SonicWall® Analytics REPORTS

Administration
For an IPFIX-Based Solution



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Overview

This document introduces the **REPORTS** view for the IPFIX-based Analytics solution. This solution can be used as a stand-alone solution or it can be used as a SonicWall firewall management system. This chapter describes the Overview command options.

(i)

NOTE: The interface for Analytics varies because of the different configurations and types of reporting that can be set up. The images provided do not match every implementation, but should be viewed as an example that you can use as a guide while moving through the interface. Major differences are noted when needed to avoid confusion. The information for the **REPORTS** view in a Syslog-based Analytics solution is documented in *Analytics REPORTS Administration for a Syslog-Based Solution*.

Topics:

- Accessing REPORTS
- Status
- Live Reports
- Devices
- Related Documents

Accessing REPORTS

When you select the **REPORTS** view, the default view is **REPORTS > Overview > Status**. The **Status** page is the starting point to receive all the alerts and notifications triggered using data flow and incorporating the analytics framework.

(i)

NOTE: The same Status page can be seen by navigating to **HOME > Overview > Status**.

When you first open the **REPORTS** view, the interface shows three work areas:

Device Manager In the **DEVICE MANAGER**, you can group the devices in your security

infrastructure using the pre-defined views.

Command menu The command menu is located directly under the SonicWall logo. You can

manage or monitor your devices using the commands shown here.

Work space The work space is where all the data is displayed. This is where you monitor

status, see reports, set schedules, drill down for data and so forth. Similar tasks are grouped under the views identified by the icons across the top navigation of

the work space. The options may vary according to your configuration.

The following figure illustrates a typical view of **REPORTS > Overview > Status**. In this instance the Device Manager is hidden, but it can be showing by clicking on the **Expand** icon.



For more information about using the Analytics interface, refer to "Navigation" in *Analytics HOME Administration*.

Status

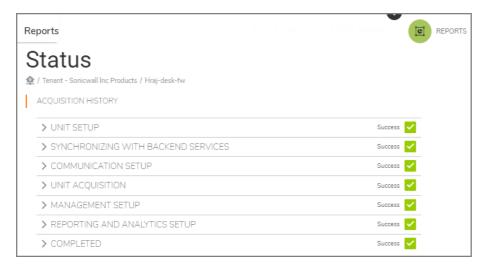
The system goes through a series of steps when acquiring a firewall, and these steps can be monitored on the **Overview > Status** page. The Status page shows different things depending upon whether you have firewall management with Analytics or on-premises Analytics, the Syslog-based option or IPFIX-based option. The interface shows which options are applicable to your implementation. This IPFIX-based option is described in this document.

Topics:

- Acquisition History
- Firmware Details
- Firewall
- Flow Reporting License Status
- System
- Flow Management

Acquisition History

The **Acquisition History** section of the **Status** page tracks the steps taken to acquire a unit. As each stage of the acquisition is completed, success is indicated by a green check mark along with a message indicating status. If you want more information about each stage, you can expand it by clicking on the right arrow. More messages and status are displayed.



If an error occurs, or if a process seems to be taking too long, you can use the information from the expanded options to determine where to begin your troubleshooting. When the acquisition completes successfully, green check marks are shown for every stage.

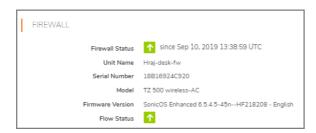
Firmware Details

The Firmware Details section of the Status page appears if you selected GlobalView in the Device Manager. It shows the number of available firewalls. After you click on the specific appliance, however, the Firmware Details section is no longer shown.



Firewall

The **Firewall** section of the **Status** page shows the data for the selected firewall.



A green up arrow indicates that ipfix packets are being received from the firewall. If the acquisition has not completed successfully, the status shows a red down arrow, indicating that the firewall is not online or that there is some kind of error. You can use the messages from the page to help diagnose what the issue might be.

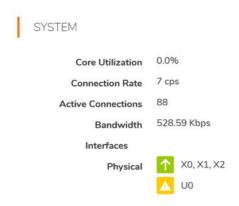
Flow Reporting License Status

The **Flow Reporting License Status** section of the **Status** shows when the GlobalView is selected. It shows the appliance name, for example: **SM 9400**, and indicates that it is licensed.



