For the field that you want to add...	You should choose...
Extra Fields	extraFields
Storage Group	storageGroup

File Fields

Substitute the following labels in the `file` category:

For the field that you want to add...	You should choose...
File Create Time	fileCreateTime
File Hash	fileHash
File ID	fileId
File Modification Time	fileModificationTime
File Name	fileName
File Path	filePath
File Permission	filePermission
File Size	fileSize
File Type	fileType

Flex Fields

Substitute the following labels in the `flex` category:

For the field that you want to add...	You should choose...
Flex Date 1	flexDate1
Flex Date 1 Label	flexDate1Label
Flex Number 1	flexNumber1
Flex Number 1 Label	flexNumber1Label
Flex Number 2	flexNumber2
Flex Number 2 Label	flexNumber2Label
Flex String 1	flexString1
Flex String 1 Label	flexString1Label
Flex String 2	flexString2
Flex String 2 Label	flexString2Label

OldField Fields

Substitute the following labels in the `oldfield` category:

For the field that you want to add...	You should choose...
Old File Create Time	oldFileCreateTime

Old File Fields

Substitute the following labels in the `old file` category:

For the field that you want to add...	You should choose...
Old File Hash	oldFileHash
Old File ID	oldFileId
Old File Modification Time	oldFileModificationTime
Old File Name	oldFileName
Old File Path	oldFilePath
Old File Permission	oldFilePermission
Old File Size	oldFileSize
Old File Type	oldFileType

Request Fields

Substitute the following labels in the `request` category:

For the field that you want to add...	You should choose...
Request Client Application	requestClientApplication
Request Context	requestContext
Request Cookies	requestCookies
Request Method	requestMethod
Request URL	requestUrl
Request URL FileName	requestUrlFileName
Request URL Query	requestUrlQuery

Source Fields

Substitute the following labels in the `source` category:

For the field that you want to add...	You should choose...
Source Address	sourceAddressBin
Source DNS Domain	sourceDnsDomain
Source Geo Country Code	sourceGeoCountryCode
Source Geo Latitude	sourceGeoLatitude
Source Geo Longitude	sourceGeoLongitude
Source Geo Postal Code	sourceGeoPostalCode
Source Geo Region Code	sourceGeoRegionCode
Source Geolocation Info	sourceGeoLocationinfo
Source Hostname	sourceHostName
Source Mac Address	sourceMacAddressBin
Source NT Domain	sourceNtDomain
Source Port	sourcePort
Source Process ID	sourceProcessId
Source Process Name	sourceProcessName
Source Service Name	sourceServiceName
Source Translated Address	sourceTranslatedAddressBin
Source Translated Port	sourceTranslatedPort
Source Translated Zone External ID	sourceTranslatedZoneExternalID
Source Translated Zone URI	sourceTranslatedZoneURI

For the field that you want to add...	You should choose...
Source User ID	sourceUserId
Source User Privileges	sourceUser Privileges
Source Username	sourceUserName
Source Zone External ID	sourceZoneExternalID
Source Zone URI	sourceZoneURI

Scheduling Regular Runs of a Search

*You must have the **Manage Scheduled Searches** permission to schedule runs of a search.*

Select Home > Scheduled Searches > Schedule.

A **scheduled search** is a search that runs on a regular interval. Whereas a saved search is saved, but does not run automatically. Each time a scheduled search runs, search adds the results to the list of Completed Searches runs.

Manage Scheduled Searches

*You must have the **Manage Scheduled Searches** permission to schedule runs of a search.*

Select Home > Scheduled Searches > Scheduled.

- "Create a Scheduled Search" on the next page
- "Manage Scheduled Searches" above
- "Clone a Scheduled Search" on page 415
- "Edit a Scheduled Search" on page 415
- "Delete a Scheduled Search" on page 416
- "Enable and Disable a Scheduled Search" on page 416

For your scheduled searches, you can perform the following actions:

View and edit all details for a schedule search

To view specific scheduled search details, in the Name column, locate the search name and select it. Click Edit at the top of the table.

Sort the data in columns

To change the sort order, click the column heading to toggle between ascending and descending order.

Reorder columns

To rearrange the order of the columns, drag each column header to a new position.

Search for a search keyword

To find a keyword, click the field next to the Magnifying Glass icon (Search Keyword), enter a value, and the system displays your results automatically.

Hide and display columns

To hide and display a column, in the far right-corner of the window, click the Wrench icon (Manage Columns), and then select and clear the column name checkboxes.

Filter the data in columns

You can filter scheduled searches based on Status, Timestamp, and Fieldset. To filter the data for more specific results, in the far-right corner of the window, click the Funnel icon (Filters), and then select and clear the filter options.

Create a Scheduled Search

*You must have the **Manage Scheduled Searches** permission to schedule runs of a search.*

Select Home > Scheduled Searches > Scheduled.

For every scheduled search, enter the query, fieldset, or time range for the search events or leave the defined values for the saved search. Just as for a saved search, the following considerations apply to a scheduled search:

- The search is case sensitive.
- The query input determines the search type (full text, natural language, or contextual).
- The system treats a comma (,) between search items and values as an OR operator.
- As you specify the search criteria, the system suggests search items and operators based on a schema data dictionary. To view the predefined queries, type # in the query field.
- To search for a field without data, enter [field_name] = *Null*.

To create a scheduled search:

1. Select Home> Scheduled Searches.
2. Select +.
3. Specify a Name that is 5 to 255 characters long.
4. To enable the scheduled search, select enable.

   You also can enable and disable scheduled searches at any time in the Scheduled tab.

5. To indicate how frequently you want the search to run, specify one of the following options:
   - Hourly
   - Daily
   - Weekly
   - Monthly
6. Configure the settings for the dates and times of each run, based on how frequently they will run.

   Scheduled searches can run multiple days per week. These weekly searches can run once per day, at a particular hour, or they can run periodically every *N* number of hours during chosen days of the week. Additionally, you can schedule searches to run multiple times per month, as desired.

   > **NOTE:** If you choose the End after option, the maximum number of instances is 1000.
7. For Search Query and Metadata, complete one of the following actions:
   - To use an existing search, type # then select from the list of available saved searches.
   - To create a new search, specify the query, fieldset, and time range.
8. Select Schedule.

Clone a Scheduled Search

*You must have the **Manage Scheduled Searches** permission to schedule runs of a search.*

Select Home > Scheduled Searches > Scheduled.

After creating a scheduled search, you can clone it at any time.

1. Select the scheduled searches that you want to clone.
2. Click the clone icon.

Edit a Scheduled Search

*You must have the **Manage Scheduled Searches** permission to schedule runs of a search.*

Select Home > Scheduled Searches > Scheduled.

After creating a scheduled search, you can edit it at any time. After you modify a schedule, the first completed run will have a flag to indicate that the modification occurred.

If you change the Pattern values, please be aware that Search counts any and all completed runs before you made the change. For example, your scheduled search uses the repeat forever option and Search has performed three runs. If you update the ending option to end after eight occurrences, Search counts the three previous completed runs; therefore, you would only have five occurrences of the eight occurrences left to run. Should you want eight occurrences, you would need to change your ending option to 11 occurrences.

1. Select **Home** > **Scheduled Searches**.
2. Select the scheduled searches that you want to edit.
3. Click the **edit** icon.

Enable and Disable a Scheduled Search

*You must have the **Manage Scheduled Searches** permission to schedule runs of a search.*

Select Home > Scheduled Searches > Scheduled.

After creating a scheduled search, you can enable and disable it at any time.

1. Select the searches that you want to enable or disable.
2. Select **Enable** or **Disable**.

   The **Status** column, which you can add with the *Manage Columns* option, displays the status of either **Enabled** (green) or **Disabled** (red).

Delete a Scheduled Search

*You must have the **Manage Scheduled Searches** permission to schedule runs of a search.*

Select Home > Scheduled Searches > Scheduled.

You can delete a scheduled search at any time. After selecting **Delete**, the system prompts you to keep or delete the completed runs associated with the scheduled search.

> To cancel the deletion process, select the **X** that closes the dialog box, instead of selecting **Yes** or **No**.

Manage Completed Runs of a Scheduled Search

You must have the Manage Scheduled Searches permission to schedule runs of a search.

Select **Home** > **Scheduled Searches** > **Completed**.

After creating a scheduled search, you can view, delete, export, and filter the **completed runs** of that search. The results of a completed run are immutable. That is, if you edit the settings or query of a completed run, your changes do not affect the original results stored in the Completed list of scheduled searches.

- "View a Completed Run of a Scheduled Search" below
- "Save the Results of a Completed Run" on the next page
- "Delete Completed Runs of a Scheduled Search" on page 419
- "Export Completed Runs of a Scheduled Search" on page 419

View a Completed Run of a Scheduled Search

You must have the Manage Scheduled Searches permission to schedule runs of a search.

Select **Home** > **Scheduled Searches** > **Completed**.

The name of a completed run represents the name of the scheduled search name plus its start date and time.

When a run is in progress, Search displays the number of events received thus far and when the last chunk of data was received. Also, a flag beside the name of a completed run indicates that the settings for that scheduled search were changed before this run.

> If the system's **global search limit** is exceeded, you may experience problems. To verify if the global search limit was reached, create a new search. If the error message: "An error occurred while creating search. Exceeding the limit of 1000 global searches." displays, then the limit was reached. For more information about search limits, see Understand Search Limits.

In the **Completed** tab, you can perform the following actions:

View all details for a completed schedule search

To view completed search results, click the Eye icon beside the search name.

Sort the data in columns

To change the sort order, click the column heading.

Reorder columns

To rearrange the order of the columns, drag each column to new position.

Search for a search keyword

To find a keyword, click in the field next to the Magnifying Glass icon (Search Keyword), enter a value, and the system displays your results automatically.

Hide and display columns

To hide and display a column, in the far right-corner of the window, click the Wrench icon (Manage Columns), and then select and clear the column name checkboxes.

Filter the data in columns

To filter scheduled searches based on *Status* and *Fieldset*, select the corresponding filter parameter. You can also filter completed scheduled searches based on a time range (custom and preset).

To filter the data for more specific results, in the far right-corner of the window, click the Funnel icon (Filters), and then select and clear the filter options. To filter the results based on execution time, set the date picker filter in the far right corner.

Create a report based on the run results

Each completed run has a unique Search Results ID, which allows you to create a report based on the search results.

Save the Results of a Completed Run

You must have the Manage Scheduled Searches permission to schedule runs of a search.

Select **Home** > **Scheduled Searches** > **Completed**.

You can save the dataset from the completed run of a scheduled search, similar to saving other searches. When you save the run results, Search renames the selected run to the name that you specify. You also can choose how long to retain the dataset in the database.

1. When viewing a completed run, select the Save icon.
2. Specify a name for the saved dataset.
3. Under Result Retention and Limitations, configure how long you want to keep each completed run of the scheduled search.
    - Your choice of values for each setting might be confined to limits set by your product administrator.

- For Delete files after, you can specify a value that overrides how you configured Search Expires In for your search preferences.

  For example, you prefer that searches expire within five days. But you want the dataset for this completed run to expire after 10 days.
- (Conditional) If you have the *Never Expire Search Results* permission, you can choose Never Expire to retain the dataset indefinitely.

4. Select Save.

Upgrading to the New Search Capability

After you upgrade to the new Search capability, you might encounter minor issues with saved scheduled searches. The general workaround to prevent these issues is to save your previous results **before** the upgrade and recreate them for new search runs. Issues you might see include:

- For completed scheduled searches before and after an upgrade, the "number of results" column may not match actual search results or equal zero. But, you can still view the actual results by opening the completed scheduled searches.
- The results of scheduled searches that contain the **eval** operator may not load properly if you are loading them in a search results tab that is already open.

Delete Completed Runs of a Scheduled Search

You must have the Manage Scheduled Searches permission to schedule runs of a search.

Select **Home** > **Scheduled Searches** > **Completed**.

You can delete a completed run of a scheduled search at any time.

> By default, completed scheduled searches expire after seven days. If you have set them to "never expire," then you should periodically delete completed runs (in batches of 50 or fewer) to avoid performance issues.

1. Select the completed runs that you want to delete.
2. Click the delete icon.

Export Completed Runs of a Scheduled Search

*You must have the **Manage Scheduled Searches** permission to schedule runs of a search.*

Select **Home** > **Scheduled Searches** > **Completed**.

You can export the completed run of a scheduled search to .csv format.

1. Click the CSV icon next to the name of the scheduled search that you want to export.
2. Alternatively, view the search, then select the CSV icon to export the results.

For more information about exporting, see "Export the Search Results" on page 399.

Hunting for Known Threats and Vulnerabilities

To help you hunt for undetected but industry-recognized threats and vulnerabilities, the Reports Portal includes a set of built-in dashboards and reports. You can view this content based on the tactics and standards established by the Cloud Security Alliance and OWASP. Additional reports and dashboards focus on fundamental security issues, such as monitoring firewalls and malware.

For rapid access to your regular dashboards, you can configure the Reports Portal to display your preferred dashboards by default. For some dashboards, you also can customize the date and time of a dashboard by adjusting the Start and End times. By default, the system displays events from the past two hours.

Understanding the Cloud Security Dashboards and Reports

In the Reports Portal, select Repository > Standard Content > Cloud.

Cloud services providers are highly accessible, and the vast amount of data that they host makes them an attractive target for malicious users. To help you assess the security of services in the cloud, we provide dashboards and reports based on the industry-wide standards set by the Cloud Security Alliance (CSA). This alliance has identified the most significant security threats to the shared, on-demand nature of cloud computing. CSA refers to these issues as the **Treacherous 12**.

Reporting includes the following dashboards and reports, organized by the Treacherous 12 categories:

Category	Dashboards	Reports
"Abuse and Nefarious Use of Cloud Services" on the next page	DoS Originated from EC2 Instances EC2 Instances Communicating with Cryptocurrency Entity EC2 Instances Querying Domains Involved in Phishing Attacks EC2 Machines Involved in Suspicious Communication Email Spam Originated from EC2 Instances Nefarious Activity by an Unauthorized Individual from EC2 Suspicious Activity Reported by Microsoft Azure Trojans or Backdoors Installed on EC2 Instances	n/a
"Account Hijacking" on page 423	Account Hijacking Vulnerabilities Man in the Middle Attacks Phishing Attacks Principal Invoked an API Commonly used to Discover Information Associated with AWS account	Broken Authentication and Session Management
"Advanced Persistent Threats" on page 424	Trojans or Backdoors Installed on EC2 Instances	n/a
"Data Breaches" on page 425	All Information Leakage Events Information Disclosure Vulnerabilities Organizational Information Leakage Personal Information Leakage	n/a
"Data Loss" on page 425	Amazon AWS Deletion Events	Amazon S3 Bucket Deletion Events Amazon VPC Deletion Events
"Denial of Service" on page 426	DoS Activity	n/a
"Insecure Interfaces and APIs" on page 426	n/a	Vulnerabilities on Interfaces and API
"Insufficient Due Diligence" on page 427	n/a	EC2 Machines Behavior Deviates from the Established Baseline Failed Technical Compliance Events

Category	Dashboards	Reports
"Insufficient Identity Credential and Access Management " on page 427	n/a	AWS Account Password Policy Was Weakened Invalid or Expired Certificate Unsecured Password Events
"Malicious Insiders" on page 428	n/a	Nefarious Activity by an Unauthorized Individual
"System Vulnerabilities" on page 428	Vulnerability Overview	Cloud Related Vulnerabilities Critical Vulnerabilities Heartbleed Vulnerabilities Kernel Vulnerabilities Overflow Vulnerabilities Security Patch Missing Shellshock Vulnerabilities Spectre and Meltdown Vulnerabilities Vulnerabilities by Host
"Vulnerabilities on Shared Technologies" on page 430	n/a	"Vulnerabilities on Shared Technologies" on page 430

The cloud-based security dashboards and reports provide a view of events occurring in Amazon Web Service (AWS) and Azure, forwarded to the ArcSight Database from ArcSight ESM. Content in a dashboard depends on the widgets that it displays, as well as the dashboard’s specified time range. For example, some widgets summarize events by resource names and profile IDs, as well as by the event’s severity.

Abuse and Nefarious Use of Cloud Services

In the Reports Portal, select Repository > Standard Content > Cloud > CSA > The Treacherous 12.

Malicious users can exploit poorly secured cloud service deployments, free cloud service trials, and fraudulent account sign-ups, which expose cloud computing models such as Iaas, PaaS, and SaaS. You might experience denial of service attacks, email spam and phishing campaigns, and brute-force computing attacks, or malicious individuals spoofing identities.

Some charts display data reported by Amazon GuardDuty, which is a threat detection service that continuously watches for malicious activity and unauthorized behavior.

Dashboards	Reports
DoS Originated from EC2 Instances	n/a
EC2 Instances Communicating with Cryptcurrency Entity	
EC2 Instances Querying Domains Involved in Phishing Attacks	
EC2 Machines Involved in Suspicious Communication	
Email Spam Originated from EC2 Instances	
Nefarious Activity by an Unauthorized Individual from EC2	
Suspicious Activity Reported by Microsoft Azure	
Trojans or Backdoors Installed on EC2 Instances	

DoS Originated from EC2 Instances

Helps you identify denial of services activities that arise from EC2 (AWS Elastic Compute Cloud service) instances. The charts and table show events summarized by their Amazon resource name, severity, and GuardDuty.

EC2 Instances Communicating with Cryptocurrency Entity

Displays EC2 instances that communicates with cryptocurrency IP addresses or domains.

EC2 Instances Querying Domains Involved in Phishing Attacks

Lists the EC2 instances in which querying domains are involved in phishing attacks.

EC2 Machines Involved in Suspicious Communication

Lists the EC2 machines that are involved in suspicious communication.

Email Spam Originated from EC2 Instances

Identifies email spam that originates from EC2 instances.

Nefarious Activity by an Unauthorized Individual from EC2

Displays events that Amazon GuardDuty reports as nefarious activity by an unauthorized individual from EC2 machines. Amazon GuardDuty is a threat detection service that continuously watches for malicious activity and unauthorized behavior.

Suspicious Activity Reported by Microsoft Azure

Lists suspicious activity reported by Microsoft Azure.

Trojans or Backdoors Installed on EC2 Instances

Lists backdoors or trojans discovered on EC2 machines.

Account Hijacking

Select Reports > Portal > Repository > Standard Content > Cloud > CSA > The Treacherous 12.

CSA identifies the hijacking of accounts and services as an ongoing, top threat. Malicious users might hijack accounts by phishing, fraud, and exploiting software vulnerabilities. In the cloud, the hijackers can eavesdrop on organizational activities, manipulate data, and redirect your clients.

Dashboards	Reports
Account Hijacking Vulnerabilities Man in the Middle Attacks Phishing Attacks Principal Invoked an API Commonly used to Discover Information Associated with AWS Account	Broken Authentication and Session Management

Account Hijacking Vulnerabilities

Provides charts of the top 10 vulnerabilities and the number of vulnerabilities over time. This dashboard also includes a table of the vulnerabilities, so you can review the reporting vendor or device, agent severity, asset, and the asset's zone.

Man in the Middle Attack

Provides charts that show man in the middle events by time, source address, destination address, source MAC address, and destination MAC address.

Phishing Attacks

Provides charts that show the phishing attacks against the organization.

Principal Invoked an API Commonly used to Discover Information Associated with AWS account

Provides charts that show the principals invoked by an API commonly used to discover information associated with AWS accounts.

Broken Authentication and Session Management

Lists the events that might be associated with broken authentication (possibly hijacked credentials) and session management issues reported by vulnerability scanners in the organization.

Advanced Persistent Threats

In the Reports Portal, select Repository > Standard Content > Cloud > CSA > The Treacherous 12.

Advanced Persistent Threats (APTs) are a parasitical form of cyberattack that infiltrates systems to establish a foothold in the computing infrastructure of target companies from which they smuggle data and intellectual property.

Dashboards	Reports
Trojans or Backdoors installed on EC2 Instances	n/a

Trojans or Backdoors Installed on EC2 Instance

Provides charts showing backdoors or trojans discovered on EC2 (AWS Elastic Compute Cloud service) machines.

Data Breaches

Select Reports > Portal > Repository > Standard Content > Cloud > CSA > The Treacherous 12.

While the risk of a data breach is not unique to the cloud, the CSA ranks it as a top concern for cloud customers. Sometimes the breach is the prime motivation of malicious users. However, breaches also result from mistakes made by individuals within the organization or poor security practices and software vulnerabilities.

To search for potential threats, use the following dashboards:

Dashboards	Reports
All Information Leakage Events Information Disclosure Vulnerabilities Organizational Information Leakage Personal Information Leakage	n/a

All Information Leakage Events
Provides charts and a table that show the leakage events in the organization, including the top reported events, destination users, and assets.

Information Disclosure Vulnerabilities
Provides charts and a table that show the disclosure vulnerabilities reported in the organization over time and by agent severity. You can also see the top 20 hosts, IP addresses, and signature ID events.

Organizational Information Leakage
Provides charts and a table that show the leakage of organizational information. You can view the top 20 leakage events and signature IDs, as well as leakage over time and agent severity.

Personal Information Leakage
Provides charts and a table that show the leakage of personal information. You can view the top reported, top 10 destination and source users, and leakage over time.

Data Loss

In the Reports Portal, select Repository > Standard Content > Cloud > CSA > The Treacherous 12.

No organization wants to lose data, particularly to malicious individuals who might use the information in an adverse manner. Unfortunately, data stored in the cloud can also be deleted accidentally or as a result of a catastrophe.

Dashboards	Reports
Amazon AWS Deletion Events	Amazon S3 Bucket Deletion Events Amazon VPC Deletion Events

To assess the potential for data loss, use the following reports:

Amazon AWS Deletion Events
Provides charts and a table listing the number of deletion events by operations, day, source address, and source user.

Amazon S3 Bucket Deletion Events
Lists the deletion events that occur in Amazon S3 Buckets.

Amazon VPC Deletion Events
Lists the deletion events that occur in Amazon VPC.

Denial of Service

In the Reports Portal, select Repository > Standard Content > Cloud > CSA > The Treacherous 12.

Denial-of-service (DoS) attacks deliberately attempt to prevent users from accessing services, data, and applications. Use the **DoS Activity** dashboard to watch for potential service interruptions. You can view the top source and destination addresses, as well as events by day.

Dashboards	Reports
DoS Activity	

DoS Activity
Provides charts the top source and destination addresses, as well as events by day. This dashboard also is available in the Network Monitoring category of the Foundation reports.

Insecure Interfaces and APIs

In the Reports Portal, select Repository > Standard Content > Cloud > CSA > The Treacherous 12.

Users interact with cloud computing services through user interfaces (UIs) and application program interfaces (APIs), and the value-added services built on these services. APIs and UIs are generally the most exposed part of a system, perhaps the only asset with an IP address available outside the trusted organizational boundary. These assets will be the target of heavy attack.

Dashboards	Reports
n/a	Vulnerabilities on Interfaces and API

Vulnerabilities on Interfaces and API

Reports the vulnerabilities found in your cloud-based interfaces and APIs.

Insufficient Due Diligence

Select Reports > Portal > Repository > Standard Content > Cloud > CSA > The Treacherous 12.

The CSA states that it is essential to develop a good roadmap and checklist for due diligence when evaluating technologies and CSPs. Organizations should perform due diligence to mitigate the myriad risks associated with providing cloud services.

Dashboards	Reports
n/a	EC2 Machines Behavior Deviates from the Established Baseline Failed Technical Compliance Events

EC2 Machines Behavior Deviates from the Established Baseline

Details how the behavior of EC2 (AWS Elastic Compute Cloud) machines deviates from the established baseline.

Failed Technical Compliance Events

Lists the failed technical compliance events.

Insufficient Identity Credential and Access Management

In the Reports Portal, select Repository > Standard Content > Cloud > CSA > The Treacherous 12.

Malicious users can infiltrate and cause data breaches based on poor authentication methods and weak password policies.

Dashboards	Reports
n/a	AWS Account Password Policy Was Weakened Invalid or Expired Certificate Unsecured Password Events

AWS Account Password Policy Was Weakened

Lists events associated with weakened AWS account password policy.

Invalid or Expired Certificate

Lists events associated with invalid or expired certificates.

Unsecured Password Events

Lists events associated with unsecured passwords.