System

The **System** section of the **Status** page shows the system and interface data for the selected firewall. The following shows a sample:



The symbols indicate the status of the interfaces. In the example, X0, X1, and X2 are available, but U0 is unassigned. This section also shows the status of virtual interfaces, when present. A red symbol means the interface is down.

(i) NOTE: The System section of the Status page is displayed when Analytics is used with a SonicWall firewall management system and only when a unit is successfully acquired.

Flow Management

The **Flow Management** section shows statistics about the flow agent you set up on the device.

(i) NOTE: If the VPN Tunnel is down, the Status field appears and provides a message describing what the issue might be. You can use this information to begin your troubleshooting.

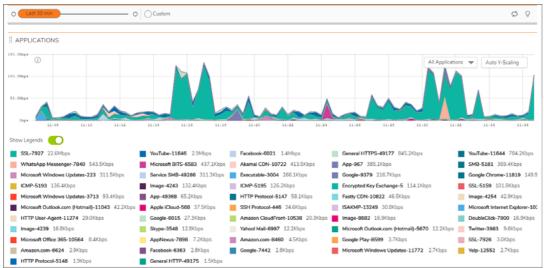


The green up arrows show the firewall **Status** and that the **VPN Tunnel** has been established.

Live Reports

The system provides **Live Reports** that give a historical view of the real-time monitor charts on the **Overview > Live Reports** page. You can customize the view for the past 365 days by choosing one of the predefined time periods with the sliding bar, or you can define a custom period by selecting **Custom**. Individual charts can be rearranged manually. Show or hide legends by clicking the **Legends** button under each chart.

The following is an example of one of the Live Reports. Scroll down on the interface to see others.



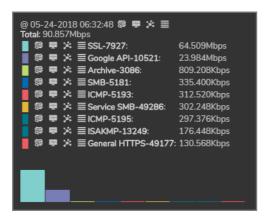
The following charts are shown in Live Reports:

- **APPLICATIONS** collects the top 25 applications that are traversing through the firewall in bits per second.
- BANDWIDTH indicates the incoming bandwidth utilization in bits per second.
- PACKET RATE shows average incoming packets per second.
- PACKET SIZE collects the incoming packets size, in bytes, for each interface during the collection period.

- CONNECTION RATE is plotted by collecting outgoing + incoming connection rate for each interface.
 - NOTE: When looking at the combined connection rate of more than one interface at the same time, it may appear double the actual connection rate since a single connection between a pair of interfaces are counted for both interfaces.
- CONNECTION COUNT shows the current number of active connections during each refresh period.
- MULTI-CORE MONITOR shows the CPU utilization for each core during each refresh period.

All the charts, except **Connection Count**, can be filtered to show a subset of the data. Click on the drop-down list in the chart and select the option you want. The chart clears and begins collecting data based on the new parameters.

To get details about the data being shown, mouse over the data in the graphs to see the value at that instant. Details are shown in the popup window similar to the one shown here:



The popup also shows icons to the left and at the top of the data to drill down to get more information. The icons at the top allow you to drill down on all the data displayed. The icons at the left allow you to drill down on each item individually. The icons take you to the following reports:

- Analytics (ANALYTICS | All Traffic > Groups)
- Graphs (ANALYTICS | All Traffic > Graphs)
- Report view (REPORTS | Details > report_type, where report_type is the specific report found in the Details section)
- Sessions (ANALYTICS | All Traffic > Session logs)

Devices

When you select **GroupView** or **GlobalView** in the **Device Manager**, the **Live Monitor** option is not shown. Depending upon your implementation you have the option to view **Devices** or **Device List** instead.

Devices

The Devices option provides two views that you switch between by using the tabs at the top of the table: **Devices** and **Device Groups**. The Devices tab is the default view and shows information about the firewalls associated with your solution. You can also search for a specific device to display, refresh the display or customize the table by using the search field and icons above the table.

Devices



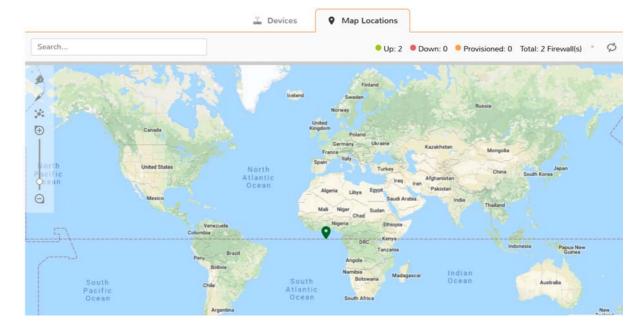
The **Device Groups** tab shows the device groups that you defined for your implementation.

Device List

In the **Device List** for the group or global view you selected shows the firewalls or virtual units that make up that view in the table on the default view, which is the **Devices** tab. A summary showing the status of the devices in the group is shown at the top of the table. You can also search for a specific device to display, refresh the display or customize the table by using the search field and icons above the table.



By selecting the Map Locations tab, you can see how the devices are distributed over a world map.



Related Documents

The following documents provide additional information about Analytics or related firewall management applications:

- Analytics HOME Administration
- ANALYTICS Administration
- Analytics NOTIFICATIONS Administration
- Analytics CONSOLE Administration Guide

Details

The **REPORTS > Details** command offers a number of different reports to view depending on which applications you are licensed for. These reports show various types of data being tracked for your security infrastructure. Think of these as executive detail reports that you can start with to check the general health for the topics listed. If an issue is reported, you can drill down from these detail reports.

Topics:

- Detailed Reports Navigation
- Reports

Detailed Reports Navigation

You can customize and manage the data displayed in the **Details** reports.

Topics:

- Customizing Details Reports
- Traffic Snapshots
- Filtering the Data

Customizing Details Reports

At the top of the Details reports—no matter what topic you pick, you can customize and manage the reports displayed.

Option	Description
Sliding bar	Slide left or right to select a predefined period for the reports to cover.
Custom option	Define a custom period for the reports to cover. Select starting and ending dates and times for the custom period.
View: Total □ Find X Show Default □ Total □ General HTTPS □ General DNS	Click on the down arrow next to View to Find a report, Show Default, Total count, General HTTPS , and General DNS .

Option	Description
By: Connections	Click on the down arrow next to Connections to sort data grid and charts by the selected options. The drop-down available list dynamically changes with the Reports Details page: Connections Threats Blocked Total Bytes Total Blocked Virus Intrusions Spyware Botnet Blocked AcR Blocked Geo-IP Blocked CFS Blocked Data Sent Data Received App Rule blocked
Limit	Click on the down arrow next to Limit to choose between 10, 25, 50, 100, 250, 500, 1000, 5000, and 8000 (Max) connections.
 ₩ □ □ □ □ □ 	These icons allow you to customize the view of the charts and grids. From left to right, the icons represent: • Enable Chart & Grid Multi-View • Enable Grid Only View • Enable Data Grid • Enable Time Line Grid
Export/Downloads Options icon	Provides two options: Generate Flow Report PDF Generates a PDF document of the flow reports being displayed. The file is stored at REPORTS Scheduled Reports > Archive to download the report. The report may take several minutes to generate. Download Capture Threat Assessment

Refresh icon

Click on the **Refresh** icon at any time to refresh the data in the reports.

Show/Hide Grid Columns

Select this icon to customize the columns that appear in the data table. You can show all columns, select the predefined (default) view, or chose to enable/disable individual columns.

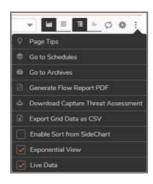
You must first download the Visualization database for offline report generation of your network traffic. The report is downloaded to your file

Option

Description

More/Options icon





ons icon Click on the More vertical ellipsis icon to get more information about:

- Page Tips
- Go to Schedules
- Go to Archives
- Generate Flow Report PDF
- Download Capture Threat Assessment
- Export Grid Data as CSV
- Enable Sort from SideChart
- Exponential View (checked off by default)
- Live Data (checked off by default)

The list of options is expanded when Device Manager is visible. However, when Device Manager is hidden you do not see:

- Enable Sort From SideChart
- Exponential View
- Live Data

When Device Manager is hidden the set of icons below are displayed.