Malicious Insiders

Select Reports > Portal > Repository > Standard Content > Cloud > CSA > The Treacherous 12.

Individuals within an organization, such as system administrators or disgruntled colleagues, might access sensitive information for malicious intent. Most organizations use controls to limit risk from malicious insiders, such as controlling encryption keys and monitoring or auditing the activities of specific users.

Dashboards	Reports
n/a	Nefarious Activity by an Unauthorized Individual

Nefarious Activity by an Unauthorized Individual

Lists events that Amazon GuardDuty reports as nefarious activity by an unauthorized individual from EC2 (AWS Elastic Compute Cloud) machines. Amazon GuardDuty is a threat detection service that continuously watches for malicious activity and unauthorized behavior.

System Vulnerabilities

Select > Reports > Portal > Repository > Standard Content > Cloud > System Vulnerabilities.

Most computer systems have programs, services, and operating systems that are vulnerable to exploitation. According to the CSA, vulnerabilities within the components of the operating system – kernel, system libraries and application tools – put the security of all services and data at significant risk.

Dashboards	Reports
Vulnerability Overview	Cloud Related Vulnerabilities Critical Vulnerabilities Heartbleed Vulnerabilities Kernel Vulnerabilities Overflow Vulnerabilities Security Patch Missing Shellshock Vulnerabilities Spectre and Meltdown Vulnerabilities Vulnerabilities by Host

Cloud Related Vulnerabilities
Lists all events associated with vulnerabilities known to affect AWS and Azure.

Critical Vulnerabilities
Lists all events that have a High or Very High severity, based on CVE and CVSS data.

Heartbleed Vulnerabilities
Lists all events associated with the heartbleed bug, which is a system vulnerability in the OpenSSL cryptographic software library. This weakness allows malicious users to steal the information protected, under normal conditions, by the SSL/TLS encryption used to secure the Internet. A Heartbleed attack works by tricking servers into leaking information stored in their memory. Attackers can also get access to a server's private encryption key, allowing the attacker to unscramble any private messages sent to the server and even impersonate the server.

Kernel Vulnerabilities
Lists all events associated with kernel vulnerabilities. For example, the vulnerability in the Linux Kernel netfilter/xt_TCPMSS, which could allow remote hackers to carry out a denial of service attack.

Overflow Vulnerabilities
Lists all events associated with buffer overflows. When a buffer receives more data than it can handle, the data can overflow to other storage locations. Overflows can cause system crashes or create an exploitable vulnerability.

Security Patch Missing
Reports the hosts that do not have the security patches needed to resolve known vulnerabilities.

ShellShock Vulnerabilities
Reports the hosts vulnerable to a ShellShock attack. In a ShellShock attack, the Unix shell Bash could execute arbitrary commands and allow unauthorized access to services, such as web servers, that use Bash to process requests.

Spectre and Meltdown Vulnerabilities
Reports the hosts vulnerable to Meltdown and Spectre attacks, which exploit critical vulnerabilities in modern processors. Meltdown breaks the fundamental isolation between user applications and the operating system, allowing a program to access the memory and data of other programs and the operating system. Spectre attacks break the isolation between applications, allowing programs to leak information to each other. These exploitations do not leave any traces in traditional log files.

Vulnerability Overview
Provides a dashboard view of the vulnerabilities found in the organization.

Vulnerabilities by Host
Lists all vulnerabilities detected on the specified hosts.

Vulnerabilities on Shared Technologies

In the Reports Portal, select Repository > Standard Content > Cloud > CSA > The Treacherous 12.

Some technologies that form the infrastructure for the cloud-based services started as on-premises capabilities, and thus might not have been designed to share its resources in multi-tenancy or multicustomer environments. For example, an application might not have initially been expected to support multi-factor authentication or its database designed to partition data by tenant.

Dashboards	Reports
n/a	Vulnerabilities on Shared Technologies

Vulnerabilities on Shared Technologies

Lists the vulnerable technologies that a malicious user might exploit.

Understanding the Foundation Dashboards and Reports

Available only with ArcSight capabilities.

In the Reports Portal, select Repository > Standard Content > Foundation.

Reporting includes dashboards and reports, organized by the following foundational categories:

Category	Dashboards	Reports
"Entity Monitoring" on the next page	Account Management Login Activity Overview	All Logins by Hostname Failed Logins Summary Login Activity by User
"Events Overview" on page 434	Least Common Events Most Common Events Most Common Events by Severity Reporting Devices	n/a

Category	Dashboards	Reports
"Host Monitoring" on page 435	Host Profile Overview	Anti-Virus Activity Anti-Virus Stopped or Paused Audit Log Cleared Failed Anti-Virus Updates Summary Operating Systems Errors and Warnings Services Shutdown Services Started
"Malware Monitoring" on page 436	Attacks and Suspicious Activity Overview Malware Overview Web Application Attacks	Reported Malware by Host Worm Infected Systems
"Network Monitoring" on page 438	DGA Overview DoS Activity Email Attacks IDS Events Overview Man in the Middle Attacks Reconnaissance Activity SSH Attacks Traffic Anomaly Overview VPN Activities Overview	Exploit Attempts Detected by IDS Network Device Configuration Changes
"Perimeter Monitoring" on page 442	Firewall Blocked Events Firewall Traffic Overview	Firewall Configuration Changes Firewall Blocked Traffic by Destination Address
"Vulnerability Monitoring" on page 443	Vulnerability Overview	High Risk Vulnerabilities by Host SSL Vulnerabilities Vulnerability Overview Vulnerabilities by Host XSRF Vulnerabilities XSS Vulnerabilities

Entity Monitoring

In the Reports Portal, select Repository > Standard Content > Foundation > Entity Monitoring.

To prevent brute force attacks or denial-of-service attacks, you could track login activities in your environment. A malicious user might attempt to guess another user’s password by repeatedly attempting to log in to the same account. You can track this behavior by observing failed login attempts. You might also watch for users who attempt to log in to multiple devices and hosts. Malicious users might also create, modify, and delete accounts to gain unauthorized access or let them execute harmful code.

To monitor account activity, use the following dashboards and reports:

Dashboards	Reports
Account Management	All Logins by Hostname
Login Activity Overview	Failed Logins Summary
User Profile Overview	Login Activity by User

Account Management

Provides charts and a table to view actions associated with account management.

Charts:

- Source User, Modification, Outcome, and Account
- Account Management Actions
- Account Modification by User
- Events Table

Special Views

- Accounts by Action Type
- Management Account Distribution
- Windows Account Privilege Change

Filters

- Device Vendor and Product
- Outcome
- Action Type

Login Activity Overview

Provides an overview of login activity. The table shows the details of the event, and if you click Global Event Id, it will take you to the Event Inspector. You can also click Open Search and it will take you to the search page and loads the `categoryBehavior = /Authentication/Verify` query with the same time that the dashboard was run.

Charts:

- By Destination User
- By Destination Host
- By Source Address
- Events Table

Special Filters:

- Login Activity Distribution
- Windows Logon Type

Filters:

- Login Outcomes
- Device Vendor and Product

User Profile

Displays information about a specific user's actions in your environment. This is a drill-down dashboard that can be opened with a specific user from another dashboard, table, bar, chart, or entered in the dashboard search bar. The dashboard requires a valid user to show information.

Charts:

- Log In Connections
- Account Management Actions
- Traffic by Volume
- Requested URLs
- Processes Used
- Application Protocols
- Events Table

Filters:

- Device Vendor and Product
- Category Outcome
- Category Significance

All Logins by Hostname

Reports the number of login attempts over time, including the outcome, for the specified hosts.

You must specify one IP address.

Failed Logins Summary

Reports the number of failed logins over time. The table includes the user, source address, target host, and number of failed attempts.

Login Activity by User

Reports the number of times that the specified users have attempted to log in to a host. The table indicates whether the attempt is successful.

You must specify one user by Destination UserName.

Events Overview

In the Reports Portal, select Repository > Standard Content > Foundation > Events Overview.

To identify threats in your environment, you might want to have an overview of the events that occur the most often or affect the most devices and hosts. You could also watch for events that rarely occur to check for unusual activity.

To monitor event activity, use the following dashboards:

Dashboards	Reports
Least Common Events Most Common Events Most Common Events by Severity Reporting Devices	n/a

Least Common Events

Provides charts and a table to help you identify the events that have the fewest reported occurrences. You can view the results by vendor, such as Amazon, or product, such as Microsoft Windows.

Most Common Events

Provides charts and a table to help you identify the common events that affect your environment by vendor, such as Amazon, or product, such as Microsoft Windows.

Most Common Events by Severity

Provides a table to help you track the events by count and severity.

Reporting Devices

Provides charts and a table to help you identify the hosts and devices with the most reported security events. You can view charts summarizing the most common severity of the events; top 20 events by vendor such as Microsoft or McAfee; top 20 events types of events, such as stopped services, and the top 20 events by class ID, such as a CVE.

Host Monitoring

In the Reports Portal, select Repository > Standard Content > Foundation > Host Monitoring.

In general, you should consistently monitor host-based events that indicate unauthorized activities. For example, a malicious user or program might start and stop host services and anti-virus programs. Additionally, they might clear the audit log to hide their actions on a host.

To monitor unusual activity that affects hosts, use the following reports:

Dashboards	Reports
Host Profile Overview	Anti-virus Activity Anti-virus Stopped or Paused Audit Log Cleared Events Failed Anti-virus Updates Summary Operating System Errors and Warnings Services Shutdown Services Started

Host Profile Overview

Displays the activity on a specific host. This is a drill-down dashboard that can be opened from IP addresses or host names located in a table, bar, chart, or entered in the dashboard search bar. The dashboard requires a valid IP address or host name to show information.

Charts:

- Inbound Connections
- Outbound Connections
- Source Users Associated
- Destination Users Associated
- Events Table

Filters:

- Device Vendor, Product, and Class ID
- Category Outcome
- Category Technique
- Application Protocol

Anti-virus Activity

Reports the volume of activity by reporting anti-virus service. The table provides results by event name, count, affected host, and outcome.

Anti-virus Stopped or Paused

Reports the top IP addresses where an anti-virus service has been stopped or paused. The table provides results by host, service name, and number of events.

Audit Log Cleared

Reports the number of times that the audit log has been cleared by user, host, and date.

Failed Anti-virus Updates Summary

Reports the number of failures in updating anti-virus software by date and host.

Operating Systems Errors and Warnings

Reports the top system errors and warnings by host. You could identify issues associated with specific errors or warnings, such as privileged objects and users, password changes, and login failures. Alternatively, you could sort the table by the reported hosts to review the types of issues affecting each host.

Services Shutdown

Reports the top 10 services that have been shut down in your environment. The table provides a summary of all services, including the associated hosts.

Services Started

Reports the top 10 services that have been started in your environment. The table provides a summary of all services started, including the associated hosts.

Malware Monitoring

In the Reports Portal, select Repository > Standard Content > Foundation > Malware Monitoring.

Malware, or malicious software, represents all the variations of programs designed to damage computers, servers, clients, devices, applications, and networks.

To monitor unusual activity that affects hosts, use the following reports:

Dashboards	Reports
Attack and Suspicious Activity Overview Malware Overview Web Application Attacks	Reported Malware by Host Worm Infected Systems

Attacks and Suspicious Activity Overview

Displays an overall view of new threats and monitor your devices.

Charts:

- Suspicious Activity Relationship
- Attack/Target Matrix
- Events Table
- Top 5 Ports
- SSH Attacks- drilldown to SSH Attacks Overview Dashboard
- Web Attacks- drilldown to Web Attacks Overview Dashboard

Filters:

- Agent Severity
- Attack Technique

Malware Overview

Displays the number of malware events, malware detected in your environment, and the infected hosts.

Charts:

- Top Reported Malware
- Malware Distribution
- Infected Assets
- Outcome, Action, and Malware
- Events Table

Filters:

- Device Vendor and Product
- Login Outcome
- Severity

Web Application Attacks

Displays information from web-based attacks on your environment.

Charts:

- Type of Web Application Attack
- Targeted Host

- Attacker IPs
- Events Table

Filters:

- Device Vendor and Device Product
- Category Techniques
- Agent Severity

Reported Malware by Host

Lists the malware found on the specified hosts.
You must specify one host.

Worm Infected Systems

Lists the hosts infected by worms, and provides a chart that shows the malware by count found in your enterprise.

Network Monitoring

In the Reports Portal, select Repository > Standard Content > Foundation > Network Monitoring.

The traffic exchanged between devices and servers tells you a lot about your network. By monitoring network traffic, you can identify cyber attacks and network events that could affect your enterprise. For example, malicious users might find a way to intercept communications to generate a man-inthe-middle attack or change the configuration of devices to gain unauthorized access. In both cases, the attack is the beginning of further intrusions. Also, a system infected by malware can be instructed generate a large volume of domains, thus causing increased traffic.

To monitor network activity, use the following dashboards and reports:

Dashboards	Reports
DGA Overview DoS Activity Email Attacks IDS Events Overview Man in the Middle Attacks Reconnaissance Activity SSH Attacks Traffic Anomaly Overview VPN Activities Overview	Exploit Attempts Detected by IDS Network Device Configuration Changes

DGA Overview

Helps you watch for domain generation algorithms (DGAs). DGAs make it easier for adversaries to introduce malware to your environment.

Charts:

- Affected IPs
- Suspicious Domains Generated
- Affected IPs by Bytes Out
- DGA Activity Relationship
- Events Table

Filters:

- Affected IP
- Suspicious IP
- DGA Domains
- Query Type

DoS Activity

Provides charts and a table for you to identify denial-of-service events. You can view the number of events per day, as well as the top source and destination addresses.

This dashboard also is available in the Denial of Service category of the Cloud reports.

Email Attacks

Provides charts and a table that describe the email attacks detected in your enterprise. You can view the top events or target users, as well as the destination and source addresses.

Exploit Attempts Detected by IDS

Shows the top 10 exploit attempts reported by the intrusion detection systems (IDS) in your enterprise. In the table, you can sort the events by count or severity.

IDS Events Overview

Helps you identify events generated by Intrusion Detection Systems.

Charts:

- Attacker IPs
- Targeted IPs
- Distribution by Category Technique
- Events Table

Filters:

- Device Vendor, Product, and Signature ID
- IDS Type
- Category Technique

Man in the Middle Attacks

Provides charts and a table to help you catch potential man-in-the-middle (MitM) attacks. You can view events over time, by source and destination address including MAC addresses, and the top MitM events.

During a MitM attack, the malicious user intercepts communications between two parties either to secretly eavesdrop or modify traffic traveling between the two.

Network Device Configuration Changes

Reports the top 10 devices whose configurations have changed, as well as the top 10 events causing configuration changes.

Reconnaissance Activity

Helps you watch for reconnaissance activity, which occurs when attackers are collecting information about your system in order to find vulnerabilities for future attacks.

Charts:

- Reconnaissance Events
- Targeted Users
- Targeted IPs
- Target Ports
- Category Technique
- Source IPs
- Events Table

Special Views:

- *Source IP-Target IP Relationships* serves as a scatter chart showing the relationship between source and target IPs.
- *Reconnaissance Activity Distribution* provides a distribution map displaying reconnaissance activity.

Filters:

- Device Vendor and Device Product
- Targeted Users

- Transport Protocol
- Category Technique
- Agent Severity

Traffic Anomaly Overview

Helps you identify anomalies in network traffic.

Charts:

- Anomalies Detected
- Targeted Ports
- Source IPs
- Targeted IPs
- Events Table

Special Views:

- *Source IP- Target IP Relationship* which provides a scatter chart displaying the relationship between source and target IPs.
- *Traffic Anomaly Distribution* which provides a distribution map displaying traffic anomalies.
- *Traffic by Volume*, which provides a line chart displaying traffic volume over time.

Filters:

- Device Vendors and Products
- Anomaly Type
- Application Protocol
- Transport Protocol
- Category Significance

SSH Attacks

Displays an overview of SSH protocol usage so that you can monitor threats and see vulnerabilities in your environment.

Charts

- Type of SSH Attacks
- Top Targeted Users
- Top Targeted IPs
- SSH Activity Relationship
- Events Table

Filters:

- Device Vendor, Product, and Class ID
- Source User
- Category Technique
- Category Significance
- Agent Severity

Note: The Events Table chart for the SSH Attacks Activity Overview populates using baseEventCount received from the connectors.

VPN Activities Overview

Provides charts and a table for you to monitor VPN activity, such as the top users who access the VPN. You can view the VPN activities per day, as well as review the top source and destination addresses.

Perimeter Monitoring

In the Reports Portal, select Repository > Standard Content > Foundation > Perimeter Monitoring.

The perimeters of an enterprise's network handle a great deal of traffic, causing system administrators to face an ever-increasing need to allow fast, efficient flow of traffic while also keeping the network secure. If you pro-actively monitor the firewalls in your enterprise, you can identify problems at an early stage and prevent network attacks. Malicious users often exploit loopholes in your firewall rules, particularly any old or unused rules. Network traffic also can be vulnerable to unencrypted data.

To monitor your network's perimeter, use the following dashboards and reports:

Dashboards	Reports
Firewall Blocked Events Firewall Traffic Overview	Firewall Configuration Changes Firewall Blocked Traffic by Destination Address

To monitor your network's perimeter, use the following dashboards and reports:

Firewall Blocked Events

Provides charts and a table for you to monitor the events that your firewalls have blocked, such as the bytes in and out for all blocked events. You can view the top events blocked per device, application protocol, source address, or destination address.

Firewall Blocked Traffic by Destination Address

Lists the top 10 firewall traffic events that have been blocked from reaching the specified hosts.

You must specify one IP address.

Firewall Configuration Changes

Lists the top 10 changes to the firewall configuration by host.

Firewall Traffic Overview

Provides charts and a table for you to monitor traffic through your firewalls, such as the bytes in and out by accepted and denied traffic. You can view the top reporting devices and destination addresses, as well as the outcomes of port usage over time. The table lists the Port, transport protocol, application protocol, and number of events reported by firewalls.

Vulnerability Monitoring

In the Reports Portal, select Repository > Standard Content > Foundation > Vulnerability Monitoring.

Many of the components within a web application, such as the libraries and modules, run with the same privileges as the application itself. Applications and APIs using components with known vulnerabilities can undermine application defenses and enable various attacks and impacts. For example, malicious users can exploit a known in SSL with the Heartbleed Bug. Web site and web applications can be vulnerable to cross-site scripting (XSS) and cross-site request forgery (XSRF) attacks. In an XSRF attack, also known as a one-click attack or session riding, a malicious user submits unauthorized commands to a web application from a user account that the application trusts.

High-risk vulnerabilities represent those that are relatively easy for attackers to exploit and gain control over system components. Many high-risk vulnerabilities can temporarily or permanently disrupt enterprise operations.

To check whether your enterprise has vulnerabilities, use the following dashboard and reports:

Dashboards	Reports
Vulnerability Overview	High Risk Vulnerabilities by Host SSL Vulnerabilities Vulnerabilities by Host XSRF Vulnerabilities XSS Vulnerabilities

Vulnerability Overview

Provides information to help you track vulnerabilities reported in your enterprise.

Charts:

- Vulnerabilities Detected
- Vulnerable Hosts
- Agent Severity
- Events Table

Filters:

- Device Vendor, Product, and Signature ID
- Agent Severity

High Risk Vulnerabilities by Host

Lists all high-risk vulnerabilities found on the specified hosts.

You must specify one host by `Destination Host`.

SSL Vulnerabilities

Lists the hosts reported to have the most SSL vulnerabilities.

Vulnerabilities by Host

Lists all vulnerabilities found on the specified hosts.

You must specify one IP address.

XSRF Vulnerabilities

Lists the top 10 hosts that are vulnerable to a cross-site request forgery (XSRF or CSRF) attack.

XSS Vulnerabilities

Lists the top 10 hosts that are vulnerable to cross-site scripting (XSS) attacks.

Understanding the OWASP Security Dashboards and Reports

In the Reports Portal, select Repository > Standard Content > OWASP.

We provide dashboards and reports based on the industry-wide standards set by the Open Web Application Security Project®. OWASP is a nonprofit foundation that works to improve the security of software. The organization has established a list of the Top 10 security risks to web applications, focusing on the most critical threats to the shared, on-demand nature of webbased applications.

Reporting includes the following dashboards and reports, organized according to **OWASP’s Top 10** risk categories:

Category	Dashboards	Reports
"Broken Access Control" below	N/A	"Broken Access Control" below
Cryptographic Failure	Information Leaks Overview	Organizational Records Information Leaks Personal Information Leaks
"Identification and Authentication Failures" on page 450	N/A	Broken Authentication and Session Management
"Injections" on the next page	Injection Vulnerabilities Overview XSS Vulnerabilities	Command Injections on HTTP Request Cross Site Scripting Injection Vulnerabilities SQL Injection
Software and Data Integrity Failures	Deserialization Flaws Overview	Deserialization Flaws
"Security Logging and Monitoring Failures" on page 450	Attacks and Suspicious Activity Overview Failed Logins Overview Login Activty Overview Security Log is Full	All Logins by Hostname Audit Log Cleared Failed Logins Summary Operating System Errors and Warnings
"Security Misconfiguration" on page 448	Misconfiguration Events Overview Missing Security Patches Overview XML Vulnerabilities Overview	Security Patch Missing XML Vulnerabilities
Server-Side Request Forgery	N/A	Server-Side Request Forgery
"Vulnerable and Outdated Components" on page 449	SSH Vulnerabilities Overview Vulnerability Overview	SSH Vulnerabilities Summary SSL Vulnerabilities

Broken Access Control

Select Reports > Portal > Repository > Standard Content > OWASP > A 1 - Broken Access Control.

Some enterprises fail to enforce access controls that restrict what authenticated users are allowed to do. By exploiting vulnerabilities in access controls, a malicious user might retrieve sensitive files, gain access other user’s accounts, change access rights, and misuse data.

Dashboards	Reports
n/a	Broken Access Control

Broken Access Control

Lists vulnerable hosts by severity over time.

Cryptographic Failures

In the Reports Portal, select Repository > Standard Content > OWASP > A 2 - Cryptographic Failures.

Most enterprises store sensitive data that needs to be protected, such as personal information, customer and organizational financial data, healthcare records, or intellectual property. Web applications and APIs might inadvertently expose sensitive data by not having enough protections such as encryption at rest or in transit, or when exchanging data with the browser. Malicious users could use the data for credit card fraud, identity theft, and other crimes.

Dashboards	Reports
Information Leaks Overview	Organizational Records Information Leaks Personal Information Leaks

Information Leaks Overview

Provides charts and a table to help you identify the most reported systems, types of leaks, and leakage events that occur over time. You can identify the top reported users and view leaks by category.

Organizational Records Information Leaks

Lists the top leakage events that affect organizational records.

Personal Information Leaks

Lists the top leakage events that affect personal records by Destination UserName.

Injections

In the Reports Portal, select Repository > Standard Content > OWASP > A 3 - Injections.

Injection vulnerabilities, or flaws, allow malicious users to inject code in other systems, especially interpreters, by using vulnerable applications. For example, in a SQL, NoSQL, OS or LDAP injection attack, someone sends untrusted data to an interpreter as part of a command or query to trick the interpreter into executing hostile commands or accessing data without appropriate authorization. Usually, these flaws result from insufficient validation of data input or the failure to filter or sanitize the input.

Dashboards	Reports
Injection Vulnerabilities Overview XSS Vulnerabilities	Command Injections on HTTP Request Cross Site Scripting Injection Vulnerabilities SQL Injection

Command Injections on HTTP Request

Lists the highest number of events associated with command injections in an HTTP request, by the requested URL. This report includes a chart to help you identify the relationship between the IP addresses of the attacker and the target.

In a command injection attack that exploits an HTTP request, malicious users execute arbitrary commands on the host operating system via a vulnerable application. For example, the web application passes unsafe data supplied by the user to a system shell.

Cross Site Scripting

Lists events associated with XSS vulnerabilities.

Injection Vulnerabilities

Lists the hosts with the most injection vulnerabilities over time.

Injection Vulnerabilities Overview

Provides charts and a table to help you identify the systems affected by injection vulnerabilities, as well as view the top reported vulnerabilities by agent severity, risk, and over time.

SQL Injection

Lists the systems with the highest number of SQL injection vulnerabilities.

In a SQL injection attack, a malicious user can interfere with the queries that an application makes to its database. The user could view delete, or modify data not usually available for retrieval. A malicious user could also use SQL injections to start a denial-of-service attack or compromise other services, servers, or infrastructure.

Vulnerabilities associated with **cross-site scripting (XSS)** enable malicious users to inject code in legitimate web pages or applications that executes harmful scripts in the user’s web browser when the browser parses data. The scripts might hijack user sessions, deface web sites, or redirect users to harmful sites. A web application or web page becomes vulnerable when it includes untrusted data; data without proper validation or escaping; or data supplied by users through an API that can create HTML or Java-script. XSS attacks tend to occur in forums, message boards, and web pages that allow comments. Malicious users can execute XSS attacks in VPSCript, ActiveX, Flash, and CSS. However, this type of injection attack most commonly occurs in Java Script.

XSS Vulnerabilities

Provides charts and a table so you can review potential XSS vulnerabilities in your environment by vulnerability type or the top vulnerable hosts.
To get a list of the top 10 hosts vulnerable to cross-site scripting attacks, run the XSS Vulnerabilities report.

Security Misconfiguration

Select Reports > Portal > Repository > Standard Content > OWASP > A 5 - Security Misconfiguration.

In general, the most common vulnerability in your environment is mis-configured operating systems, frameworks, libraries, and applications. Mis-configurations include missing security patches or updates, incomplete or ad hoc configurations, use of insecure default configurations, poorly configured HTTP headers, and error messages that contain sensitive information.

Dashboards	Reports
Misconfiguration Events Overview Missing Security Patches Overview XML Vulnerabilities Overview	Security Patch Missing XML Vulnerabilities

Misconfiguration Events Overview

Provides an overview of the mis-configured events reported in your environment. The charts show the top mis-configured systems, the top misconfiguration events, an indicator of the risk associated with the reported misconfiguration events, events by agent severity, and misconfiguration events over time. The table provides additional information, such as the associated vulnerability.

Missing Security Patches Overview

Provides charts and a table to help you identify the top machines that fail to have all relevant security patches, as well as the security patches most reported as not having been applied. You can review the missing patch reports over time, by agent severity, and by risk indicator.

Security Patch Missing

Lists the security patches that have not been applied, as reported by vulnerability scanners in your environment.

Older or mis-configured XML processors use XML documents to evaluate external entity references, and can inadvertently process harmful XML input. Malicious users the XML processor’s to reveal internal content such as files, file shares, and port scans, as well as execute remote code and denial of-service attacks.

XML Vulnerabilities
Lists the hosts with the most XML vulnerabilites.

XML Vulnerabilities Overview>
Provides charts and a table to help you identify the systems with the most XML vulnerabilities as well as the most reported vulnerabilites. You can review the vulnerabilities by severity and risk indicator.

Vulnerable and Outdated Components

In the Reports Portal, select Repository > Standard Content > OWASP > A 6 - Vulnerable and Outdated Components.

Many of the components within a web application, such as the libraries and modules, run with the same privileges as the application itself. Applications and APIs using components with known vulnerabilities can undermine application defenses and enable various attacks and impacts. Malicious users can exploit vulnerabilities in SSH and SSL. For example, the Heartbleed Bug is a known SSL vulnerability. Your enterprise might have large numbers of SSH keys because end users can create new SSH keys (credentials) or even duplicate them without oversight, unlike certificates or passwords. A malicious user can gain long-term access to your resources by taking advantage of SSH keys that have been left unaccounted for.

Dashboards	Reports
SSH Vulnerabilities Overview Vulnerability Overview	SSH Vulnerabilities Summary SSL Vulnerabilities

SSH Vulnerabilities Overview
Provides charts and a table that show hosts with the most SSH vulnerabilities and the most reported vulnerabilities. You can review these vulnerabilities over time, by agent severity, and by risk indicator.

SSH Vulnerabilities Summary
Lists the hosts reported to have the most SSH vulnerabilities.

SSL Vulnerabilities
Lists the hosts reported to have the most SSL vulnerabilities.
This report also is available in the Vulnerability Monitoring category of the Foundation reports.

Vulnerability Overview
Provides charts and a table that show the top signature IDs for the anti-virus programs that have failed to update, as well as the hosts most likely to be vulnerable. You can review these vulnerabilities over time and by agent severity.

Identification and Authentication Failures

In the Reports Portal, select Repository > Standard Content > OWASP > A 7 - Identification and Authentication Failures.

Some enterprises mis-configure or fail to enable the authentication and session management functions of applications and web sites. When this occurs, a malicious user could compromise passwords, keys, and session tokens.

Dashboards	Reports
n/a	Broken Authentication and Session Management

Broken Authentication and Session Management

Reports the top 20 hosts with the most reports of broken authentication and system management. The table lists the IP address, host name, ID of the device event class, and the number of reported events. This report also is available in the Account Hijacking category of the Cloud reports.

Security Logging and Monitoring Failures

In the Reports Portal, select Repository > Standard Content > OWASP > A 9 - Security Logging and Monitoring Failures.

According to OWASP, insufficient logging and monitoring, coupled with missing or ineffective integration with incident response, allows malicious users to further attack systems; maintain persistence; pivot to more systems; and tamper, extract, or destroy data. Most major incidents start with an exploitation of the vulnerabilities in logging and monitoring. Yet, most organizations fail to discover the breach until several months have passed.

To help you detect potential breaches as soon as possible, use the following reports and dashboards:

Dashboards	Reports
Attacks and Suspicious Activity Overiew Failed Logins Overview Login Activity Overview Security Log is Full	All Logins by Hostname Audit Log Cleared Failed Logins Summary Operating System Errors and Warnings

All Logins by Hostname

Lists all logins that have occurred on the specified host.

Attacks and Suspicious Activity Overview

Provides charts and a table to help you identify the top attackers, targets, and events over time.

Audit Log Cleared

Lists all the Audit Clear events that have occurred in the organization.

Failed Logins Overview

Provides charts and a table showing failed logins by time, users, hosts, reporting devices, and attacker address.

Failed Logins Summary

Lists the failed login events that have occurred in your environment.

Login Activity Overview

Provides charts and a table showing the outcome of login activity, including successful logins. You can view activity by machine or user, as well as a chart showing the relationship between users and systems to which they log in.

Operating System Errors and Warnings

Provides charts and a table that report the operating systems errors and warnings in the organization.

Security Log is Full

Provides charts and a table to help you identify the hosts where the security log is full.

Server-Side Request Forgery

In the Reports Portal, select Repository > Standard Content > OWASP > A 10 - Server-Side Request Forgery.

When server-side web applications fetch remote resources without checking the user-supplied URL, attackers may force the application to send a crafted request to an unexpected destination including those protected by a firewall or VPN.

Dashboards	Reports
n/a	Server-Side Request Forgery

Server-Side Request Forgery

Lists any Server-Side Request Forgery (SSRF) events that occur in your environment. This report provides details including: relevant hostnames, event IDs captured, the product that captured the events, and the number of times the event occurred. Additionally, this report has a chart for a visual representation of the information.

Creating Lists and Rules

The ArcSight Platform includes a subset of the functionality that is available for active lists, session lists, and rules in the ArcSight Command Center.

Working with Rules

You can create and delete rules in the ArcSight Platform. You can create rules in your personal folder (My Rules) and also create real-time rules. You can apply conditions to rules.

Creating rules involves defining the events the rule evaluates and thresholds for triggering the rule. Conditions define which events trigger the rule and thresholds determine when a condition is met and a correlation event is generated.

When defining rules, begin by determining:

- Which event occurrences do I want to be aware of? This determines what events this rule needs to monitor and the conditions to be tested.
- How many times do I want the event or events to occur and within what time frame? This determines the rule's threshold.

Be specific when determining which events you want to monitor. For example, monitoring all events from a Cisco Router would not be as useful as monitoring all denied events from that Cisco Router. In addition, the more conditions you add to a rule, the more specific the rule becomes. Use the data fields to guide you in selecting and specifying conditions.

For more information about data fields:

- If you are not using ArcSight Saas, in the ArcSight Console User's Guide for ESM, go to Reference Guide > Data Fields.
- If you are using ArcSight Saas, in the User’s Guide for Real-time Threat Detection ArcSight Console, go to Reference Guide > Data Fields.

> **Note:** Rules that you create in My Rules are not available to other users until you deploy them. When you deploy a rule in My Rules it becomes a real-time rule.
>
> The dashboard provides only a subset of the functionality that is available in the ArcSight Console. Rule authoring with advanced conditions such as matches Filter, InActivelist, In Asset is not supported. Basic rule conditions with simple queries is supported. For example:
>
> (Name endswith Failed or (bytesIn >= 100 and bytesOut >= 1 and priority > 5))
>
> Agent Address = '10.0.0.1' and Application Protocol = UDP

To create a rule:

1. (Conditional) If you are not using ArcSight Saas, select ESM and then select **Rules**.
2. (Conditional) If you are using ArcSight Saas, select Detect and then select **Rules**.
3. On the Real Time Rules page or the My Rules page, click the plus (+) icon.
4. Provide the following information:

Rule Name	Provide a name for the rule. The name can contain up to 25 characters.
Rule Trigger	Select from the following options: • On First Event - trigger the rule the first time rule conditions are met.. • On Subsequent Events - trigger the rule the second and subsequent times rule conditions are met, not the first. • On Every Event - trigger the rule every time rule conditions are met • On First Threshold -for the number of matches greater than 1, trigger the rule the first time rule conditions and threshold settings are met. • On Subsequent Thresholds - for the number of matches greater than 1, trigger the rule the second and subsequent times rule conditions and threshold settings are met, not the first. • On Every Threshold - trigger the rule every time rule conditions and threshold settings are met.
# of Matches	

5. Select the conditions that you want to apply to the rule, and then save the rule.
6. If you created a rule on the My Rules page and want to add it to the real-time rules, select the rule in the grid and then click the Deploy icon.

   To deactivate a rule without deleting it, select the rule and then click click the Undeploy icon.

   To permanently remove a rule, select the rule and then click the trash can icon.

Working with Active Lists

Active lists allow you to track traffic with IP addresses of interest. While you can manually update active lists, their real value comes when you define them in conjunction with rules specifically tailored to interact with and populate the lists dynamically. Lists that are not rule-driven are empty or contain only manual entries that have not timed out.

In the ArcSight Platform, you can create and edit both **event-based** and **field-based** active lists. Viewing active list entries, however, is not supported. In the ArcSight Platform, the active lists you create are **read-optimized**.

With read-optimized active lists, each component accessing the list holds a local copy of the list data. The local cache provides the best performance for rule filters and data monitors that reference the list. However, changes to a read-optimized active list require a short time to propagate to each local copy, so some events might be evaluated against stale list data.

Note: In the ArcSight Platform, the available active lists are specific to the user that is currently logged in.

To create an active list:

1. (Conditional) If you are not using ArcSight Saas, select ESM and then select Active List.
2. (Conditional) If you are using ArcSight Saas, select Detect and then select Active List.
3. On the My Active Lists page, click the plus (+) icon.
4. Provide the following information:

Name	Provide a name for the active list. Special characters are allowed.
Capacity (x1000)	The maximum number of active list entries to keep in memory. The default is 10,000. For most cases, 10,000 is appropriate; however, you might want to adjust this setting if the devices you are monitoring for this active list contain a lot of data. This represents a limit on in-memory capacity only. If you also select Partially Cached, the system retains more entries but this has an impact on performance when it is necessary to retrieve active list items from the database. If the maximum number of entries is reached, an existing entry is randomly selected and removed. For multi-mapped lists, removal is based on the key field and starts when the number of keys exceeds capacity. Capacity influences the maximum memory that the active list can consume. Memory usage is proportional to the number of entries in the list, which is usually less than the capacity. Capacity affects memory usage, but has little if any impact on performance.
TTL Days TTL Hours TTL Minutes	TTL (Time To Live) means the items remain in the list for at least the amount of time you specify in days, hours, or minutes. Use 0 (zero) to cause the field to never expire. The maximum number of days is 99999.
Count Limit	Count Limit is used to limit the number of unnecessary updates to active list entries and improve performance. For example, if an On Every Event rule adds an entry to a list, but additional rules only check if an entry is in the list, not the count, there is no reason to update the count field of the entry every time. The Count Limit is a hard limit for the maximum count for an entry. A value of 0 (zero) indicates an unlimited count.
Case Sensitivity	Select whether the list will be case-sensitive or case-insensitive. **Note:** After you save the list, you cannot change this setting. If you want to revert the case sensitivity setting, define a new list instead.
Cache Model	The Cache Model determines how list data is accessed in a distributed cluster. Active lists that you create in the ESM or Detect Dashboards are read-optimized. In the ArcSight Platform, this field is read-only.

Multi Mapping	Check this box to allow multiple instances of key pairings. This enables a single key, such as an actor attribute, to map to multiple values, such as a set of roles. You can use this to return a list of entries with the same value for the key field. For example, with multi-mapping enabled, you can create an active list that could return multiple roles for an actor named Clark Kent (reporter, superhero, space traveller) or multiple names associated with a farmhouse in Kansas (Clark Kent, Superman, Kal-El). **Note:** Do not select this option if you are creating a time partitioned active list.
Partially Cached	Check this box to allow additional entries beyond the in-memory Capacity (x1000) maximum to be stored and retrieved from the database. Using partial caching increases overall capacity but can impact performance because it takes more time to retrieve list entries from the database. This setting is required by active lists that are time partitioned. **Note:** There is a limitation when in-memory resources such as active channels and data monitors are used to return values from a partially-cached list. Only those values that are in the cache are returned. Reports and query viewers are not affected by this limitation because these resources query the database directly and do not use cache.
Time Partitioned	Check this box in addition to Partially Cached to capture data over time. Without time partitioning, a partially-cached list requires constant retrievals from the database to update the entries, and old entries are removed at random. With time partitioning, the cached data is segregated into partitions based on the list’s timestamp (Date field) value. Time-partitioned list data are kept in memory, and older data are the first to age out of the list.

5. (Conditional) If you are creating an event-based active list, in the Data section, select a field category to see the available fields for that category, and then drag the fields for which you want to collect data to the Selected Fields column. When you are done, apply your changes and save the active list.
6. (Conditional) If you are creating a field-based active list, enter the corresponding data type, sub-type, and mark as key field as required. Refer to the following table for guidance:

IP Address	This field supports IPv4 or IPv6 address. If the value is an IPv6 address, the resulting address is displayed in simplified format if applicable. For example, 2001:db8:0000:0000:0000 is displayed as `2001:db8::`
Date	This Date field is used as a default Timestamp value for interval-type queries on active lists.
Double, Integer, or Long	Select the applicable numeric type. **Note:** Leave the Subtype column blank even if you see the selections. The numeric subtypes MIN, MAX, and SUM are not supported in active lists.

MAC Address	MAC address of the format consisting of six groups of two hexadecimal digits per group. Use hyphen (-) as separators. For example `01-00-5E-90-10-FF`
Resource Reference	Any ArcSight Resource such as asset and so on.
String	This is optional for lists in general but required, along with a Date field, if your list is time partitioned.
Key field	Select one or more fields that must be unique. In most cases, you would select at least two fields to make a key-value pair. For example, in the case of a DHCP login event, when a new IP and zone combination are written to the list, this indicates that a new session has started.

Database columns are defined after the active list is created. Column definitions cannot be added, removed, or changed once the new active list is saved.

7. Refresh the My Active Lists grid to view the new active list.

To edit or delete an active list:

1. Select the active list from the My Active Lists grid, and then click the pencil or trash can icon.
2. If you selected to edit an active list, you can edit the following fields:
   - Capacity (x1000)
   - TTL Days
   - TTL Hours
   - TTL Minutes
   - Count Limit

Working with Session Lists

Session lists allow you to track traffic with IP addresses of interest. While you can manually update session lists, their real value comes when you author automatic, rule-driven lists with dynamic content. Lists that are not rule-driven are empty or contain only manual entries that have not timed out.

In the ArcSight Platform, you can create and edit session lists. Viewing session list entries, however, is not supported.

> **Note:** In the ArcSight Platform, the available session lists are specific to the user that is currently logged in.

To create a session list:

1. (Conditional) If you are not using ArcSight Saas, select ESM and then select **Session Lists**.
2. (Conditional) If you are using ArcSight Saas, select Detect and then select **Session Lists**.
3. On the My Session Lists page, click the plus (+) icon.
4. Provide the following information:

Name	Provide a name for the session list. Spaces and special characters are allowed.
Overlapping Entries	Check this box to alert the system to allow multiple instances of key pairings, which keeps the previous session with the same key field open. For example, you might check this box if the list is tracking activity for an asset that supports multiple user logins.
In Memory Capacity (x1000)	This setting indicates the maximum number of session entries the system keeps in memory. The default value is 10,000. For most cases, 10,000 is appropriate; however, you may wish to adjust this setting if the devices you are monitoring for this session list contain a lot of data to ensure you have adequate memory cache available. As a best practice, be sure to set In Memory Capacity higher than the number of live sessions you anticipate. This helps optimize performance and, therefore, keeps results reliable.
Entry Expiration Time	Enter an expiration time in hours, minutes, and seconds for session list entries. This indicates the time after which entries are marked as terminated (if no explicit termination event is received previous to this). Maximum expiration is 24 days. The default is `Unlimited`, which means the entry never expires. An entry with no expiry date/time can only be terminated explicitly through user action on ArcSight Console or rule actions.
TTL Days	Set the fewest number of days a closed session should remain on the list before it is removed. Default is `0` days. Use `0` to keep the closed session indefinitely. The maximum number of days is 99999.
Case Sensitivity	You can optionally configure the list to be case-sensitive or -insensitive. Furthermore for caseinsensitive lists, you can specify case-insensitivity for keys only, or for both keys and values. The feature enables you to store and look up values in lists regardless of case. Select one: • Case-Sensitive (the default) • Key Case-Insensitive • Key & Value Case-Insensitive **Important:** After you save the list, you cannot change this setting. If you want to revert the case sensitivity setting, define a new list instead. **Caution:** Lookups on case-insensitive lists will slow down query and active channel performance. Make sure your queries and variables (used by channels) get values from casesensitive lists.

5. Under the Name column, replace <Enter Name> with a descriptive name for each session parameter you want to track.

The name you enter here appears as a label in the session list and in the Variable pick list. Names can contain spaces, such as User Name.

6. Enter the corresponding data type, sub-type, and mark as key field as required. Refer to the following table for guidance:

IP Address	This field supports IPv4 or IPv6 address. If the value is an IPv6 address, the resulting address is displayed in simplified format if applicable. For example, 2001:db8:0000:0000:0000 is displayed as `2001:db8::`
Date	This Date field is used as a default Timestamp value for interval-type queries on session lists.
Double, Integer, or Long	Select the applicable numeric type. **Note:** Leave the Subtype column blank even if you see the selections. The numeric subtypes MIN, MAX, and SUM are not supported in session lists.
MAC Address	MAC address of the format consisting of six groups of two hexadecimal digits per group. Use hyphen (-) as separators. For example `01-00-5E-90-10-FF`
Resource Reference	Any ArcSight Resource such as asset and so on.
String	This is optional for lists in general but required, along with a Date field, if your list is time partitioned.
Key field	Select one or more fields that must be unique to indicate a session start. In most cases, you would select at least two fields to make a key-value pair. For example, in the case of a DHCP login event, when a new IP and zone combination are written to the list, this indicates that a new session has started.

Database columns are defined after the session list is created. Column definitions cannot be added, removed, or changed once the new session list is saved.

7. Click **Save** to save and continue editing or **OK** to save and close.

To edit or delete a session list:

1. Select the session list from the My Session Lists grid, and then click the pencil or trash can icon.
2. [Conditional] If you selected to edit a session list, modify the necessary fields, and then click **Save**.

Analyzing Anomalous Data with Outlier Analytics

Requires the Log Management and Compliance service in ArcSight SIEM as a Service or the ArcSight Recon capability. Requires the Manage Outlier Models and Scoring permission.

Select Insights > Outliers.

To help you identify anomalous behavior, the **Outlier Analytics** feature allows you to compare incoming *EventCount*, *BytesIn*, and *BytesOut* values to typical values for your environment. The EventCount, BytesIn and BytesOut values are aggregations over certain time periods for each host/IP address. Outlier Analytics can create and persist a baseline of host behavior. To derive outliers, you compare this baseline with aggregations over new time periods. Basically, the lower the anomaly score, the more likely the event is anomalous.

The analytics process allows you to define and build a model that identifies typical behavior for your environment, and then start a scoring process that evaluates incoming events against the model. The scoring process assigns a score that indicates the degree to which the incoming data varies from the typical behavior. Outlier Analytics displays the results of the scoring process in a table that shows the top anomalous hosts. From the table, you can generate charts that provide additional information about the anomaly.

The model specifies a subset of data from the Events table that represents typical behavior on your network. When you define the model, you can specify criteria that identify which device behaviors you want to model. For example, you might want to look for anomalous values in events that you receive from a specific device vendor or in systems on a specific subnet.

Generating Models to View Anomalous Data

You must have the Manage Outlier Models and Scoring permission to define and build models.

The model for Outlier Analytics defines typical *EventCount*, *BytesIn*, and *BytesOut* behavior for a set of IP addresses over a specified date range. You can define the criteria that identify which device behaviors you want to model. If you want a different model, you must define and build a new one.

- "Considerations for Generating Models" below
- "Define and Build a Model" on the next page
- "Score a Model" on page 461
- "Delete a Model" on page 462

Considerations for Generating Models

You must have the Manage Outlier Models and Scoring permission to define and build models.

Before defining and building a model, review the following considerations:

- You can create and delete models, but you cannot modify them.
- You can define as many models as you want, but you can only build one model at a time.

- When you define the model, you should set the date range wide enough (more than 168 hours) so that the model includes a variety of device behaviors, including cyclical patterns.
- Because the scoring algorithm is based on peer group analysis, we recommend that you include similar devices in a model, based on activity. For example, you might want to create separate models for scoring endpoints, scoring DNS servers, and scoring databases.
- Each model definition applies a filter where Source Address != NULL.
- When you build a model, Outlier Analytics adds a lookup list of the same name to Search > Home > Lists. You cannot view or edit this list. When you delete the model, the lookup list also gets deleted.
- The auto-complete functionality is temporarily unavailable in search input. The following columns are available for outliers filtering in the Search feature, where *<Model_Name>* corresponds to the model being scored:
  - Start Time of *<Model_Name>*
  - Source Address of *<Model_Name>*
  - Base Event Count Score of *<Model_Name>*
  - Bytes Out of *<Model_Name>*
  - Bytes In of *<Model_Name>*

Define and Build a Model

You must have the Manage Outlier Models and Scoring permission to define and build models.

When you build the model, the feature aggregates events from the Events table by IP address, day of week, and hour of day for each five-minute time increment.

The feature then calculates a sum for:

- *EventCount*
- *BytesIn*
- *BytesOut*

Outlier Analytics then creates conditional probability tables for sum of *EventCount*, sum of *BytesIn*, and sum of *BytesOut*.

To build a model:

1. Review the considerations for building a model.
2. Select Configuration > Outlier.
3. From the **Create Model Configuration** section, specify the criteria that you want to use for building the model.

For example:

- To define a specific subnet that represents a specific class of equipment (like server or data center), specify criteria similar to the following:

  `sourceAddress in subnet 10.1.1.0/24`.

- To model outbound HTTP/HTTPS traffic, specify criteria similar to the following:

  `destinationPort = 80,443`

4. To more easily find the model later, give the model a name by typing over the Model Name.

   The model name can contain letters, numbers, and underscores only. The name must start with an alpha character and cannot exceed 19 characters.

5. For the time range, perform **one** of the following actions:

   - Accept the default time (Last 14 days)
   - From the menu, select a pre-defined value under Quick Ranges
   - From the menu, use the Custom Range fields to specify a time range
   - From the menu, select Dynamic, and then enter a dynamic date value

   Because of assumptions about the hours and days that comprise a model, do not specify a range that includes a shift in Daylight Savings Time. Also, the timestamp for events always represents the Normalized Event Time.

6. Click Create.

   The created model displays in the **Available Models** table with a status of Created.