Chart configuration icon



Allows further customization of the charts. You can select rows to control and configure policy.

Zooming

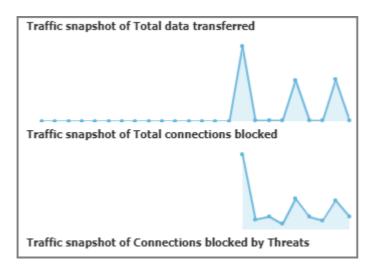
Zoom in on a segment of the graph by drawing a rectangle around the part you want to enlarge. This sets a **Custom** interval filter. To revert to the prior view, you have to reset to the prior time interval using the sliding bar or the **Custom** option.

More icons appear when you hide **DEVICE MANAGER**. Click on the orange icon displayed in the images below to hide Device Manager. Refer to the images for the page default layout and alternate layout.

Traffic Snapshots

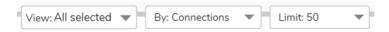
At the top right of your charts, the traffic snapshot bar graphs are displayed. Three snapshots are provided:

- Traffic snapshot of Total data transferred
- Traffic snapshot of Total connections blocked
- Traffic snapshot of Connections blocked by Threats



Filtering the Data

On each of the report panels, you customize the view, filter the data on predefined types, and set the number items shown in the display.



Use the **View** drop-down list to set what data is shown in the detailed reports. For example, in the **Application** report, you can select five applications to display or you can select the predefined default view. The **View** list also has a search field so you more easily find a specific feature for that report.

Use the **By** drop-down list to further refine the kind of data shown in the detailed reports. For example, you can sort **Intrusions** by **Connections** and **Blocked**. Other reports have different options that are applicable to them.

Use the **Limit** drop-down list to set the number of records displayed. Several options are provided. Note that 8000 is the maximum number allowed.

(i) NOTE: Not all reports list all three filters.

Reports

Fourteen different **Details** reports are predefined for you. Navigate to **REPORTS > Details** and then select the report option under **Details**. For all reports, a graphical representation of the data is shown along with a table showing the details. You can click on the Drill-Down icon for more specific information. Some data values are also links that lead to detailed reports on the **ANALYTICS** view. Additional navigation tips can be found when you click on the **Options** icon and select **Page Tips**.

For CSC-MA, the **Applications**, **Intrusions**, and **Web Categories** reports allow you to switch tabs at the top for more information:

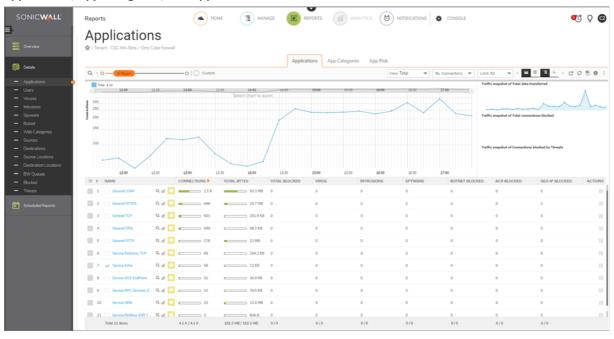
- The Applications report lets you choose between the Applications, App Categories, and App Risk tabs.
- The Intrusions report lets you choose between the Intrusions and Priority tabs.
- The Web Categories report lets you choose between Web Categories and Websites tab.

Topics:

- Applications
- Users
- Viruses
- Intrusions
- Spyware
- Botnet
- Web Categories
- Sources
- Destinations
- Source Locations
- Destination Locations
- BW Queues
- Blocked
- Threats
- Group Level Reports

Applications

On the CSC-MA system, the **Applications** details have three type of reports (represented by the different tabs): **Applications**, **App Categories**, and **App Risk**.



These reports provide information about the data traversing the firewall. Click on **REPORTS > Details > Applications** to see the application reports.