7. From the **Available Models** table, select the model that you want to build.

   You can build only one model at a time.

8. Click Build 🔨.

9. To evaluate incoming events against the model, you must start the scoring process.

Score a Model

You must have the Manage Outlier Models and Scoring permission to score a model.

After you build a model, you can start a **scoring process** that evaluates incoming events against the model. The process assigns a score that indicates the degree to which the incoming data varies from typical behavior. By default, Outlier Analytics selects the current date as the scoring start date. You can only score one model at a time, but you can build another model while a different model is being scored.

To start the scoring process:

1. Select Configuration > Outlier.
2. From the **Available Models** table, select the model that you want to score.

   The model must be in Build Complete status before you can score it.
3. Select Score.
4. Select the date for which you want to start the scoring process, then click Start.

   Because of assumptions about the hours and days that comprise a model, do not use a model that you built with Daylight Savings Time data to score non-Daylight Savings Time data. Conversely, do not use a model that you built with non-Daylight Savings Time data to score Daylight Savings Time data.
5. (Conditional) To pause scoring because of performance or ingestion issues, select Pause.

   If you selected a date in the past to start the scoring process, the scoring job runs frequently to catch up to the current date. To allow any running scoring jobs to complete, wait 15 minutes before performing any other action such as deleting a model or resetting scoring.
6. (Conditional) To resume the scoring process from the point at which you paused it, select Resume.

   Alternatively, to restart the scoring process, select Reset.
7. To view the scored data when scoring completes, select Insights > Outliers.

Delete a Model

You must have the Manage Outlier Models and Scoring permission to delete a model.

When you delete a model, Outlier Analytics deletes the model definition and all scores that are based on that model.

1. Select Configuration > Outlier.
2. From the **Available Models** table, select the model that you want to delete.
3. Click Delete 🗑.

Viewing Anomalous Data in a Model

You must have the Manage Outlier Models and Scoring permission to define and build models.

Select Insights > Outliers.

After you specify search criteria for the data that you want to view in the model, Outlier Analytics displays the top anomalous hosts that meet the criteria. When you select a host from the **Top Anomalous Hosts** table, the feature generates charts that provide more information about the anomaly scores.

The scores are calculated for five-minute chunks, so each source address can have multiple outlier scores each hour. When listing the top anomalous hosts, Outlier Analytics shows the maximum scores for each source address for each hour. If the specified search criteria included a filter, the scores represent results after being filtered.

Understand the Provided Analytics Charts

You must have the Manage Outlier Models and Scoring permission to define and build models.

Each Outlier Analytics model includes the following charts:

Outlier Scores History

Compares anomaly scores of the top anomalous hosts for one week from the specified End time.

Use this chart if you suspect a lateral attack. To view details about the score for a specific date and hour, point to the corresponding area in the chart.

Selected Anomalous IP

Shows the anomaly score for the host that you selected for two weeks from the specified End time.

If you suspect that a host is under attack (for example, from ex-filtration malware), use this chart to study the behavior of the IP address over time and identify anomalous patterns. To view details about a data point, point to it.

Selected Anomaly Hour

Compares the anomaly score for the host that you selected to the top 30 hosts for the anomaly hour.

If you suspect that a network is under attack (for example, a denial of service attack), use this chart to study the behavior of other top 30 hosts during the anomaly hour. To view more details, hover over a bar in the chart.

Investigate Anomalies Further

You must have the Manage Outlier Models and Scoring permission to define and build models.

After you view the outlier data, you can use the action available from the grid rows in the Top Anomalous Hosts table to further investigate anomalies. Right-click on one of IPs in the Top Anomalous Hosts table and select option Search for <IP_address>.

This will search events for the host and time range for which you selected to view scoring data and displays the results on the **Search** page.

View a Scored Model

You must have the Manage Outlier Models and Scoring permission to define and build models.

1. Select Insights > Outliers.
2. Specify the outlier metric that you want to view: EventCount, BytesIn, or BytesOut.
3. For the search query, specify any of the following criteria that you want to apply to the data:
   - Base Event Count Score of *<Model_Name>*
   - Bytes In Score of *<Model_Name>*
   - Bytes Out Score of *<Model_Name>*
   - Source Address of *<Model_Name>*
   - Start Time of *<Model_Name>*
4. Specify a valid time range to view the scored data.

   The time range selector displays the valid date range in the date selection area to ensure that you specify a valid date range. Scoring data is performed hourly so the time range for detection is in an hourly format (MM/DD/YY HH). End time hour is inclusive. If the end time is 05/21/19 05, the scoring data from 05/21/19 05:00-06:00 will be included. To help you select time range for detection, the time range selector displays Score Available Range.
5. Click Detect.

   > If the system's **global search limit** is exceeded, you may experience problems. To verify if the global search limit was reached, create a new search. If the error message: "An error occurred while creating search. Exceeding the limit of 1000 global searches." displays, then the limit was reached. For more information about search limits, see Understand Search Limits.

6. Wait while Outlier Analytics processes the request and generates the **Top Anomalous Hosts** table and the **Outlier Scores History** table.

> ⚠ **CAUTION**: If Outlier Analytics retrieves a large amount of data, the search might pause. You must allow the feature to populate the **Top Anomalous Hosts** table before you click Play to resume the search. Otherwise, the table will not be displayed.

7. (Optional) To generate the remaining charts, select a row in the **Top Anomalous Hosts** table.
8. (Optional) To use the filter action in your investigation, complete the following steps:
   a. Right-click a row in the grid.
   b. Select Search for <IP_Address>.

Viewing and Creating Dashboards and Reports

Your environment must include a capability that uses the reports.

Select REPORTS — without Multi-tenancy enabled.

Select DASHBOARD & REPORTS > REPORTS — with Multi-tenancy enabled.

The **Reports Portal** allows you to browse and filter your datasets and to visualize results in the Portal’s reports and dashboards. Rapidly discover meaningful trends and associations that yield actionable intelligence. The built-in Admin reports enable a report administrator to track use of the Portal.

If your product provides built-in reports and dashboards, you usually can find them in the *Standard Content* directory of the Portal’s repository. Depending on your assigned permissions, you can view, schedule, design, or manage reports and dashboards. You add custom reports and dashboards by collecting and filtering data from your connected sources. The Reports Portal supports the ability to drill down into specific elements for thorough data reviews.

Accessing the Reports Portal

Your environment must include a capability that uses the Reports Portal. Also, you must have one of the Reports permissions to use this feature.

Select REPORTS — without Multi-tenancy enabled.

Select DASHBOARD & REPORTS > REPORTS — with Multi-tenancy enabled.

When you view the dashboards and reports, be aware that they are not persistent. Once you leave a report or dashboard, you must regenerate the view when you return to the page. If you choose to open a report in a new browser tab, you can leave that tab open to keep the dashboard or report active while you look at other dashboards or reports.

Many out-of-the-box reports and dashboards contain pre-built queries. When you run a report or view a dashboard, it might prompt you to provide values for the run-time parameters. Reports also prompt for the start and end time of the data search.

View a Dashboard

When you open a dashboard, it automatically retrieves data from the last two hours. However, you can modify the time range as needed.

1. To access the Reports Portal, perform one of the following actions:
   - Without Multi-tenancy enabled, select Reports > Portal.
   - With Multi-tenancy enabled, select Dashboard & Reports > Reports > Portal.
2. To choose a dashboard, select Repository > Standard Content.
3. Expand the desired category, then select the dashboard that you want to view.
4. (Optional) To change the time range for the report, modify the start or end time parameters.

   When you change the time range, the dashboard refreshes the data.

View a Report

When you open a report, you must define the time range for the data that you want to view.

1. To access the Reports Portal, perform one of the following actions:
   - Without Multi-tenancy enabled, select Reports > Portal.
   - With Multi-tenancy enabled, select Dashboard & Reports > Reports > Portal.
2. To choose a report, select Repository > Standard Content.
3. Expand the desired category, then select the report that you want to view.
4. To specify the time range, complete the following steps:
   a. To activate the Calendar, point your cursor at the position of the Calendar icon to the right of the time selection box.
   b. Select the Calendar icon.
   c. Enter the Start Time for the report.
   d. Enter the End Time for the report.
5. Select Submit.

   The report will execute and display when it is complete.

6. (Optional) To email the report when it completes, select Schedule, then define the delivery options.

Customize Your Dashboards

Select REPORTS — without Multi-tenancy enabled.

Select DASHBOARD & REPORTS > REPORTS — with Multi-tenancy enabled.

You can customize the features of some built-in dashboards as well as the ones that you create. For example, a built-in dashboard might allow you to specify a particular time range. Some charts in your dashboards also allow for customization.

- "Change the Default Time Frame of a Dashboard" below
- "Customize Charts in a Dashboard" below

Change the Default Time Frame of a Dashboard

You can change the time range for some built-in dashboards, as well as those you create.

1. In the Reports Portal, navigate to the dashboard that you want to modify.
2. Right-click the dashboard, then click Edit.
3. Select Options > Scripts.
4. Change the default value of the following parameters:
    - `parameter.start_time`
    - `parameter.end_time`

    For example:

    To change the default start time to the past three hours instead of the past two hours, change the time as follows:

    from

    ```
    startTime.setHours(startTime.getHours() - 2);
    ```

    ```
    parameter.start_time = startTime;
    ```

    to

    ```
    startTime.setHours(startTime.getHours() - 3);
    ```

    ```
    parameter.start_time = startTime;
    ```

Customize Charts in a Dashboard

Some charts can be customized in the following ways:

Any chart

- The table at the bottom of each dashboard displays individual events and associated information, such as severity, source address, and destination address. To view a particular event in the Event Inspector, click the left-most icon of the row for the event.
- You can adjust the filters to include or exclude information.
- To investigate and filter the displayed data, use the Open in Search option to start a query based on the data in the dashboard.

Bar chart

Organize results from the highest or lowest amounts. For example, show the *Top Target IPs*. You also can choose the amount of results displayed: 10, 25, 50, 100.

Parabox charts

Visualize connections between multiple entities and identify significance based on the size of target elements, such as source user.

Timeline chart

Display events by hour or minutes.

Word Cloud charts

Display data according to key words, based on the chart's purpose.

Designing Report and Dashboards for Data Analysis

You must have the ***Report Admin*** or **Design Reports** permission to use this feature.

Select REPORTS — without Multi-tenancy enabled.

Select DASHBOARD & REPORTS > REPORTS — with Multi-tenancy enabled.

The **Designer** provides a wizard that allows you to create new content using the bundled Standard Content data worksheets. You can design elements, change their attributes, and control all aspects of element presentation and layout. The Designer saves all attributes and related information in a template file in XML format. The Designer also supports visually building queries against multiple types of data sources and specifying data grouping, summarization and element data binding.

The Designer offers you the same functionality as an API, but makes most tasks, such as report layout, much simpler. You can also use the Designer to attach scripts to embed business logic into the report. For more information about using the Designer, see "Best Practices for the Report Designer and Dashboard Designer" on the next page.

Scheduling Report Generation

You must have the **Report Admin** or **Schedule Reports** permission to use this feature.

Select REPORTS — without Multi-tenancy enabled.

Select DASHBOARD & REPORTS > REPORTS — with Multi-tenancy enabled.

The Reports **Scheduler** enables you to schedule and manage batch report generation. You can create one or more scheduled tasks for which you specify a time condition, reports to be generated, and delivery mechanism of the generated output.

The Reports feature can output the reports in formats such as PDF and Excel. The Scheduler can send the reports in email, save to disk or an archive, or print them.

> The system automatically saves scheduled tasks regardless whether you close the task or click OK.

Best Practices for the Report Designer and Dashboard Designer

When using the Reports Portal, follow these best practices to improve your work flow for creating reports and dashboards.

Use Search Results to Create a Dashboard or Report

Each completed search has a unique **Search Results ID**, which represents a link to the temporary table containing the search results. You can copy that ID, then build a report or dashboard around the search results.

- Build a Report Using Search Results
- Build a Dashboard Using Search Results
- Convert the Search Fields to Human-Readable Values

Build a Report Using Search Results

You can build a report around results of a previously run search by leveraging the Search Results ID.

1. When viewing the Events table for a search, select the Copy icon in the table’s header.

   This icon contains the Search Results ID.
2. Open Report Designer.
3. Select Create > Report.
4. In the Select a data source field, paste the Search Results ID that you copied.

   The retention period of the temporary table in the database is 30 days.

5. (Optional) Convert the fields in the temporary table to human-readable values.
6. Continue creating the report.

Build a Dashboard Using Search Results

You can build a dashboard around results of a previously run search by leveraging the Search Results ID.

1. When viewing an Events table, select the Copy icon in the table’s header.

   This icon contains the Search Results ID.
2. Open the Dashboard Designer.
3. Select Create > New Dashboard.
4. From the visual composer, select Data Source > Database > TABLE > Default_secops_recon.
5. Select the ID of the search that you previously copied.

   The retention period of the temporary table in the database is 30 days.
6. Select Open wizard or OK.
7. (Optional) Convert the fields in the temporary table to human-readable values.
8. Continue creating the dashboard where the Search Results ID is the data source.

Convert the Search Fields to Human-Readable Values

The ArcSight Database uses a temporary table to store content associated with a Search Results ID. Because the names of the fields in the table represent the coding-style name, you might want convert the terms to more user-friendly values.

To change the field names, your report or dashboard must use a Data Worksheet.

1. Open the Dashboard or Report Designer.
2. Open the dashboard or report that you want to modify.
3. From the upper-right corner, select the Data icon.
4. Open the worksheet.
5. In the lower pane, select the Formula Editor icon. The tool-tip for this icon says “Create Expression.”
6. Select SQL.
7. In the Expression pane of the Formula Editor, add the following strings:

   ```
   Time: to_timestamp(field['normalizedEventTime']/1000)
   IP:   v6_ntoa(field['sourceAddressBin'])
   MAC:  mac_btoa(field['sourceMacAddressBin'])
   ```
8. Select OK.

9. In the lower pane of the worksheet, select the Change Data Mode icon.
10. Select Live Event data.
11. Hide the binary (original) fields.
12. Export or Save the dashboard or report as needed.

Use Data Models to Build a Worksheet

In the Report Designer, select Data Source > Database.

Data models are logical models of the events table in the database that allow for an extra level of abstraction where you can perform varied transformations. You can use the final data model as the final table when creating a data worksheet. By default, the system has two data models:

Basic Data Model

Contains fewer fields from the events table. Use this model for an easier understanding or for simple reports that require less fields.

Event View

Contains the entire events table.

You can also create, edit, and delete your own Data Models. For more information, see “Create a Data Model” in the Help in the Reports Portal. Make sure to add only the fields you that need and create the filters from there. Some of the fields in the data model are non-human readable. You should parse them to ensure that they are readable in the report.

Use Data Worksheets to Build a Dashboard or Report

Data worksheets define the base for the reports and dashboards. Using data worksheets allows you to freely manipulate different data origins and generate a final set of results that can be used for reports and dashboards.

1. Open the Dashboard or Report Designer.
2. From the upper-right corner, select the Data icon.
3. From the right corner, select the New Data Worksheet icon.
4. To start the worksheet, complete one of the following actions:

   4a (Conditional) To browse for a data source, select Database Query, then OK.

   4b (Conditional) To import a data file, select Upload File, then OK.

   4c (Conditional) To open a new worksheet then choose the data source, select Mashup Data, then OK.

   4d (Conditional) To open a new worksheet, select Cancel.

5. Drag and drop the fields, tables, or queries that you want to include in the dashboard or report.

   Alternatively, you can create tables, then link them using unions or joins.

   > Using joins to show correlations between data sources like CSV files and event charts might cause slow performance depending on the size of the files. For larger data sources, see Use Pre-Populated Search Results.

6. (Conditional) To refine the design, select one of the following options from the Preview pane.

   For example, you can sort and reorder the columns or change the data mode.

   > Be sure to hide or remove fields that you don't need for your dashboard or report.

7. To save your changes, complete the following steps:

   7a Select Save or Save As.

   7b Specify the folder where you want to save the worksheet.

   Do not specify the Standard Content folder, which is reserved for the built-in reports and dashboards.

   > When you create a custom report, do not base that report on any existing Standard Content DataWorksheet. Instead, create a new DataWorksheet or use the DataSource/table selection options.

Create a Simple Dashboard

When creating a simple dashboard, Reports prompts you to select the data source. When you open the Dashboard Visual Composer, a window displays where you can choose the data source for the Dashboard. Follow the prompts or close the window to continue to the main editor of the Dashboard.

From the Dashboard editor, you can create Tables and Charts in the canvas. From there, you can also convert to measure some fields that can provide numeric values and can be used in a chart. You can also convert to dimension the fields that can provide a string value.

First, use the system to create and save a data worksheet as the basis for your dashboard. Use one of the following to create a simple dashboard.

- Use the Dashboard Wizard
- Use the Dashboard Editor

Use the Dashboard Wizard

If you select the wizard, the Dashboard Designer displays the Wizard section of the Dashboard. From here, you can create the first component of the Dashboard.

1. Open the Dashboard Designer.
2. Select Create > New Dashboard.
3. Select the data worksheet of your preference as a data source, and then click Next.
4. Select Open Wizard.
5. Select the fields to use in your dashboard.
6. (Conditional) Select the dashboard style:

   Crosstab

   Groups the dashboard by row and column headers and displays the summary data at the intersections

   Table

   Groups the dashboard and summarizes it or displays it in tabular layout

   Chart

   Creates multiple charts using multiple fields

   Full Editor

   Allows granular control view of your updates, such as format, color, and shape
7. Once the editing is complete, set the position of the element in the dashboard canvas.
8. View the dashboard, and then select Continue.
9. Once the dashboard has been successfully edited, select Finish.
10. Click Save as to save your dashboard.

Use the Dashboard Editor

Using the Dashboard Designer, you can edit the elements and freely set their position in the Dashboard. The Dashboard Designer displays the Wizard section of the Dashboard.

1. Open the Dashboard Designer.
2. Select Crosstab Wizard.
3. Click Cancel to open the dashboard editor.
4. Select the data worksheet of your preference as a data source, and then click Next.
5. Add the elements available from the left.
6. Update the dashboard using the Dashboard composer.

You can create, add, and edit multiple elements.

7. Click Save to save your dashboard in a Custom Content folder.

Create a Parabox Chart

Parabox charts, also called Parallel Coordinates, allow you to visualize connections between multiple entities and identify significance based on the size of target elements. This allows you to quickly discover threats and respond to suspicious activity in your environment.

1. Open the Dashboard Designer.
2. Select the Create New icon.
3. Choose the data source.

   Make sure the data source includes the fields you want to represent on the parabox chart.
4. When the visual composer opens, drag the chart from the left panel.
5. Select the Edit icon.
6. Select Full Editor.
7. Drag the fields you want for the Y axis to the box labeled Y.
8. Right click on the Y axis.
9. Select Hide Title.
10. Right click on the chart.
11. Select Properties .
12. Select Script.
13. In the Script section, paste the code below.

```
 if(this.data.length>1){
        //new EGraph() creates a new instance of a EGraph object and
represents the graph definition
        graph = new EGraph();
        //Create a new Parabox element
        var elem = new ParaboxElement();
        //Obtain fields and ordering from binding dialog instead of having
to declare them
        var y =  bindingInfo.yFields;
        var scales = [];
        for(var j=0; j < y.length; j++) {
               var z = new CategoricalScale(y[j]);
               //hide line
               z.getAxisSpec().setLineVisible(false);
               //add categoricalScale to array
               scales.push(z);
               //Add the required fields to the parabox.
               elem.addParaboxField(y[j])
               }
               var coord = new ParaboxCoord(scales[0],scales[1]);
               coord.setScales(scales);
               //set vertical spacing between data points; default is 10,
requires build 143798+
               //coord.setSpacing(15);
               //Set the Font and Color of the column labels
               var labelColor = coord.getAxisLabelScale().getAxisSpec
().getTextSpec();
               labelColor.setFont(java.awt.Font('Roboto',java.awt.Font.PLAIN,
10));
               labelColor.setColor(java.awt.Color(0xFFFFFF));
               //Sets the graph coordinates to the Parabox Coordinates defined
above
               graph.setCoordinate(coord);
               //Create new Text Specifications to set the text format of the
points
               var pointColorFont = new TextSpec();
               pointColorFont.setFont(java.awt.Font
('Roboto',java.awt.Font.PLAIN, 11));
               pointColorFont.setColor(java.awt.Color(0xFFFFFF));
               elem.setTextSpec(pointColorFont);
               //set shape and color of data points
               var sframe = new StaticShapeFrame();
               var cframe = new StaticColorFrame();
               cframe.setColor(java.awt.Color(0x0073E7));
               sframe.setShape(GShape.FILLED_CIRCLE);
               elem.setShapeFrame(sframe);
               elem.setColorFrame(cframe);
               //set connecting line color
               var cframeLine = new StaticColorFrame();
               cframeLine.setColor(java.awt.Color(0x44495B));
               elem.setLineColorFrame(cframeLine);
               //Add the parabox element to the graph
               graph.addElement(elem);
               }
```

> ✓ Tip: If you want to control the spacing between the presented data, or avoid overlap between the parabox chart data, you can change the spacing between the data by uncommenting this line from the script:
>
> ```
> //coord.setSpacing(15);
> ```
>
> Adjust the value accordingly. By default, when this line is commented, the spacing is 10.

14. Select Apply.

Create a Simple Scheduled Report

You can create a report that runs on your chosen schedule. In the report, define conditions that trigger tasks and actions you want to run.

1. Open the Scheduler:
   - If Multi-tenancy is disabled, select REPORTS > SCHEDULER.
   - If Multi-tenancy is enabled, select DASHBOARD & REPORTS > REPORTS > SCHEDULER.
2. In the lower left corner of the screen, select New Task.
3. For Name, enter a name of the task.
4. To set the conditions for your report, complete the following steps:
   a. Select the Condition tab.
   b. (Conditional) To specify the timezone that the report uses, perform one of the following actions:
      - To use the timezone where the server is installed, select Show Server Time Zone
      - To use your timezone, deselect Show Server Time Zone
   c. (Conditional) To run the task at specific intervals, configure the frequency.

      For example, to run a report every Monday afternoon, specify the following settings:
      - Select Time Range, then Afternoon
      - For Every, enter 1
      - Select Monday
   d. (Conditional) To run the tasks in sequence, select Chained, then specify the first task.
   e. Select OK to save the scheduled task.

   > The system automatically saves scheduled tasks even when you close the task rather than clicking OK.
5. To specify the report associated with the scheduled tasks, complete the following steps:

a. Select the Action tab.

b. For Report, click Select then navigate to the report that you want to schedule.

c. To email the report results, select Deliver to Emails then configure the email content and destination addresses.

d. To set the time range in which the report retrieves data, complete one of the following actions:

   - Select Add, and then specify the time values.
   - Select Creation Parameters, then choose the dates from the calendar option.

e. Select OK to save your changes.

Create a Simple Report

First, create and save a data worksheet. For additional details on how to create a data worksheet, see Using Data Worksheets to Build a Dashboard or Report.

Use the one of the following wizards to create a simple report.

- Use the Crosstab Wizard
- Use the Table Wizard
- Use the Chart Wizard
- Guidelines for Report Usage

Use the Crosstab Wizard

From the Reports Designer menu, use the Crosstab Wizard to create a report that displays data in a pivot table where the data is grouped by row and column headers, and the summary data is displayed at the intersections.

1. In the Report Designer selectCrosstab Wizard.
2. Select the data worksheet of your preference as a data source, and then click Next.
3. Define the row and column groups (vertical and horizontal columns), and then click Next.
   - For Row groups, select the row headers.
   - For Column groups, select the column headers.
4. (Conditional) Define the summary columns that will display as summarized fields.
5. (Conditional) Filter the conditions that will define the original data.

   After the design statement is filled, the options for insert, modify, and clear will be enabled.

6. (Conditional) For table style, use the default option.
7. To complete the editing, click Finish Editing.

Use the Table Wizard

From the Reports Designer menu, use the Table Wizard to create a report that displays data in tabular layout or grouped and summarized.

1. Select Reports > Report Designer > Table Wizard.
2. Select the data worksheet of your preference as a data source.
3. Select the columns to display in the report from the select detail columns.
4. Define the groups to display as column headers.
5. (Conditional) Define the summary columns that will display as summarized fields.
6. (Conditional) Filter the conditions to define the original data. Once the design statement is filled, the control options are enabled.
7. (Conditional) Retain the default table style for better formatting results.
8. (Conditional) Rank the groups to display as top or bottom groups.

Use the Chart Wizard

From the Reports Designer menu, use the Chart Wizard to create a chart-based report.

1. Select Reports > Report Designer > Chart Wizard.
2. Select the data worksheet of your preference as a data source.
3. By default, the auto option is selected. Use the chart style to style your report.
4. (Conditional) If required, select one of the following 2D and 3D images chart styles.

   Your chart options include bar, line, area, point, pie, donut, radar, stock, candle, box plot, waterfall, pareto, map, treemap, and marimeko charts.
5. Define the X Axis that to display as columns.
6. Define the Y Axis to display as columns.
7. Define the visual properties (color, shape, size, text) of the columns by using the visual binding.
8. (Conditional) Filter the conditions to define the original data. Once the design statement is filled, the control options are enabled.

   (Conditional) Rank the groups to display as top or bottom groups.
9. (Conditional) Additional steps might be required depending on the chart style selected:

   Geographic binding

Use if you select Map Style for your report. Choose different aspects about the map report that will be generated.

Tree dimensions

Use if you select Treemap, Sunburst, Circle Packing, or Icicle for your report. Select the fields
the report will use for the Tree Mapping.

Marimekko category

Use if you select Marimekko Style for your report. Select the field for the Marimekko Category Dimension.

Guidelines for Report Usage

- Create as many data models as needed but only include the fields that you need for your report. For simple reports, use the Basic Data Model instead of the event view.
- To convert non-human readable fields in the data model, parse them before adding them to the report.
- You can create filters from the data model or the report itself. It is recommended to set the filters from the data model so these can be saved in the data base.
- Check the meta data box for a faster pre-visualization of the report. Take into consideration that no real data is displayed with this option.
- Export the results in CSV format for faster results.
- When needed, copy the built-in dashboards and use them as templates for other creations.

Improve the Performance of Dashboards and Reports

You can improve the performance of your reports, dashboards, and worksheets by following these best practices.

- Use Raw Database Fields instead of Defined Functions Fields
- Use `normalizedEventTime` Instead of the Time Field
- Use the Integer Variant Instead of the String Variant
- Display Host Names Instead of IP Addresses on Charts
- Use `startswith` or `endswith` Instead of `contains` to Create Conditions
- Put the Expensive Conditions at the Top of your Worksheets
- Put the Most Expensive Conditions Towards the Top of your Building Blocks Hierarchy

- Put Parameters at the Top of your Worksheets
- Use the Flyover Option for Dashboards with Multiple Charts and Tables

Use Raw Database Fields Instead of Defined Functions Fields

Where possible, use raw database fields over defined function fields to speed up the search process by limiting the number of events searched.

ƒ icons represent the defined function fields. ▤ icons represent the raw database fields.

For example, use: `[Events.deviceAddressBin][is not][null]` instead of `[Device Address][is not][null]`.

Use Normalized Event Time Instead of the Time Field

Use `normalizeEventTime` instead of the Time field from the logical model. Because the Time field requires extra calculations, whereas `normalizeEventTime` is a raw field, your query will run more quickly. For more information, see Use Raw Database Fields instead of Defined Functions Fields.

Use the Integer Variant Instead of the String Variant

When data can be represented in a string format or an integer format, use the integer format of the data field because strings are defined functions and integers are raw database fields. For more information, see Use Raw Database Fields instead of Defined Functions Fields.

For example, use: `[Events.agentSeverity][is][one of][3,4]` instead of `[Events.Agent Severity String][is][one of][High,Very-High]`.

Display Host Names Instead of IP Addresses on Charts

Where possible, use host names because host names are represented as raw fields in the database. IP addresses represented as database function `v6_ntoa(Events1_0.destinationAddressBin) AS Target Address` will be calculated for every selected event.

Use 'startswith' or 'endswith' instead of 'contains'

To create conditions, use `startswith` or `endswith` instead of `contains`, when possible. This narrows your search, and your queries will process more quickly.

For example: `[Events.categoryTechnique][is][starting with][/Traffic Anomaly]`.

Put the Most Expensive Conditions at the Bottom of Your Worksheets

When you have conditions that take up a lot of operation space, put them at the bottom of your worksheet. This will limit the quantity of events that the expensive condition must search, and thus speed up your query.

Put the Most Expensive Conditions Towards the Top of Your Building Blocks Hierarchy

For advanced users.

When you need to display expensive conditions on your dashboard, you can move it up in the hierarchy. This improves your dashboard's performance because those conditions will not run against every event.

Note: This does not work for reports, only dashboards.

Caution: If you have a wrapper function and move it up the in the hierarchy, you need to define the wrapper function multiple times. For example, if you have multiple charts showing the same field from different angles (one chart is Top Target IPs, and another chart for relationships between attacker IPs and Target IPs) you will need to define the wrapper function twice.

Put Parameters at the Top of your Worksheets

If you create a dashboard or report with parameters (for example, data for a specific host), arrange the worksheet conditions so that the parameter goes before the complex conditions. This will limit the events that the complex conditions search and speed up your query.

For example:

```
[Events.destinationHostNamelowerCase][is][contains][$(hostname(equal_or_
like))]
```

```
[and]
```

```
[Events.Time][is][between][$start_time.$(end_time)]
```

Use the Flyover Option for Dashboards with Multiple Charts and Tables

When you have a dashboard with a table, consider using the flyover option instead of using the charts and tables on one screen. If you designed the dashboard with the flyover option, the dashboard will show one chart. When you click on a specific target, a flyover table will show the information for this specific target. Right-click the dashboard you want to use the flyover option.

1. Select Properties.

2. Under Flyover, click the box or boxes for the additional chart or table you want to appear, and then click OK.

Additionally, when you again pause the mouse over the specific target, the flyover information appears more quickly because it is drawn from the cache.

Exporting and Printing Dashboards and Reports

Some dashboards include tables that have a large number of columns. When you export the dashboard, the right side of these large tables might get cut off, leaving some data out of reach for visualization.

When you export the dashboard, ensure that you select Expand Components. This option expands the tables, making all columns visible in the exported file.

When to Write your own SQL Query

If you want to run a very specific query, and you do not want to use the logical model, you can write your own SQL query.

1. From New Data Worksheet, select Database Query.
2. Add fields.
3. Write your SQL query, save it, and use it like any other worksheet. For more information, see Use Search Results to Create a Dashboard or Report.

Using the ArcSight Dashboard

If Multi-tenancy is enabled, this feature is not available.

Select Dashboard.

The **ArcSight Dashboard** enables you to visualize, identify, and analyze potential threats by incorporating intelligence from the multiple layers of security sources that might be deployed in your security environment:

- Managing and monitoring ArcSight infrastructure components with ArcSight Management Center (ArcMC)
- Real-time event monitoring and correlation with data from ArcSight Enterprise Security Manager (ESM)
- Analyzing end-user behavior with ArcSight Intelligence
- Performing deep-dive investigations with Log Management and Compliance (Recon)
- Responding to and mitigating cyber attacks with ArcSight SOAR

To help you get started, the system provides a set of out-of-the-box widgets and dashboards. Users can organize the widgets into personalized dashboards. Out-of-the-box, any user can perform the following actions:

- View dashboards owned by or shared with the user
- Modify, delete, and export dashboards owned by the user
- Create or clone dashboards
- Import dashboards
- Set a dashboard as a personal default dashboard

You can create one or more ArcSight dashboards that incorporate widgets in your preferred arrangement. Depending on your role, you can create dashboards to be shared with specific roles, and even identify which of those dashboards should be the default landing page for a role.

Understand the Provided Dashboards

If Multi-tenancy is enabled, this feature is not available.

To help you get started, the Dashboard provides out-of-the-box dashboards with associated widgets. You will need to configure the widgets to ensure the dashboards display data appropriately for your environment.

- "Data Processing Monitoring" below
- "Health and Performance Monitoring" on the next page
- "How is My SOC Running?" on the next page
- "Entity Priority" on the next page
- "Entity Risk " on the next page

Initially, the out-of-the-box dashboards are available to the administrative user created during the initial log in. This user can share these dashboards with SOC team members, who can then create their own clones for custom dashboards. Alternatively, administrators can create one or more clones based on these dashboards, then share the clones, and set default dashboards for roles.

Data Processing Monitoring

Requires that at least one deployed capability uses the ArcSight Database.

The dashboard, Data Processing Monitoring, provides information to monitor the rate of event ingestion into the ArcSight Database. It includes the following widget:

- Database Event Ingestion Timeline

Health and Performance Monitoring

Requires that at least one deployed capability uses the ArcSight Database.

The dashboard, Health and Performance Monitoring, provides information about the status of the ArcSight Database. It includes the following widgets:

- Database Cluster Node Status
- Database Event Ingestion Timeline
- Database Storage Utilization

How is My SOC Running?

Requires ArcSight ESM Command Center be deployed. This dashboard is not available in the ArcSight SaaS environment.

The dashboard, How is my SOC running?, gives you an overview of the status and trends related to ESM case management. It includes the following widgets:

- Case Breakdown
- Case Load
- Case Timeline
- Case Workflow Analysis
- Productivity
- Threat Analysis Funnel

Entity Priority

This dashboard is not available in the ArcSight SaaS environment.

The dashboard, Entity Priority, combines content from ArcSight ESM and Intelligence to provide the status of users and entities at risk. It includes the following widgets:

- Active List
- Entity Count Overview

Entity Risk

Requires ArcSight Intelligence be deployed. This dashboard is not available in the ArcSight SaaS environment.

The dashboard, Entity Risk provides at-a-glance actionable information on the current, overall risk of your organization. It includes the following widgets:

- Analytics Pipeline
- Entity Count Overview
- Overall Risk Level
- Top Risky Entities

The dashboard provides the following information:

- Risk statistics: number of events analyzed, number of anomalies and violations found, and the number of active risky entities.
- The types of entities involved and their risk counts. When you click an entity type, the Entities page opens in the ArcSight Intelligence UI, where additional information for the selected entity type is displayed.
- The trending risk of the organization.
- The dominant potential threat, if any.
- The top 5 risky users. When you click a user, the Explore page opens in the ArcSight Intelligence UI, with the selected user’s name applied to the anomalies and violations filter.
- An option to download a PDF containing a detailed report of the risk of the organization. For more information about PDF report, see the "PDF Reports" section in the *ArcSight Intelligence User’s Guide*.

Change the Time Range of Data in a Dashboard

If Multi-tenancy is enabled, this feature is not available.

When viewing a dashboard, select ✎.

Most of the widgets in a dashboard display data according to the either a specified Time range or an As of now setting, which displays data based on the last time that you refreshed the browser. You can configure the time setting.

If you select a preset time, the Dashboard displays data starting from 12:00:00 a.m. of the first date in the range to 11:59:59 p.m. of the last date in the range. If the last date is the current date, then the Dashboard defaults to the current time or time of the last browser refresh. For example, the Last 1 month setting might be from 12:00:00 a.m. April 29 to 3:34 p.m. May 29. Note that the Dashboard does not display minutes and hours.

To display time values, the Dashboard uses your browser settings, such as your local time zone.

Mark a Dashboard as a Favorite

If Multi-tenancy is enabled, this feature is not available.

To more quickly find a dashboard, you can add it to your **Favorites** list.

While viewing a dashboard, select ☆.

Specify a Default Dashboard

If Multi-tenancy is enabled, this feature is not available.

Select ... > Set as default for me.

When you log in, the Dashboard automatically displays the default dashboard that you have chosen or that an Administrator has assigned for your role. If no dashboard has been assigned to you or no default exists, you will see the list of available dashboards.

To override the default dashboard assigned to your role, you can specify any currently displayed dashboard as your preferred landing page.

Share a Dashboard

If Multi-tenancy is enabled, this feature is not available.

*You must have the **Share Dashboard** permission to perform this function.*

Select ... > Share.

You can share the currently displayed dashboard with one or more of your assigned roles. If you have the **Manage Roles** permission, you can share the dashboard with any role.

Alternatively, if you cannot share a dashboard, you can export the dashboard for others to import and use.

> You cannot re-share a dashboard that has been shared with you.

View a Dashboard

If Multi-tenancy is enabled, this feature is not available.

Select Dashboard.

The ArcSight Dashboard automatically displays your default dashboard when you log in or select Dashboard. If you do not have a default dashboard, the Dashboard displays the list of available dashboards.

While viewing a dashboard, you can modify its settings or clone it to create a new dashboard.

View Data in a Dashboard

If Multi-tenancy is enabled, this feature is not available.

Select Dashboard.

Content in a dashboard depends on the widgets that it displays, as well as the dashboard's specified time range.

View a Different Dashboard

If Multi-tenancy is enabled, this feature is not available.

When viewing a dashboard, select View All Dashboards.

In the course of your day, you might need to switch among several dashboards. You can view the list of dashboards in two ways:

- "Favorite Dashboards" below
- "All Available Dashboards" below

The list indicates whether a dashboard is shared, for your personal use, or assigned as the default for a role. You can also see who owns each dashboard. An "out-of-the-box" label indicates that the dashboard is provided with the Dashboard. In general, out-of-the-box dashboards are available only to the Dashboard administrator because they require configuration before use.

Favorite Dashboards

You can specify which dashboards are your favorites.

All Available Dashboards

You can view the full list of available dashboards. A star beside the name indicates that you have marked that dashboard as a favorite.

Viewing Analyst and Entity Details

If Multi-tenancy is enabled, this feature is not available.

Some of the widgets in the ArcSight Dashboard allow you to review activity associated with specific cases, case owners or owner groups, and entities.

Case Overview by Owner

If Multi-tenancy is enabled, this feature is not available.

Select an owner in a widget.

You can review all cases currently assigned to a specific owner. When you select an owner in a widget, the Dashboard opens the **Case Overview by Owner** page. For each case, the table includes the following details:

- Severity of the case
- Current stage of the case
- Length of time that the case has been assigned to the owner
- Time since the case was created
- Time since the case was last updated

To determine when the owner received a particular case, hover over the Owned field. If you hover over the Created and Last Updated fields, the Dashboard shows the specific date and time that the case was created or last updated, respectively.

Review Entities

Requires ArcSight Intelligence be deployed. This feature is not available in the ArcSight SaaS environment.

If Multi-tenancy is enabled, this feature is not available.

Select an entity in a widget.

You can explore the entities and their risky behaviors in the following ways:

- When you select an entity type in the Entity Count Overview widget, the Entities page opens in the ArcSight Intelligence UI, where you can view the details of the risky entities of the selected entity type. You can also navigate to the Entities page in the ArcSight Intelligence UI in the following ways:
  - When you have deployed only ArcSight Intelligence, click ENTITIES AT RISK in the left pane.
  - (Non-SaaS only) When you have deployed ArcSight Intelligence and Recon, click INSIGHTS > Entities At Risk in the left pane.
- When you select an entity in the Top Risky Entities widget, the Explore page opens in the ArcSight Intelligence UI, where you can explore the risky activities associated with the entity.

Configuring Widgets

If Multi-tenancy is enabled, this feature is not available.

Widgets display data in the ArcSight Dashboard according to your specifications. You can filter content by specific case owners or groups, case severities, and sub-filters.

Understand Widget Properties

If Multi-tenancy is enabled, this feature is not available.

When you configure a widget, you might see a combination of some or all of the following properties:

Title and Subtitle

Specifies the name and an optional secondary name for a widget you want to add to your dashboard.

You can also specify whether the dashboard displays the title or subtitle.

In general, because you might have several variations of some widgets, it’s a good practice to title each widget according to your sub-filter criteria. For example, SOC Manager Franz Tupper creates a Case Breakdown widget for each of the SOC’s three owner groups: EMEA, AMS, and APJ. He names the widgets Case Breakdown-EMEA, Case Breakdown-AMS, and Case Breakdown-APJ.

Severity

Specifies the categories of importance, or severity, assigned to the affected cases. For example, in ESM, some cases might be categorized as *Catastrophic* or *Marginal*.

When selected for **Group by** or **Facet**, you can add sub-filters by specifying the type of Cases, Assigned Owners, or Assigned Owner Groups that you also want to view.

Assigned Owners

Indicates that you want to display data based on the individuals assigned to the affected cases. You can specify the **Owners** that you want to include.

If you do not specify an owner, the Dashboard includes data for all owners. If you specify more than five owners, the Dashboard displays data for the top five selected owners. Then adds an **Other** category that totals the values for all other selected owners.

When selected for **Group by**, you can add sub-filters by specifying the type of Cases and Importance categories that you also want to view.

Assigned Owner Groups

Indicates that you want to display data based on the owner groups, or teams, assigned to the affected cases. The widget also displays all cases assigned to the individuals and child groups within the owner groups. You can specify the **Owner Groups** that you want to include.

If you do not specify an owner group, the Dashboard includes data for all groups, and thus all owners. If you specify more than five owner groups, the Dashboard displays data for the top five selected groups. Then adds an **Other** category that totals the values for all other selected owner groups.

When selected for **Group by**, you can add sub-filters by specifying the type of Cases and Severity categories that you also want to view.

Assigned Cases

Applies only when you specify Severity for Group by

Indicates whether a sub-filter includes cases assigned to the specified owners.

To include specific owners or owner groups, select Owners then add the names that you want to include. Otherwise, the Dashboard displays data for all assigned cases.

In general, to view sub-filter data, you might hover over the visual in the widget or drill down into the data.

Unassigned Cases

Applies only when you specify Severity for Group by

Indicates whether a sub-filter includes unassigned cases.

Number of Groups

Applies only to the SOAR Productivity widget

Indicates whether a sub-filter includes the most productive number of groups.

Statuses

Applies only when you specify Statuses for Facet

Indicates whether a sub-filter includes statuses.

Show Top N Playbooks

Applies only to the SOAR Productivity widget

Indicates whether a sub-filter includes the number of Top Playbooks executed.

Classifications

Applies only to the SOAR Productivity widget

Indicates whether a sub-filter includes the classification of the attack type.

Number of Playbooks

Applies only to the SOAR Productivity widget

Indicates whether a sub-filter includes the number of Playbooks executed.

Target for Case Closure

Applies only to the Productivity and Case Load widgets.

Specifies the number of cases per week that you expect each owner group (Productivity widget) or owner (Case Load) to close.

Time Range

Specifies the start and end dates for the data that you want to view:

- Dashboard's default tells the widget to use the time range set for the dashboard.
- As of now tells the widget to use the most recent data retrieved from the data source.

  Data updates each time you refresh the browser, unless you have specified a Custom time range.

> You can set a **maximum time range** to limit the amount of data that the Dashboard can collect from its data sources. For example, you can specify 365 days of data. For more information, see the *Administrator's Guide to ArcSight Command Center for ESM*.

To assign or change the severity or owner of a case, use the ArcSight Console or Command Center.

Layout

Specifies the orientation of the widget in a custom dashboard. For example, you might want the *Database Event Ingestion Timeline* widget to span the width of the dashboard.

Understand the Provided Widgets

If Multi-tenancy is enabled, this feature is not available.

The Dashboard ships with several widgets designed to help you manage your security operations. When you create or modify a dashboard, you can choose from the full set of widgets and configure them as needed.

The Dashboard provides the following out-of-the-box widgets:

- "Active List" on the next page
- "Analytics Pipeline" on page 493
- "Case Breakdown " on page 493

- "Case Load " on the next page
- "Case Timeline " on page 494
- "Case Workflow Analysis " on page 494
- "Database Cluster Node Status" on page 495
- "Database Event Ingestion Timeline" on page 495
- "Database Storage Utilization" on page 495
- "Entity Count Overview" on page 496
- "Overall Risk Level" on page 496
- "Productivity " on page 496
- "SOAR Productivity" on page 497
- "SOAR Average KPI for Event" on page 498
- "SOAR Case Breakdown - Severity" on page 498
- "SOAR Case Load" on page 498
- "SOAR Case Status" on page 499
- "SOAR Threat Analysis Funnel" on page 499
- "SOAR Case Timeline" on page 500
- "SOAR Top Playbooks Executed" on page 500
- "SOAR Trend - Playbooks Executed" on page 501
- "SOAR Trend - Mean Time To Resolve" on page 500
- "SOAR Trend - Mean Time To Respond" on page 500
- "Threat Analysis Funnel " on page 501
- "Top Risky Entities" on page 502

Active List

Requires ArcSight Intelligence and ArcSight ESM be deployed for best effect. This widget is not available in the ArcSight SaaS environment.

To watch for suspicious activity associated with entities, add **Active List** widgets to your dashboard. Each widget displays the top five at-risk entities, based on the specified Active list, Field, and Entity type settings with both ESM and ArcSight Intelligence installed.

The available active lists correspond to active lists in ESM. For example, you might have watch lists for privileged or administrative users or vulnerable hosts. If an active list entry matches an entity in ArcSight Intelligence, then the widget also shows the ArcSight Intelligence risk score for that entry. However, if the ArcSight Intelligence capability is not deployed, the widget cannot display risk scores but just entities in alphabetical order.

Analytics Pipeline

Requires ArcSight Intelligence be deployed. This widget is not available in the ArcSight SaaS environment.

The **Analytics Pipeline** widget provides the risk statistics for the last analytics run. It displays the number of events analyzed, the number of anomalies and violations found, and the number of active risky entities. This widget also provides the option of downloading a PDF report detailing the current risk of the organization. You can select the orientation of the widget as **Landscape** or **Portrait**. The default orientation is **Landscape**.

Case Breakdown

Requires ArcSight ESM be deployed. This widget is not available in a SaaS environment.

The **Case Breakdown** widget displays the number or percentage of cases by their Severity, Owners, or Owner Groups. The widget always shows data As of Now, regardless of the specified time range for the dashboard.

By default, the widget shows data for total open, assigned cases. The widget displays a maximum of six data points, which comprise the top five objects associated with the specified filter plus an *Other* object that combines the rest of the cases. For example, if you have seven case owners, the widget shows specific values for the five owners with the largest quantity of cases, then groups the total number of cases for the other two owners in the Other category.

You can change the widget’s properties to view cases in a different state, such as cases created by specific analysts. For example, SOC Manager Franz Tupper wants to view all cases created by his Level 1 analysts. He sets the filter to Assigned Owners, and in the sub-filters specifies Jin Stafford, Neve Marshall, Troy Leach, and Chole Gay as Owners. Then he selects Created for the state that he wants to analyze. The widget will display the quantity and percentage of cases created by each analyst. Because Franz has configured the dashboard to automatically refresh, he sees in real-time when the analysts add new cases.

If you don’t specify an owner or owner group, the widget displays data for all cases.

Case Load

Requires ArcSight ESM be deployed. This widget is not available in the ArcSight SaaS environment.

To help managers balance the amount of work assigned to case owners, the **Case Load** widget provides several case management metrics:

- Average number of cases each owner closes per week
- Estimation of the time required to close all cases currently assigned to the owner based on the time elapsed since the cases were opened
- Projection of the number of cases per severity that the owner might not be able to close, based on the configured target, the time elapsed since the cases were opened, and the average velocity of the owner. This assumes that owners work on cases in severity order, from highest to lowest.

By default, the widget shows the data for total open, assigned cases for the top three members of the group based on their average number of cases per week. You can filter the data by specific Owner Groups. The metrics are based on the specified time range and the target number of cases that you expect the owners to close per Severity

For best use of this widget, it is recommended that you create one Case Load widget per owner group. In this way, you will see details for members of the owner group.

Case Timeline

Requires ArcSight ESM be deployed. This widget is not available in the ArcSight SaaS environment.

The **Case Timeline** widget shows changes in the volume of cases over a specified time range. By default, the widget filters the data according to the Severity category assigned in ESM. However, you can also choose to view trends for other case states, such as cases Closed by specific Owners or Owner Groups.

To observe the breakdown of cases associated with a specific date, you can hover over any location within the timeline. You can also zoom in to view a particular time range, either using the magnifier icons or by clicking and dragging within the graph.

Case Workflow Analysis

Requires ArcSight ESM be deployed. This widget is not available in the ArcSight SaaS environment.