Users

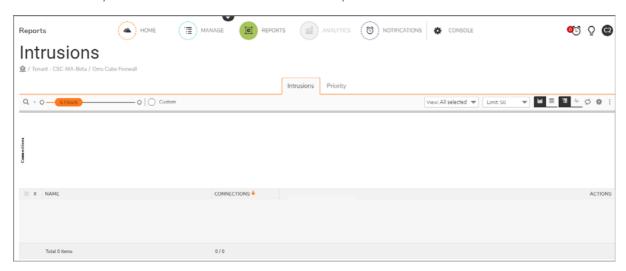
This report provides data at it relates to the users connected to the system. You can track user level transactions and activities by filtering on several different options.

Viruses

This report tracks the viruses that have been detected. You can filter on connections they occurred on or by which viruses were blocked. Details are provided in the table.

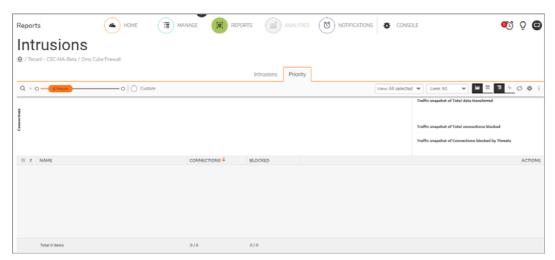
Intrusions

The Intrusions summary has two types of reports (represented by the different tabs): **Intrusions** and **Priority**. The Intrusions report tracks the disturbances that have been detected. You can filter on connections that occurred on or by which intrusions were blocked. Details are provided in the table.



Priority

The **Priority** tab shows the top priority intrusions by connections and by blocked. Select the **Priority** tab.



Spyware

This report tracks the spyware that has been detected. You can filter on connections that occurred on or by which spyware was blocked. Details are provided in the table.

Botnet

This report tracks the Botnet addresses that are detected.

Web Categories

The Web Categories summary has two types of reports (represented by the different tabs): **Web Categories** and **Websites**. The Web Categories report displays the number of connections based on web categories, such as Information Technology or Business and Economy. The Websites report displays the number of connections based on websites. You can filter on the categories in the **View** drop-down list. Details are provided in the table.

Sources

This report displays the number of connections based on the IP address of the source. You can filter on the IP addresses listed in the **View** drop-down list or on other options listed in the **By** drop-down list. Details are provided in the table.

Destinations

This report displays the number of connections based on the IP address of the source. You can filter on the source type listed in the **View** drop-down list or on other options listed in the **By** drop-down list. Details are provided in the table.

Source Locations

This report displays the number of connections based on the location of the source. You can filter on the connection type listed in the **View** drop-down list or on other options listed in the **By** drop-down list. Details are provided in the table.

Destination Locations

This report displays the number of connections based on country of the destination. You can filter on the locations listed in the **View** drop-down list or on other options listed in the **By** drop-down list. Details are provided in the table.

BW Queues

This report tracks the bandwidth data. The default is the **Inbound Realtime** view, but you can choose the **Outbound Realtime** view from the View drop-down list. You can also filter on other options listed in the **By** drop-down list. Data for both views are shown in the table.

Blocked

This report tracks the number of blocked connections. The default view is **Total**, but you can select **Threats** or **Botnet** from the View drop-down list. Data for both options are shown in the table.

Threats

This report tracks the number of connections with threats. The default view is **Total**, but you can select **Intrusions** or **Virus** from the View drop-down list. You can also filter on other options listed in the **By** drop-down list. Details are shown in the table.

Customizing and navigating the reports is summarized in **Detailed Reports Navigation**.

Group Level Reports

Group reports are the same for all solutions. CSC-MA retains reporting data by default for 365 days. However, you choose a time period for more than a year by clicking on the **Custom** button.

Group level **Details** support all the reports available in the unit level Details. The reports, however, do not support custom time ranges and are restricted to pre-defined time ranges. They are:

- Last 15 minutes
- Last 1 hour
- Last 1 day
- Last 1 month

The difference between a unit-level and a group-level Details report are the following:

- Unit-level reports support customizations in time range, whereas the group-level reports support only pre-defined time ranges.
- Unit-level reports support customization in reports for columns displayed, views (grid/chart) and filters. Whereas customization is not yet supported for group-level reports.
- Unit-level reports support the exporting of reports in PDF format. Whereas the exporting of reports in PDF format is not yet supported for group-level reports.