The **Case Workflow Analysis** widget helps you compare the current volume of cases per stage with how the cases transitioned among the stages. In the widget, the width of the lines indicates the average time cases have taken to move from stage to stage during the specified time range. The diameter of each circle, except for the Closed stage, represents the total number of cases currently at that stage, based on the last refresh of data from the source.

> The widget does not represent backward transitions. For example, a case moves from *Final* back to *Follow-up* during the specified time range.

By default, the widget shows data for total open, assigned cases. You can also choose to filter the data by Severity, Owners, or Owner Groups.

Database Cluster Node Status

Requires that at least one deployed capability uses the ArcSight Database.

The **Database Cluster Node Status** widget helps SOC managers and IT administrators monitor the state of the nodes that host the database. This widget displays the state of each node in the database cluster. It also raises awareness that the number of nodes that are down can affect the resiliency of the database cluster. For example, if the database resiliency setting is 1, and two of three nodes go down, then the database might automatically shut down to protect itself.

Also, when nodes are down or recovering from a failure, it’s possible that you might experience data loss. The longer that a node is offline, the longer it will take to recover because it needs to acquire the data available in the rest of the cluster.

Database Event Ingestion Timeline

Requires that at least one deployed capability uses the ArcSight Database.

To help SOC managers and IT administrators monitor the rate of event ingestion into the database, use the **Database Event Ingestion Timeline** widget. Due to differences in how quickly an event from different sources arrives at the database for storage, the moment when a database stores an event differs from when the event occurred. This widget measures when the database receives the event data.

Database Storage Utilization

Requires that at least one deployed capability uses the ArcSight Database.

To help SOC Managers and IT Administrators ensure that disk use does not overload the database nodes, the **Database Storage Utilization** widget displays storage utilization data for up to five database nodes. In general, most administrators keep disk usage below 60 percent per node, thus ensuring space for temporary activity required by some query execution operators.

If the database cluster has more than five nodes in the cluster, you might specify the nodes with the least amount of free space available. In this way, you can monitor the nodes at most risk of running out space. For each node, you can compare the percent and quantity of space used to the total amount. You can also monitor the throughput and latency of the database per second.

The ArcSight Database supports use of a third party storage location technology, shared among its database nodes on premises or cloud. This shared storage location is also called Communal Storage and represented in the associated widget.

> The computational and communal layers of the database are separate and allows storage of data in a single location with the ability to elastically vary the connected computer nodes per necessary computational needs. For more information, see the *Administrator's Guide to ArcSight Platform*.

Entity Count Overview

Requires ArcSight Intelligence be deployed. This widget is not available in the ArcSight SaaS environment.

To help identify users and entities currently at risk in your organization, the **Entity Count Overview** widget displays the number of entities involved in risky behaviors, by entity type, along with their risk counts based on the last analytics run. When you click an entity type in the widget, the Entities page opens in the ArcSight Intelligence UI, where additional information for the selected entity type is displayed.

Overall Risk Level

Requires ArcSight Intelligence be deployed. This widget is not available in the ArcSight SaaS environment.

To help understand the general risk in your organization, the **Overall Risk Level** widget displays the trending risk of the organization based on the last analytics run.

Productivity

Requires ArcSight ESM be deployed. This widget is not available in a SaaS environment.

To help managers optimize analyst activity for the specified time range, the **Productivity** widget incorporates several elements related to SOC productivity:

Case Closure Velocity

Shows the current rate of case closure per week based on the target velocity for all owners and owner groups. For example, you might expect teams to close at least 5 cases per week. The dotted line in the graph represents the target.

The trend indicates whether the velocity fails to meet or exceeds the target rate compared to the previous week. The velocity is based on when cases were created.

Highest Velocity

Represents the owner that currently has the fastest closure rate per week. You can also see the total number of cases assigned to the owner by severity.

The trend indicates whether the velocity fails to meet or exceeds the target rate compared to the previous week. The velocity is based on when cases were assigned to the owner.

Productivity by Owner Groups

Lists the owner groups that currently have the highest average number of cases closed per week. It also identifies which owner in the group has the highest velocity.

You can observe the average number of cases closed and whether the rate is trending up or down. The colored bar indicates the volume of cases by severity. By default, the widget displays data according to the specified time range.

SOAR Productivity

Requires data from ArcSight SOAR.

To help managers optimize analyst activity for the specified time range, the **SOAR Productivity** widget incorporates several elements related to SOC productivity. You can change the widget’s properties to select an available option from the Number of Groups drop-down list:

Case Closure Velocity

Shows the current rate of case closure per week based on the target velocity for all owners and owner groups. For example, you might expect teams to close at least 5 cases per week. The dotted line in the graph represents the target.

The trend indicates whether the velocity fails to meet or exceeds the target rate compared to the previous week. The velocity is based on when cases were created.

Highest Velocity

Represents the owner that currently has the fastest closure rate per week. You can also see the total number of cases assigned to the owner by severity. The trend indicates whether the velocity fails to meet or exceeds the target rate compared to the previous week. The velocity is based on when cases were assigned to the owner.

Productivity by Owner Groups

Lists the owner groups that currently have the highest average number of cases closed per week. It also identifies which owner in the group has the highest velocity.

You can observe the average number of cases closed and whether the rate is trending up or down. The colored bar indicates the volume of cases by severity.

By default, the widget displays data according to the specified time range.

SOAR Average KPI for Event

Requires data from ArcSight SOAR and that ArcSight ESM be deployed. This widget is not available in the ArcSight SaaS environment.

The **SOAR Average KPI For Event** widget provides the SOC Manager an overview for the volume of events in the specified time range that transition from initial analysis of events from source devices through correlation to case creation. The widget also shows the percentage of change between each state.

Correlated Event Count

Shows the number of alerts created from an ESM alert source that you must handle manually, without the use of ArcSight correlation.

Found

Indicates the reduction in the number of items that you must handle manually. This data includes the correlation events generated by rules that monitor events from source devices, as well as events generated by ArcSight components. For typical correlation rule configurations, the data usually represents a reduction in the number of items. However, the number of items might increase in the case of unusual configurations.

Created

Represents the number of cases created within a time range, based on correlation event activity, content, or systems detecting what is significant, and also manual assessments.

SOAR Case Breakdown - Severity

Requires data from ArcSight SOAR.

The **SOAR Case Breakdown - Severity** widget displays the number or percentage of cases by their Severity. The widget always shows data As of Now, regardless of the specified time range for the dashboard. By default, the widget shows data for total open cases. You can change the widget’s properties to select or deselect a severity type. You can also create custom severities. The system, however, does not limit the number of custom severities that you can create.

SOAR Case Load

Requires data from ArcSight SOAR.

To help managers balance the amount of work assigned to case owners, the **SOAR Case Load** widget provides several case management metrics:

- Average number of cases each owner closes per week.

- Projection of the number of cases per severity that the owner might not be able to close, based on the configured target, the time elapsed since the cases were opened, and the average velocity of the owner. This assumes that owners work on cases in severity order, from highest to lowest.

> Estimation of the time required to close all cases is set in the Severity Editor when you configure custom severities.

By default, the widget shows the data for total open, assigned cases for the top three members of the group based on their average number of cases per week. You can filter the data by specific Owner Groups. The metrics are based on the specified time range and the target number of cases that you expect the owners to close per Severity

For best use of this widget, it is recommended that you create one Case Load widget per owner group. In this way, you will see details for members of the owner group.

SOAR Case Status

Requires data from ArcSight SOAR.

The **SOAR Case Status** widget displays the number of cases by their Statuses. The widget always shows data As of Now, regardless of the specified time range for the dashboard.

By default, the widget shows data for All cases. You can however change the widget’s properties to select or deselect one or more Status types.

SOAR Threat Analysis Funnel

Requires data from ArcSight SOAR and that ArcSight ESM be deployed. This widget is not available in the ArcSight SaaS environment.

The **SOAR Threat Analysis Funnel** widget provides the SOC Manager an overview for the volume of events in the specified time range that transition from initial analysis of events from source devices through correlation to case creation. The widget also shows the percentage of change between each state.

Analyzed

Shows the number of **events**, from source devices, that you must handle with the use of ArcSight correlation.

Found

Indicates the reduction in the number of items that you must handle manually. This data includes the **correlation events** generated by rules that monitor events from source device as well as events created by ArcSight components. For typical correlation rule configurations, the data usually represents a reduction in the number of items. However, the number of items might increase in the case of unusual configurations.

> Base and Correlation Event counts and Created Case counts come from the *ArcSight ESM* API and *ArcSight SOAR* respectively.

SOAR Case Timeline

Requires data from ArcSight SOAR.

The **SOAR Case Timeline** widget shows changes in the volume of cases over a specified time range. By default, the widget filters the data according to the Severity category assigned in SOAR. However, you can also choose to view trends for other case states, such as cases closed by assigned or unassigned sub-filters.

To observe the breakdown of cases associated with a specific date, you can hover over any location within the timeline. You can also zoom in to view a particular time range, either using the magnifier icons or by clicking and dragging within the graph.

SOAR Top Playbooks Executed

Requires data from ArcSight SOAR.

The **SOAR Top Playbooks Executed** widget displays the execution count of the playbooks over alerts created.

By default, the widget shows data for top 5 playbooks. The widget helps managers understand the count of playbooks executed over each alert.

You can view the number of playbooks for a given date period and Top N Playbooks such as top 5, top 10.

SOAR Trend - Mean Time To Resolve

Requires data from ArcSight SOAR.

The **SOAR Trend - Mean Time to Resolve** widget displays the amount of average time it took to resolve a malicious attack.

You can change the widget’s properties to view different classifications of attacks and their statuses.

To observe the breakdown of cases associated with a specific date, you can hover over any location within the timeline. You can also zoom in to view a particular time range, either using the magnifier icons or by clicking and dragging within the graph.

SOAR Trend - Mean Time To Respond

Requires data from ArcSight SOAR.

The **SOAR Trend - Mean Time to Respond** widget displays the amount of average time it took to respond to a malicious attack.

You can change the widget’s properties to view different classification of attacks and their statuses.

To observe the breakdown of cases associated with a specific date, you can hover over any location within the timeline. You can also zoom in to view a particular time range, either using the magnifier icons or by clicking and dragging within the graph.

SOAR Trend - Playbooks Executed

Requires data from ArcSight SOAR.

The **SOAR Trend - Playbooks Executed** widget displays the number of times a playbook is executed by its execution date.

By default, the widget shows data for 5 playbooks. The widget helps managers understand the number of playbooks executed everyday.

You can change the widget’s properties to view number of playbooks for a given date period.

To observe the breakdown of playbooks associated with a specific date, you can hover over any location within the timeline. You can also zoom in to view a particular time range, either using the magnifier icons or by clicking and dragging within the graph.

Threat Analysis Funnel

Requires ArcSight ESM be deployed. This widget is not available in the ArcSight SaaS environment.

The **Threat Analysis Funnel** provides the SOC Manager an overview for the volume of events in the specified time range that transition from initial analysis of events from source devices through correlation to case creation. The widget also shows the percentage of change between each state.

Analyzed

Shows the number of **events**, from source devices, that would need to be handled manually without the use of ArcSight correlation.

Found

Indicates the reduction in the number of items that you would need to handle manually. This data includes the **correlation events** generated by rules that monitor events from source device as well as events created by ArcSight components. For typical correlation rule configurations, the data usually represents a reduction in the number of items. However, the number of items might increase in the case of unusual configurations.

Created

Represents the number of **cases** created within the time range, based on correlation event activity, content or systems detecting what’s significant, and manual assessments.

Top Risky Entities

Requires ArcSight Intelligence be deployed. This widget is not available in the ArcSight SaaS environment.

To help identify the riskiest entities in your organization, the **Top Risky Entities** widget provides a list of the top risky entities, by entity type, based on the last analytics run. By default, the widget displays the top 5 risky users. If you need to view the top risky entities for another entity type, then, as part of this widget’s properties, you can change the filter to select the entity type and the number of entities you want displayed in the list. When you click an entity in the widget, the Explore page opens in the ArcSight Intelligence UI, with the selected entity's name applied to the **anomalies and violations** filter.

SOC Management Made Easy

ArcSight Platform provides several ways for you to manage the SOC and keep it running efficiently. You can get a high-level view of case activity. You might run integrity checks on event data to assure analysts that the data hasn't been hasn't been compromised. You might help a compliance officer run reports to verify that your team is handling data properly.

Running a SOAR Out-of-the-Box Report

This feature is not available if Multi-tenancy is enabled.

The Reports Portal includes out-of-the-box reports that aid you in managing current and closed cases. Note that the reports that you previously generated with Jasper report engine will be deprecated.

The following is the list out-of-the-box reports:

> To generate reports, you must have a **Reports** permission.

- Closed Cases Report
- Integration History report
- Integration Summary Report
- Open Cases Report

Closed Cases Report

Lists the closed cases in the specified timeframe.

Integration History Report

Along with its detailed counterpart, provides a list about all integrations or a selected integration.

Integration Summary Report

Summarizes alert sources and device integrations that exists on SOAR in the specified timeframe.

Open Cases Report

Lists the open cases in the specifiedtimeframe.

Display a Dashboard on the SOC Screen

If Multi-tenancy is enabled, this feature is not available.

Like most software, the ArcSight Dashboard will end a session that has been idle for a while. This is good for security. However, it can be inconvenient if you display a dashboard on the large monitors in your SOC. To avoid manually interacting with the browser or logging in regularly, you can use a plug-in that automatically refreshes all content in the browser tab that displays the dashboard.

To automatically refresh dashboards on the SOC screen:

1. Install an Auto Refresh add-on for your browser.

   There are free add-ons available for supported browsers.

2. Specify the time interval after which you want the browser tab to refresh automatically.

   For instance, if you set the time for auto-refresh to five minutes, your browser tab will refresh automatically after an interval of five minutes.

3. (Optional) Minimize the left navigation pane.

Note that, when you refresh the tab, the Dashboard always updates to the latest data based on your chosen time range.

Supporting CISO Conversations

You gain insights into a global view of security postures your entire environment in this chapter, including that of multiple tenants.

Working with SOAR Reports

The SOAR Capability enables you to track statistical details using the dashboard and case details using the report features. You can use a predefined report template or create your own template to generate a report.

Creating Report Templates

Select **RESPOND** > **Configuration** > **Report Templates**.

You can use the Reports Portal to design you own report template. You can upload it on SOAR to get the customized reports.

Creating a Report Template

Click the **Create Report Template** button to create a new report template. In **Report Template Editor** window, specify the **Report Type Name** and navigate to the file to be uploaded.

Reviewing Your Global Security Posture

Using the built-in Optics, you get a quick overview of alerts in your environment worldwide along with a high-level overview of the key security metrics for CISOs.

Review Global Optics

This optic is available only if ArcSight ESM is integrated with ArcSight Platform and the Multi-tenancy feature is enabled.

Select Dashboard & Reports > Optics > Global View.

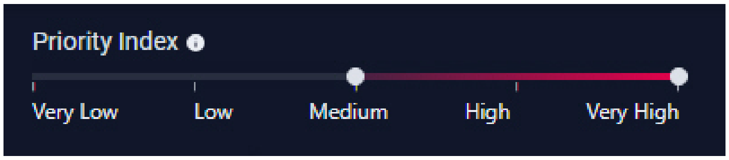
The **Global View** optic is the default page that is displayed after you log in to ArcSight. By default, the map displays the geographic distribution of alerts over the last 30 days. Provider Admin users can view alert data for all tenants, while tenant users can view alert data only for their tenants.

The map provides a quick overview of alerts in your environment worldwide. Red dots on the map indicate the locations where alerts originate, with the dot size reflecting the alert volume. The higher the number of alerts at a location, the bigger the dot.

The color of the dot represents the alert priority. The priority refers to the level of urgency assigned to an alert.

Filtering Alerts

The Priority Index slider allows you to filter the alert data displayed on the map by priority.



Alert priority has the following levels:

- Very High
- High
- Medium
- Low
- Very Low

As you move the slider back and forth, the map refreshes to show locations that have alerts for the selected priority index.

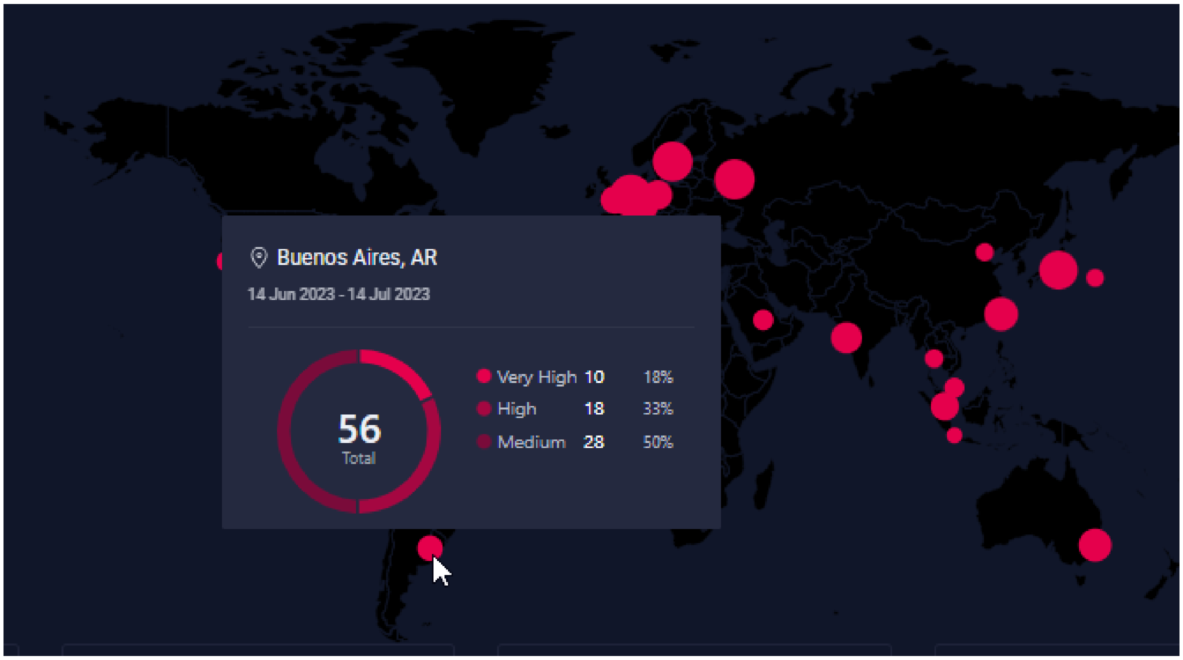
The higher the alert priority, the bigger the risk. High-priority alerts need immediate attention from security practitioners to mitigate security risks.

Viewing Alerts for a Specific Location

To view alerts for a specific location, mouse over the dot on the map. You can view the following details for alerts:

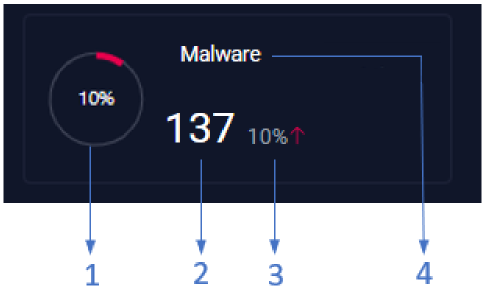
- Name of the location.
- Total number of alerts at the location. Depending on the priority levels existing for the selected time, the donut chart is divided into segments, each of which is colored differently. Each segment represents an alert priority.

- Alert count and percentage of alert count by priority.



Viewing Top 5 Alert Categories

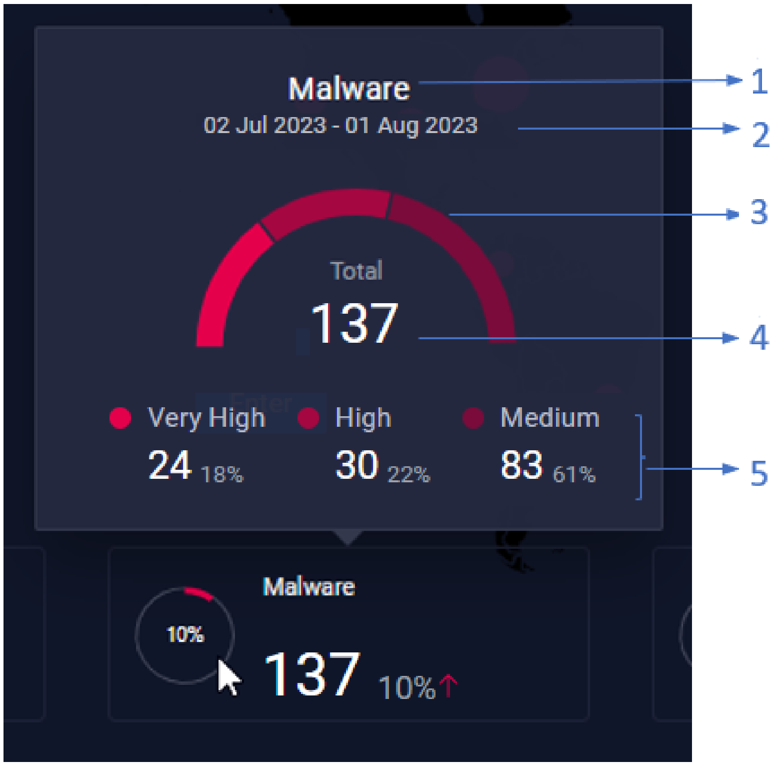
A series of cards below the map display the top 5 categories that generate the highest number of alerts in your environment.



Each card provides the following information as shown in the preceding image:

- 1 - Percentage of alerts contributed by the alert category to the overall alert count.
- 2 - Total number of alerts in the category.
- 3 - Percentage change in the alert count when compared to the previous time frame. A green downward arrow (↓) indicates a decrease in the alert count, while a red upward arrow (↑) indicates an increase in the alert count.
- 4 - Name of the alert category.

When you mouse over a card, you can view more information about the alerts in the category as shown in the following image:



Where,

- 1 - Name of the alert category.
- 2 - Duration for which the alert count is displayed.
- 3 - Distribution of alerts in the category by priority. Depending on the priority levels existing for the selected time, the semi-circle donut chart is divided into segments, each of which is colored differently. Each segment represents a priority.
- 4 - Total number of alerts in the category.
- 5 - Alert count and percentage of alert count by priority.

Review Key Security Metrics

This optic is available only if ArcSight ESM is integrated with ArcSight Platform and the Multi-tenancy feature is enabled.

Select Dashboard & Reports > Optics > CISO Overview.

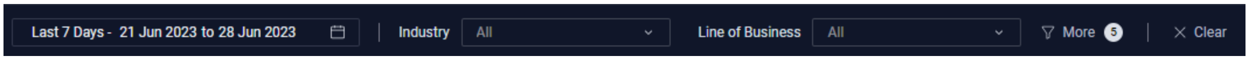
The **CISO Overview** optic provides a high-level overview of the key security metrics for individuals responsible for the security of the enterprise. The information in the optic enables them to make informed decisions and take corrective action.

CISO Overview consists of widgets that present alert data in charts and maps for the specified time and filter criteria. By default, all widgets display alert data for the last seven days for all tenants, departments, lines of business, industries, and network zones. To view alerts for a specific tenant, select the tenant name from the tenant list in the top navigation bar.

The images shown in the subsequent topics are for illustration purposes only.

Filter the Optics Data

In the CISO Overview optic, you can filter the alert data that generates the graph to narrow down the alerts that are relevant to you. Use a specific filter or a combination of filters that are available in the filter bar.



Last 7 Days - 21 Jun 2023 to 28 Jun 2023

Industry All

Line of Business All

You can view alerts that occurred within a specific time range and on attributes that include industries, lines of business, departments, and network zones. On the filter bar, click More to view additional filters.

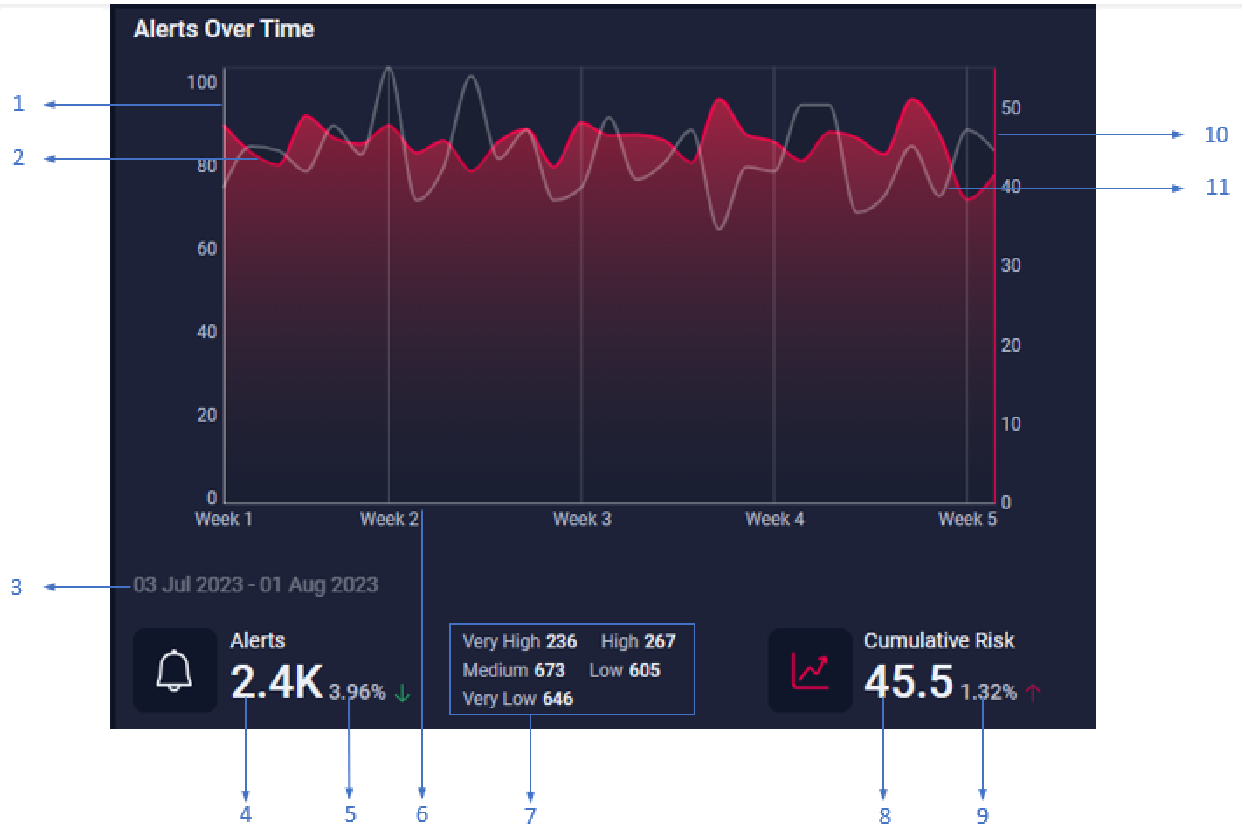
When you specify filters, they are applied to all widgets in the dashboard. For example, if you select a specific time frame, all graphs display the data based on the same time frame. By default, the optic displays the alert data for the last seven days.

Alerts Over Time

The **Alerts Over by Time** widget in the CISO Overview optic provides insights into the volume and frequency of alerts over the specified time and filters.

- "Quick View of Alerts Over Time" on the next page
- "Analyzing Alerts" on page 510
- "Viewing Alert Details" on page 511
- "Viewing Alert History" on page 512

Quick View of Alerts Over Time



The widget displays the following information, as shown in the preceding image:

1. Primary vertical axis that represents the number of alerts.
2. Trend line that represents the cumulative risk score for the specified time.
3. Duration for which the widget is displaying alert data.
4. Total number of alerts for the specified time. When you click the alert count, a fly-out provides deeper insights into the alert count.
5. Percentage change in the alert count when compared to the previous time frame. For example, if you select This Week, the system compares the data of this week to the previous week and if This Month is selected, the system compares the data of this month to the previous month. A green downward arrow (↓) indicates a decrease in alert count, while a red upward arrow (↑) indicates an increase in alert count.
6. Horizontal axis that represents the specified time. Depending on the selected time frame, the horizontal axis displays the time in chronological order at specific intervals such as days, weeks, months, or quarters. When you click an interval label on the horizontal axis, the portion of the chart that corresponds to the interval is highlighted, and the data below

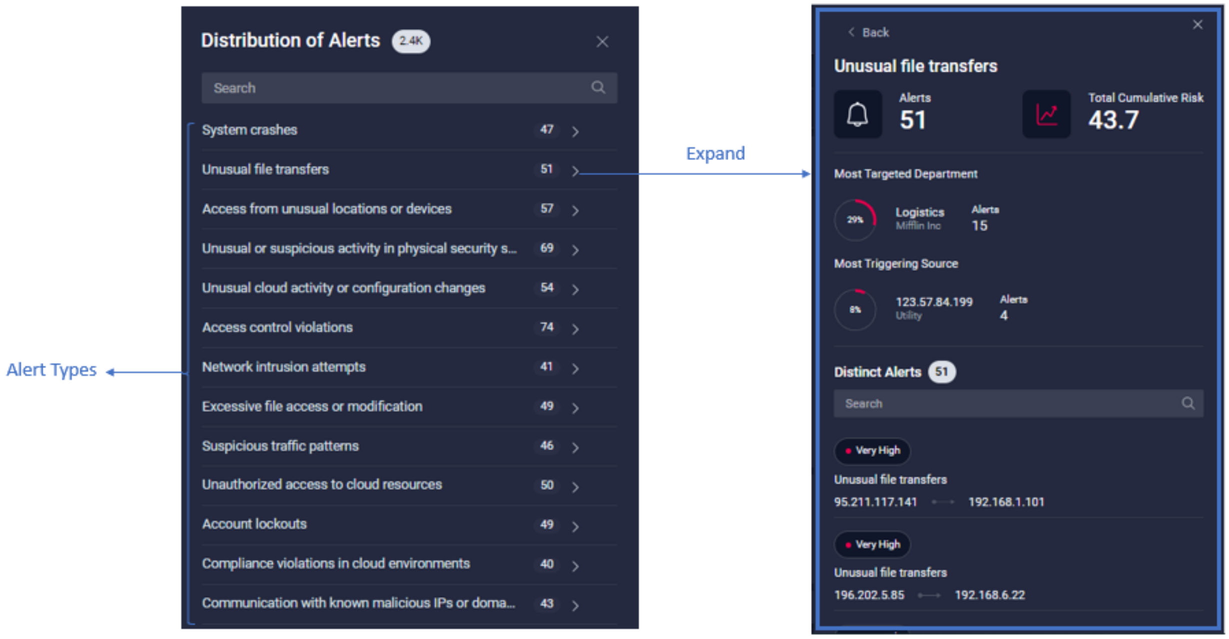
the chart is updated to display the metrics for the selected interval.

7. Alert count categorized by priority.
8. Cumulative risk score for the specified time.
9. Percentage change in the cumulative risk score when compared to the previous time frame.
10. Secondary vertical axis that represents the cumulative risk score.
11. Trend line that represents the alert count for the specified time.

As you mouse over a trend line, the data below the chart is updated to display the metrics for that day.

Analyzing Alerts

When you click the total alert count in the widget, a fly-out pane displays the distribution of alerts by alert type.



Distribution of Alerts 2.4K

Search

System crashes	47
Unusual file transfers	51
Access from unusual locations or devices	57
Unusual or suspicious activity in physical security s...	69
Unusual cloud activity or configuration changes	54
Access control violations	74
Network intrusion attempts	41
Excessive file access or modification	49
Suspicious traffic patterns	46
Unauthorized access to cloud resources	50
Account lockouts	49
Compliance violations in cloud environments	40
Communication with known malicious IPs or doma...	43

< Back

Unusual file transfers

Alerts 51

Total Cumulative Risk 43.7

Most Targeted Department

29% Logistics Mifflin Inc Alerts 15

Most Triggering Source

8% 123.57.84.199 Utility Alerts 4

Distinct Alerts 51

Search

Very High
Unusual file transfers
95.211.117.141 ⟷ 192.168.1.101

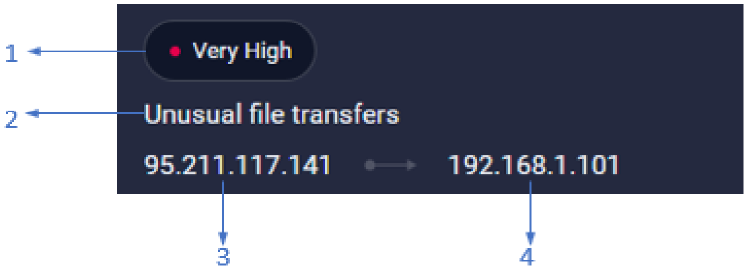
Very High
Unusual file transfers
196.202.5.85 ⟷ 192.168.6.22

Expand an alert type to further drill down and view the following information, as shown in the preceding image:

- Number of alerts for the alert type.
- Total cumulative risk score for the alert type.
- Name of the department that is most affected by the alert along with the alert count. The donut chart highlights the percentage of alerts contributed by the alert type to the overall alert count.

- IP address of the source that is triggering the alert the most along with the alert count. The donut chart highlights the percentage of alerts contributed by the source to the overall alert count.

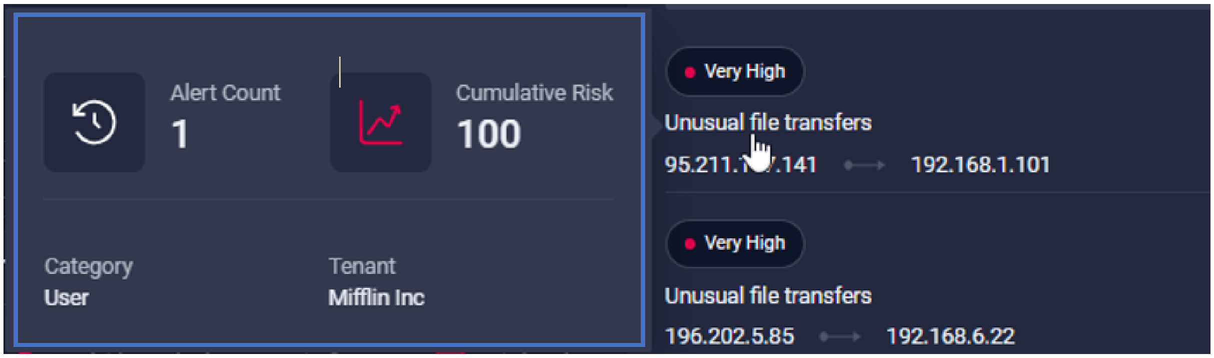
  The Distinct Alerts pane lists all alerts under the alert type. Although the listed alerts are of the same type, each alert has a distinct source and destination IP address. You can search for a specific alert by the source or destination IP address.



  For each alert in the list, you can view the following information as shown in the preceding image:

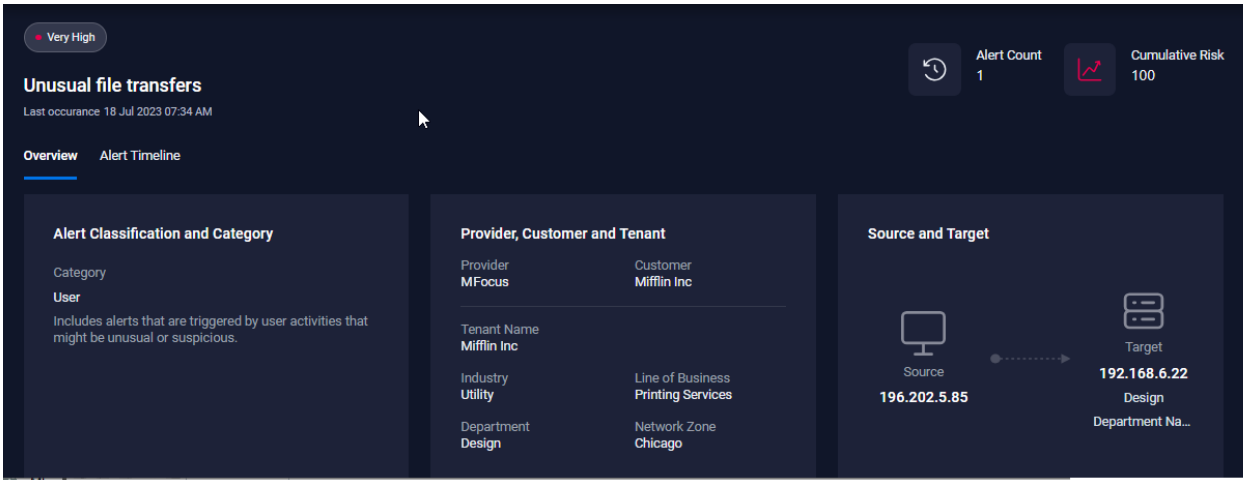
  - 1 - Priority of the alert.
  - 2 - Alert type.
  - 3 - Source IP address of the alert.
  - 4 - Destination IP address of the alert.

Mouse over the alert name as shown in the following image, to view the number of times the destination IP address has been targeted by the source, cumulative risk score, and alert category.



Viewing Alert Details

Click the alert name in the Distinct Alerts pane. The Overview tab provides detailed information about the alert.



Unusual file transfers

Last occurance 18 Jul 2023 07:34 AM

Alert Count 1

Cumulative Risk 100

Alert Classification and Category

Category
User
Includes alerts that are triggered by user activities that might be unusual or suspicious.

Provider, Customer and Tenant

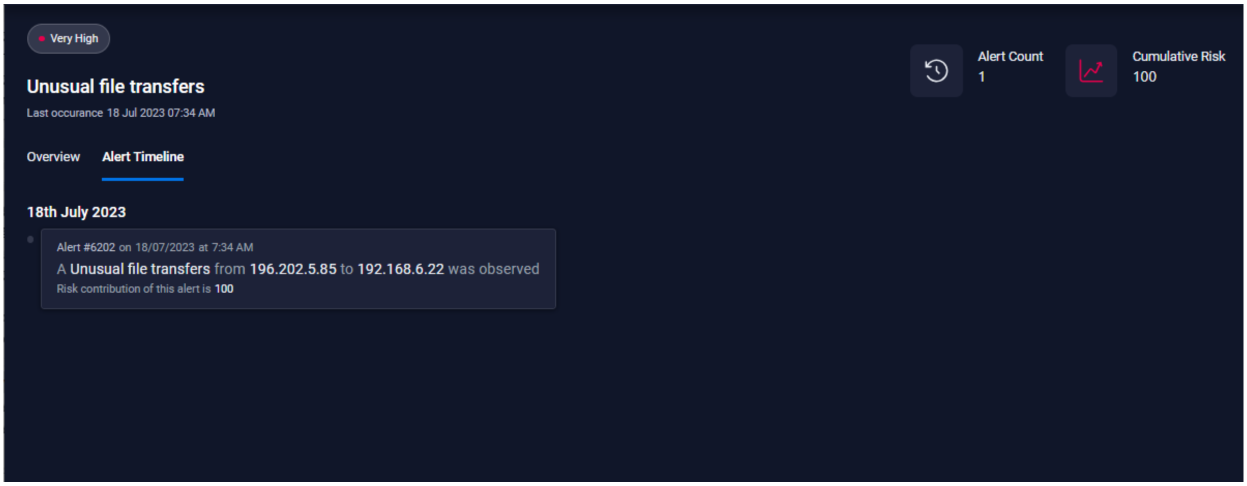
Provider: MFocus
Customer: Mifflin Inc
Tenant Name: Mifflin Inc
Industry: Utility
Line of Business: Printing Services
Department: Design
Network Zone: Chicago

Source and Target

Source 196.202.5.85
Target 192.168.6.22 Design Department Na...

Viewing Alert History

The Alert Timeline tab provides a recent history of alert activity. Each notification in the timeline includes the date and time the alert was generated, the source and destination IP address of the alert, and the risk score.



Unusual file transfers

Last occurance 18 Jul 2023 07:34 AM

Alert Count 1

Cumulative Risk 100

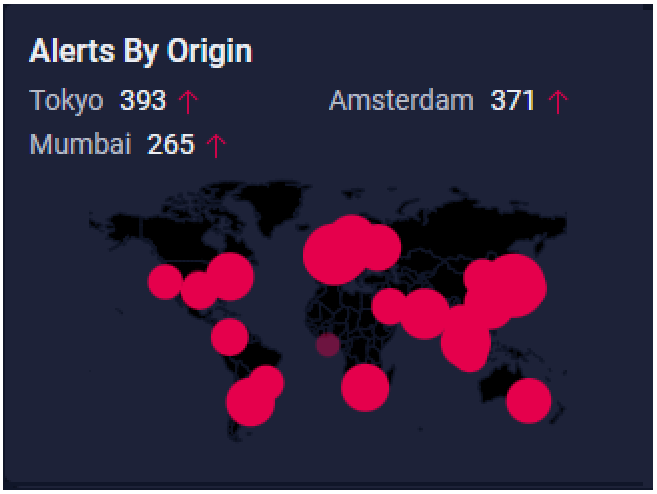
18th July 2023

Alert #6202 on 18/07/2023 at 7:34 AM
A Unusual file transfers from 196.202.5.85 to 192.168.6.22 was observed
Risk contribution of this alert is 100

Alerts by Origin

The **Alerts by Origin** widget in the CISO Overview optic displays the geographic distribution of alerts for the specified time and filters.

The red dots on the map indicate the locations that are the sources of alerts and the dot size is directly proportional to the volume of alerts. The higher the number of alerts at a location, the bigger the dot. The color of the dots varies depending on the priority level of the alerts at the location.

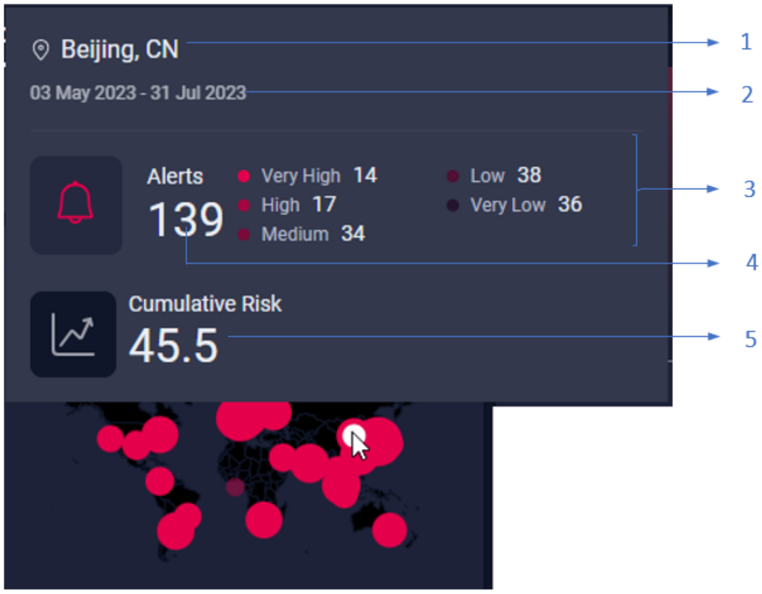


Alerts By Origin

Tokyo 393 ↑ Amsterdam 371 ↑

Mumbai 265 ↑

The widget displays the top 3 locations with the highest number of alerts and the change in the alert count between the selected time frame to the previous time frame. A green downward arrow (↓) indicates a decrease in alert count, while a red upward arrow (↑) indicates an increase in alert count.



Beijing, CN

03 May 2023 - 31 Jul 2023

Alerts 139

Very High	14	Low	38
High	17	Very Low	36
Medium	34		

Cumulative Risk 45.5

Mouse over a dot as shown in the preceding image to view the following information:

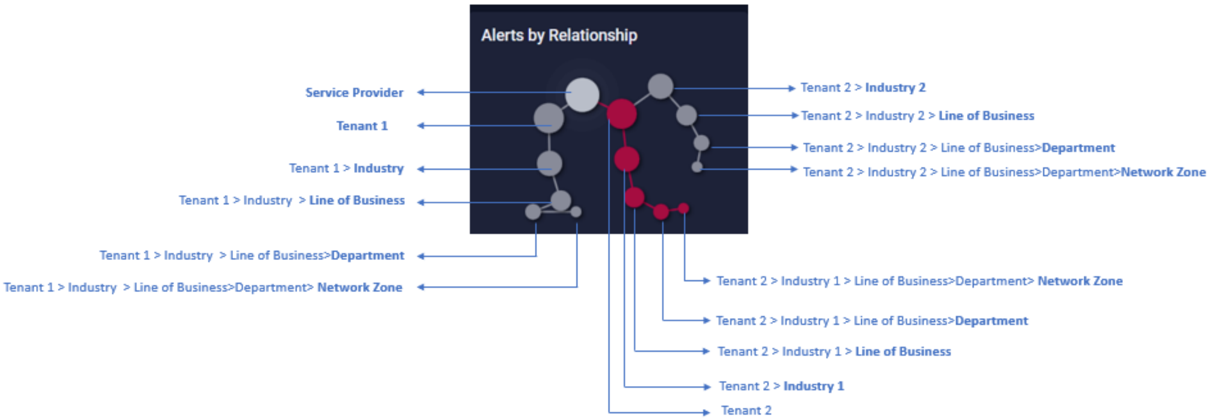
- 1 - Name of the location that is the source of alerts.
- 2 - Duration for which the widget is displaying alert data.
- 3 - Alert count by priority.
- 4 - Total number of alerts at the location for the specified duration and filters.
- 5 - Cumulative risk score.

Alerts by Relationships

The **Alerts by Relationships** widget in the CISO Overview optic helps visualize the relationship between the various entities in the environment and how alerts in one entity can potentially affect other entities.

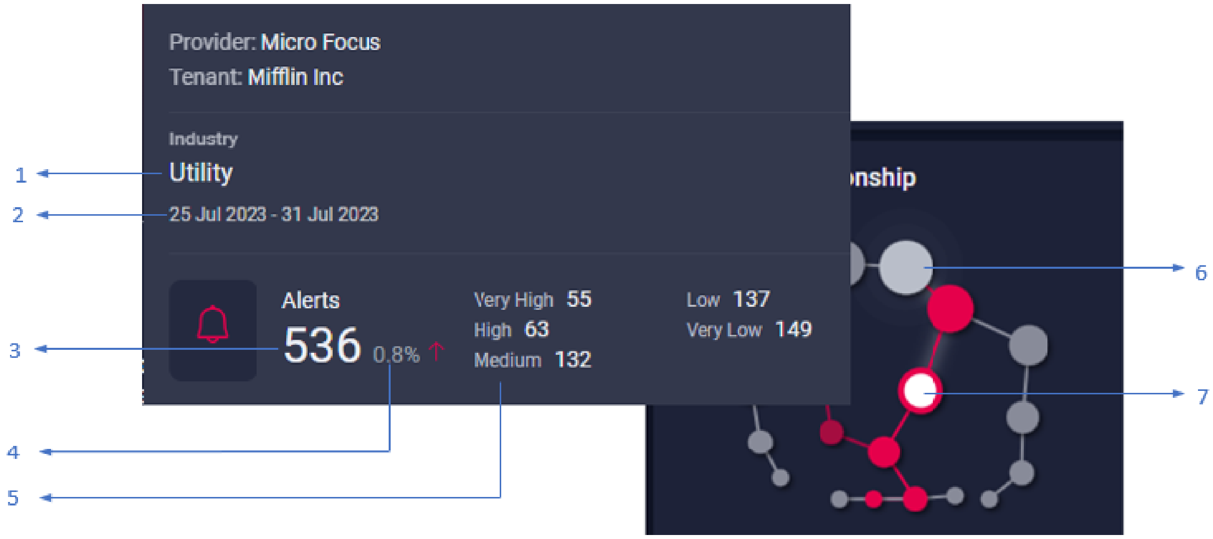
The widget displays the alert data for the specified time and filters. Each node in the chart represents an entity with the center node representing either the service provider or the tenant, depending on the organization of the logged-in user. Entities include the service provider, tenants, industries, lines of business, and departments. The color of the node represents the priority of alerts within that entity. The greater the alert priority, the brighter the node.