You can schedule reports to be generated, emailed and archived from **Details**.

Viewing Global and Unit Level Reports

To view the reports for your firewall appliances, do the following:

- 1 Log in to your SonicWall firewall management system.
- 2 Select the global view or the unit view (appliance) from the **Device Manager** tree.
- 3 Select the report you want in the command menu.
 - (i) NOTE: All reports show a one-day period unless another interval is specified in the time bar.

Scheduled Reports

The **Scheduled Reports** section of the **REPORTS** view provides the tools to manage scheduled reports and view the reports once generated.

Topics:

- Managing the Reports
- Navigating the Schedules Page
 - Setting Up the Reports
 - Checking the Reports
 - Setting the Report Date Range

Managing the Reports

Several icons at the top right corner of the **Scheduled Reports > Schedules** table help you manage your reports. Some restrictions and limits are enforced, and a few additional steps are involved while creating a group-level Scheduled Report. Refer to the image and table below to learn more about them.

(i) NOTE: A maximum of 10 schedules are allowed to be created for a single group.

Scheduled Reports icons

Icon	Description
Ø	Allows you to refresh the data.
\$	Allows you to archive your report when you click on the icon.
	Allows you to archive your report for the specific date range you define.
Ũ	Allows you to delete scheduled reports.
•	Allows you to create a scheduled report.

Navigating the Schedules Page

Go to **Scheduled Reports > Schedules** to view a list of all the scheduled reports that have been defined. The details of each report are shown in the table.



Click the search icon at the top left of the table to search for a specific report. As you type characters in the field, the table filters accordingly. To clear the filter, delete the characters.

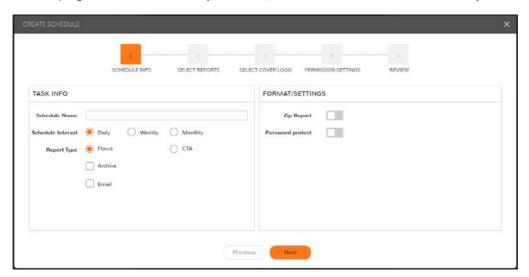
- Click **SCHEDULE NAME** to see details about the report schedule.
- Click ID to see the number associated with a report.
- Click SCHEDULE TYPE to sort the schedules.
- The icons in the **ARCHIVE/EMAIL** column indicate whether the report is set up for archiving or emailing, or both. This parameter can be changed by clicking the **Edit** icon.
- Click **EMAIL SUBJECT** to sort by email subject.
- Click **OWNER** to sort by owner.
- Click **LAST RUN TIME** to sort by the time the schedule was last executed.
- Click **STATUS** to see whether the report was successfully run or not.
- Click ACTIONS to Edit or Delete a report.

Setting Up the Reports

You can set up a Flows report or CTA (Capture Threat Assessment) report.

To set up a scheduled report:

1 At the top right of the Scheduled Reports table, click the icon to Create a Schedule Report.



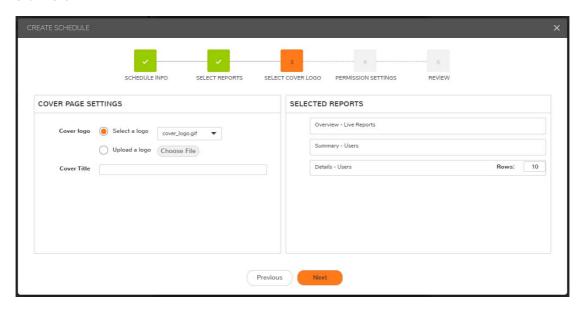
- 2 Type the **Report Name**.
- 3 Select the **Report Interval**. You can choose **Daily**, **Weekly**, and **Monthly**. The default time interval is **Daily**.
- 4 Select the **Report Type**: Flows or CTA.
- 5 Check **Archive** if you want the report stored locally.
- 6 Check **Email** if you want the report emailed directly to someone and provide the email address in the field that appears.
 - (i) NOTE: You can select both the Email and the Archive options.
- 7 Enable Zip Report if you want to zip the file before mailing it.
- 8 Enable Password Protect if you want added security for the report. Enter and confirm the password when asked.
- 9 Click Next.