The following image is an example that shows the various entities in the service provider environment and the relationship between the entities:


Alerts by Relationship
Service Provider
Tenant 1
Tenant 1 > Industry
Tenant 1 > Industry > Line of Business
Tenant 1 > Industry > Line of Business>Department
Tenant 1 > Industry > Line of Business>Department> Network Zone
Tenant 2 > Industry 2
Tenant 2 > Industry 2 > Line of Business
Tenant 2 > Industry 2 > Line of Business>Department
Tenant 2 > Industry 2 > Line of Business>Department>Network Zone
Tenant 2 > Industry 1 > Line of Business>Department> Network Zone
Tenant 2 > Industry 1 > Line of Business>Department
Tenant 2 > Industry 1 > Line of Business
Tenant 2 > Industry 1
Tenant 2

Exploring Alerts for an Entity

When you mouse over a node, as shown in the following image, you can view alert information specific to the entity that the node represents.



Provider: Micro Focus
Tenant: Mifflin Inc

Industry
Utility
25 Jul 2023 - 31 Jul 2023

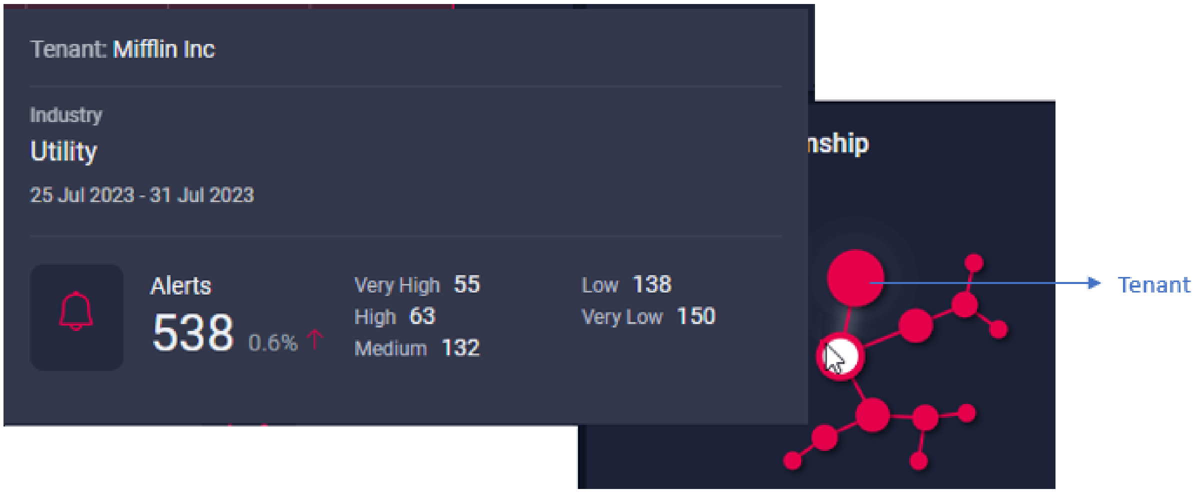
Alerts
536 0.8% ↑

Very High	55	Low	137
High	63	Very Low	149
Medium	132		

In the example shown in the preceding image, you can see the following information for the *Banking* industry within the tenant *Bank 2*:

- 1- Name of the entity for which the metrics are displayed.
- 2 - Time for which the alert count is displayed.
- 3 - Total number of alerts within the entity.
- 4 - Percentage change in the alert count when compared to the previous time frame.
- 5 - Alert count by priority.
- 6 - Node representing the service provider.
- 7 - Node representing the entity.

If you are a user from the tenant organization, the center node represents your tenant. When you mouse over a node that, for example, represents an industry, the information that is displayed in the Alert By Relationship widget might be similar to the information that is shown in the following image:



Tenant: Mifflin Inc

Industry
Utility
25 Jul 2023 - 31 Jul 2023

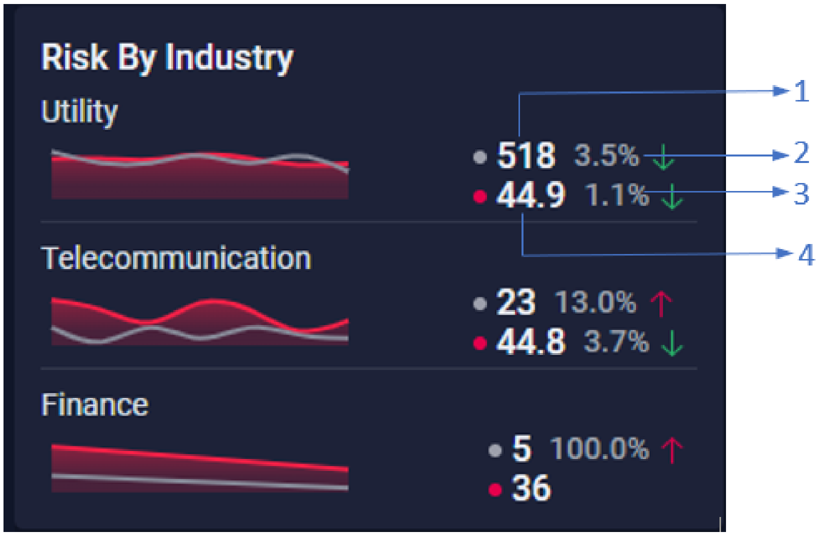
Alerts
538 0.6% ↑

Very High 55
High 63
Medium 132
Low 138
Very Low 150

Risk by Industry

The **Risk by Industry** widget in the CISO Overview optic displays a trend chart for the top three industries with the most alerts for the specified time and filters.

The white trend line represents the alert count, while the red trend line represents the cumulative risk score.



Risk By Industry

Utility
● 518 3.5% ↓
● 44.9 1.1% ↓

Telecommunication
● 23 13.0% ↑
● 44.8 3.7% ↓

Finance
● 5 100.0% ↑
● 36

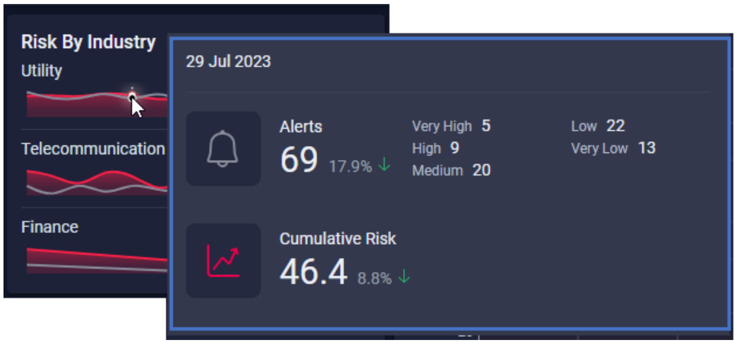
As shown in the preceding image, the widget displays the following information for each industry:

- 1- Total number of alerts for the industry for the specified time.
- 2 - Percentage change in the alert count when compared to the previous time frame.
- 3 - Percentage change in the cumulative risk score when compared to the previous time

frame.

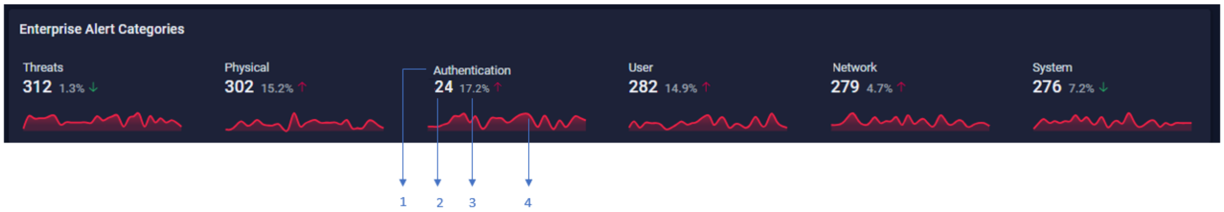
- 4 - Cumulative risk score for the industry for the specified time.

When you mouse over a trend line as shown in the following image, you can view the following details for that day: Total number of alerts for the industry along with alert count by priority, cumulative risk score, and percentage change in the alert count and cumulative risk score when compared to the previous day.



Enterprise Alert Categories

The **Enterprise Alert Categories** widget in the CISO Overview optic shows the top 6 alert categories with the most alerts over the specified time and filters. Each alert corresponds to a category. For example, categories might include malicious activities, unauthorized access attempts, policy violations, and so on. Grouping alerts based on categories provides insights into the nature of security risks faced by organizations and helps you prioritize actions.



As shown in the preceding image, each alert category in the widget displays the following information:

1 - Name of the alert category.

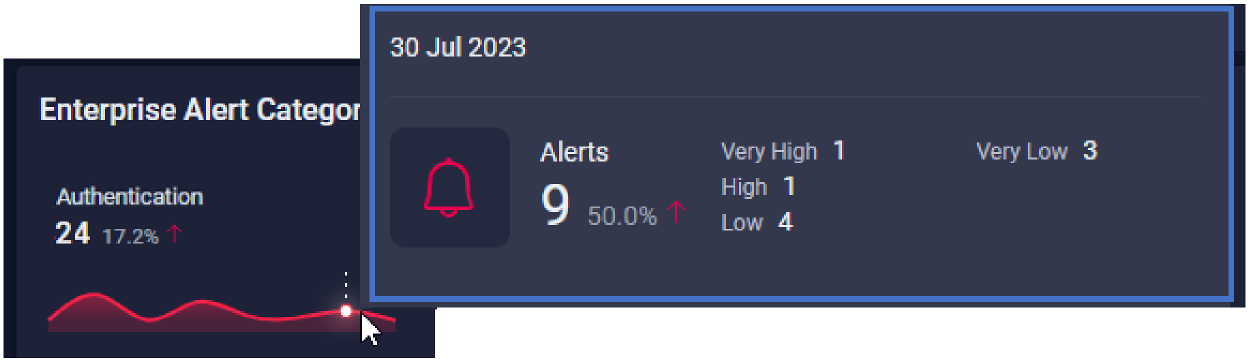
2 - Total number of alerts in the category.

3 - Percentage change in the alert count when compared to the previous time frame.

4 - Alert trend over the specified time.

Mouse over the trend line to view the following details:

- Total number of alerts along with alert count by priority.
- Percentage change in the alert count when compared to the previous day.



Enterprise Alert Categor

Authentication
24 17.2%

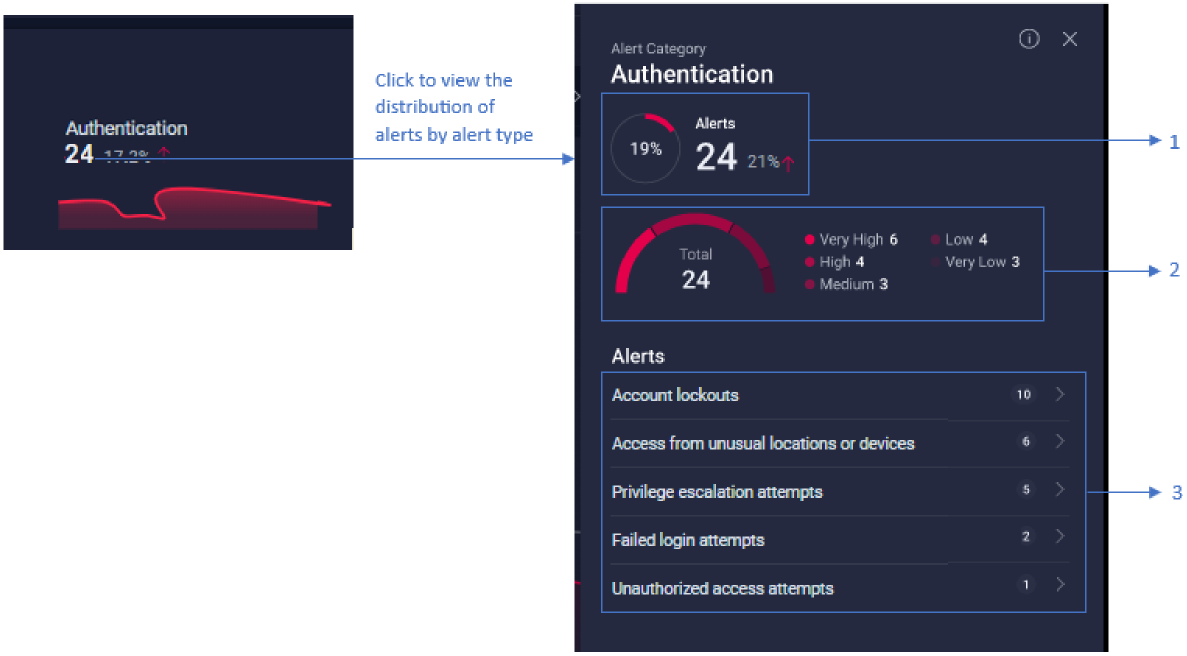
30 Jul 2023

Alerts
9 50.0%

Very High 1
High 1
Low 4
Very Low 3

Analyzing Alerts in an Alert Category

When you click the total alert count in a category, a fly-out pane displays the distribution of alerts by alert type.



Authentication
24 17.2%

Click to view the distribution of alerts by alert type

Alert Category
Authentication

19%
Alerts
24 21%

Total
24

Very High 6
High 4
Medium 3
Low 4
Very Low 3

Alerts

Account lockouts	10
Access from unusual locations or devices	6
Privilege escalation attempts	5
Failed login attempts	2
Unauthorized access attempts	1

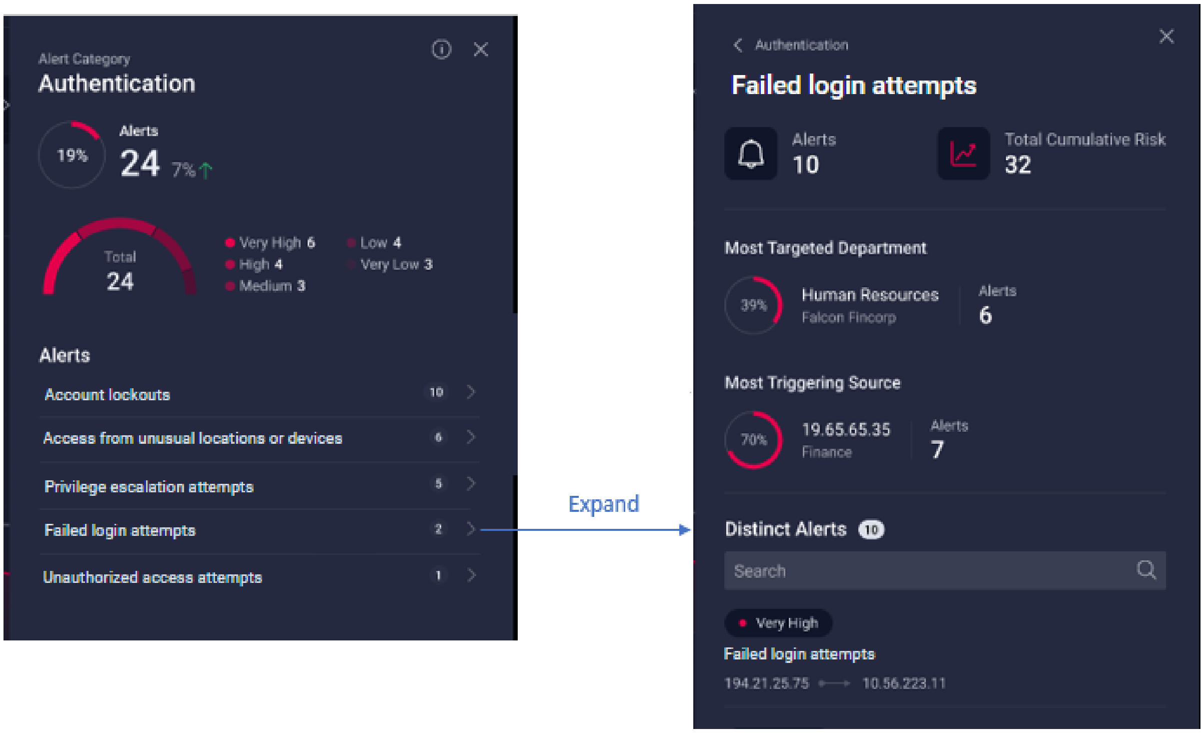
As shown in the preceding image, the fly-out pane displays the following information:

- 1 - Number of alerts in the category along with the percentage change in the alert count when compared to the previous time frame. The donut chart highlights the percentage of alerts contributed by the alert category to the overall alert count.
- 2 - Distribution of alerts in the category by priority. Depending on the priority levels existing for the selected time, the semi-circle donut chart is divided into segments, each of

which is colored differently. Each segment represents a priority.

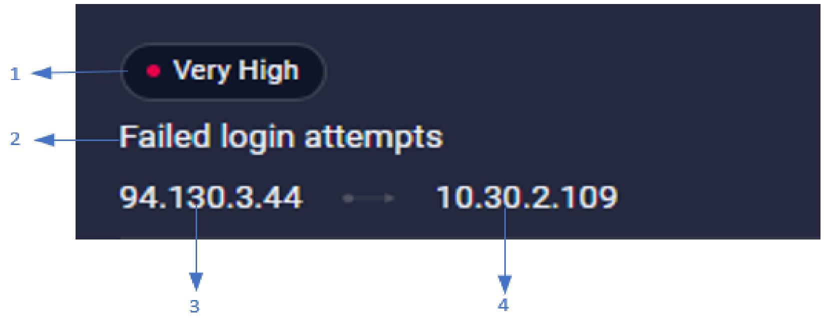
- 3 - Classification of alerts by alert type along with the alert count.

Expand an alert type as shown in the following image to explore all alert instances under the alert type.



As seen in the preceding image, the following information is displayed:

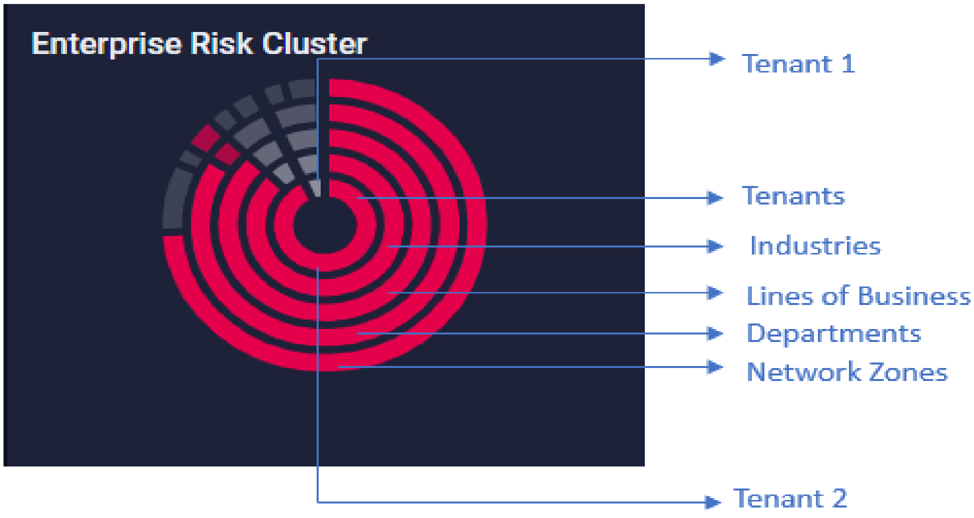
- Total number of alerts within the alert type.
- Cumulative risk score for the alert type.
- Name of the department that is most affected by this alert type along with the alert count. The donut chart highlights the percentage of alerts contributed by the alert type to the overall alert count.
- IP address and name of the source that is triggering this alert type the most along with the alert count. The donut chart highlights the percentage of alerts contributed by the source to the overall alert count.
- List of all alerts with the following information for each alert as shown in the following image:
  - 1 - Priority of the alert.
  - 2 - Name of the alert.
  - 3 - Source IP address of the alert.
  - 4 - Destination IP address of the alert.



Enterprise Risk Cluster

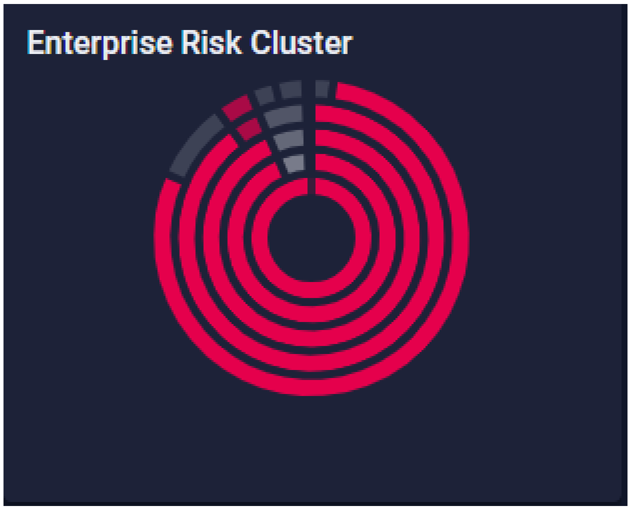
The **Enterprise Risk Cluster** widget in the CISO Overview optic displays the distribution of alerts across all entities in the environment. Each ring in the chart represents an entity with the innermost ring representing tenants and each subsequent ring representing entities in the following order *tenants>industries>line of business>departments>network zones*.

Each ring is divided into segments, and each segment represents a specific entity. The size of a segment is proportional to the volume of alerts within the entity, and the color of the segment represents the priority of alerts within that entity. The greater the alert priority, the brighter the segment.



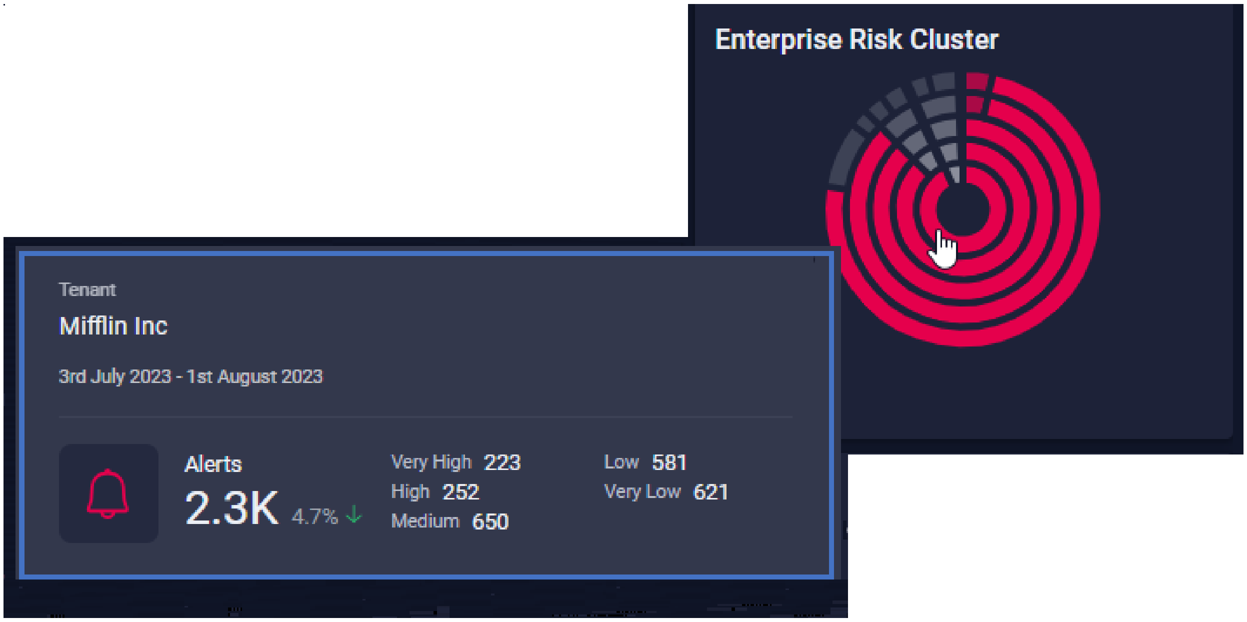
The visualization enables you to identify entities within the environment that generate most alerts and entities that have alerts of the highest priority. The hierarchical structure provides the overall alert landscape, which allows you to identify potential areas of concern by exploring alert data at various levels of granularity.

Click a segment to zoom in and explore the underlying entities within that segment. For example, when you click the *Tenant 2* segment, you can zoom in to view the entities within it, as shown in the following image:



Mouse over a segment to view the following details for the entity:

- Name of the entity.
- Time for which the alert count is displayed.
- Total number of alerts along with the alert count by priority.



Tenant
Mifflin Inc
3rd July 2023 - 1st August 2023

Alerts
2.3K 4.7% ↓

Very High 223
High 252
Medium 650
Low 581
Very Low 621

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