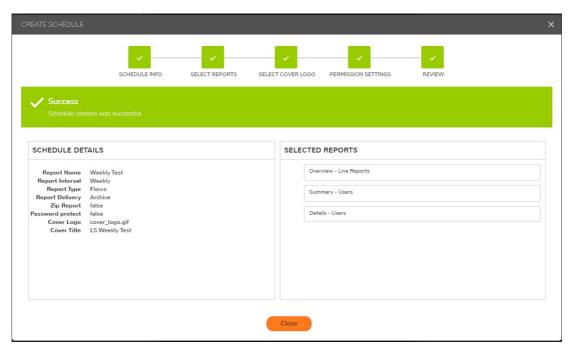
10 From the Report List, select the type of information you want included in your report.

Once you check the boxes you want, your choice appears under **SELECTED REPORTS**.

11 Click Next.



- 12 Select or upload a logo for your report, if desired.
- 13 Add a title for the cover of the report.
- 14 Click Next.
- 15 Update Permission Settings, if needed, and click Next.
- 16 Review report settings and click Create.

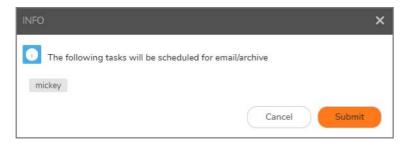


17 Click Close.

Checking the Reports

After you have created your reports, you can check on them by clicking the check boxes next to them. You can also check if your configurations have been saved and are scheduled as you have planned.

- 1 Navigate to CONSOLE | Scheduled Reports | SCHEDULE NAME column.
- 2 Check the box next to the name of your report.
- 3 Click the **Archive Now** icon at the top right of the table.



4 Click Submit.

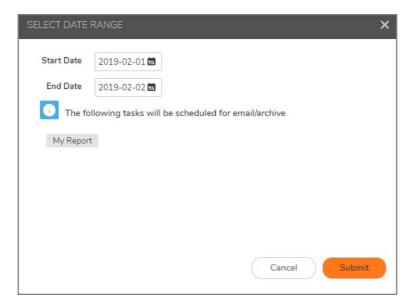


5 Click Close.

Setting the Report Date Range

- 1 Check the box next to your report **SCHEDULE NAME**.
- 2 Then, click the **Archive for date range** icon at the top right of the table to select your date range.
- 3 Click in the **Start Date** and **End Date** fields to select your preferred dates.

4 Click **Submit**.



5 Click Close.

SonicWall Support

Technical support is available to customers who have purchased SonicWall products with a valid maintenance contract and to customers who have trial versions.

The Support Portal provides self-help tools you can use to solve problems quickly and independently, 24 hours a day, 365 days a year. To access the Support Portal, go to https://www.sonicwall.com/support.

The Support Portal enables you to:

- View knowledge base articles and technical documentation
- View video tutorials
- Access MySonicWall
- Learn about SonicWall professional services
- Review SonicWall Support services and warranty information
- Register for training and certification
- Request technical support or customer service

To contact SonicWall Support, visit https://www.sonicwall.com/support/contact-support.

About This Document

Legend



WARNING: A WARNING icon indicates a potential for property damage, personal injury, or death.



CAUTION: A CAUTION icon indicates potential damage to hardware or loss of data if instructions are not followed.



IMPORTANT, NOTE, TIP, MOBILE, or VIDEO: An information icon indicates supporting information.

SonicWall $^{\$}$ Firewall Management REPORTS / GMS 9.2, CSC-MA 1.7 Administration Updated - October 2019 232-005148-00 Rev A

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End User Product Agreement

To view the SonicWall End User Product Agreement, go to: https://www.sonicwall.com/en-us/legal/license-agreements.

Open Source Code

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