

# SecureWatch Analytics User's Guide

Corero Network Security, Inc.

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## **Overview**

Corero SecureWatch Analytics is designed to assist with the analysis of security conditions that are detected by Corero Network Security's SmartWall Threat Defense System. This application is available via a globally accessible web portal or via a local web server that is hosted on a SecureWatch Managed Service Appliance at the customer's site. Once logged in to the application, you can easily review and drill down on current and historical forensic data that was reported by all of the Corero appliances that are protecting your security infrastructure.

If you are a security partner, the web portal for security partners allows you to maintain multiple customers easily from one easy-to-use interface. The only requirements to use this application are that you have a <u>supported web browser</u>, credentials to log in to the application, and are a Corero customer or partner with SmartWall Threat Defense System appliances that you need to monitor.

## **Accessing SecureWatch Analytics**

This section describes how to access SecureWatch Analytics via the web portal or the local web application.

#### **Accessing the SecureWatch Analytics Portal**

Corero SecureWatch Analytics is available via a globally accessible web portal. The portal is a powerful tool for reviewing security event information from all of your Corero SmartWall Threat Defense System appliances from the convenience of your favorite browser, from wherever you are. For partners who are maintaining Corero appliances for multiple customers, the portal application enables you to switch between customers easily.

- 1. Point a supported web browser at https://securewatch.corero.com.
- Authenticate with your credentials when the login page appears.
   Contact Corero customer service (<u>customer.service@corero.com</u>) if you do not have credentials or have forgotten your password.

## Accessing the SecureWatch Analytics Locally Hosted Web Application

Corero SecureWatch Analytics is available also by pointing a web browser to the SecureWatch Managed Service Appliance that is hosted at a customer's site.

- 1. Point a <u>supported web browser</u> to the IP address of the local server and use this URL: <u>https://se-curewatch.corero.com:8000</u>
- 2. Authenticate with your credentials when the login page appears.

  Contact Corero customer service (customer.service@corero.com) if you do not have credentials or have forgotten your password.

#### **Supported Web Browsers**

Corero SecureWatch Analytics supports the use of these web browsers:

- Firefox 10.x and latest
- Internet Explorer 7, 8, 9, and 10
- Safari (latest)
- Chrome (latest)

#### **Correcting Access Problems**

The most common problem that occurs when accessing SecureWatch Analytics via the portal or the local web application is that no data is shown when the home page opens. Typically, this is just a timing issue between the browser and the application. If this occurs, use one of these methods to populate the display:

- Press refresh (F5) and reload the page. If that fails, wait a minute and try to refresh again.
- The portal application is slower than the locally hosted application, which has a higher priority. If searches from the portal application fail, try accessing the application using the loc-

ally hosted web server.

• If you continue to experience access problems, contact <a href="mailto:customer.service@corero.com">customer.service@corero.com</a>

## **Considerations For Searching the SecureWatch Analytics Application**

Some important information to keep in mind when querying data in SecureWatch Analytics:

#### **Display**

- Sometimes, individual charts and tables can take a long time to populate. Look in the lower right corner for a status bar, prefixed with the text, "Loading".
- If you don't see any data during a period for which you expect to see data, wait a few seconds and try your search again.
- Changing a field in the selector bar via a dropdown menu defines a new search that runs immediately. Results should begin to appear within a few seconds.
- The time required to populate graphs increases considerably when the Time Frame is extended.

#### **Execution**

- Local user access to the system takes precedence over queries running via the portal.
- If you type search criteria into fields in the Security Drilldown page, you need to click the **Search** button to start the search.
- The data that is displayed in any chart or table can be exported to a CSV-format file by clicking on the small down arrow in the lower left hand corner of the chart or table. This down arrow is hidden from view until you move the mouse toward its general location.
- When viewing results in a table, use the page selector on the bottom right of the table to scroll through pages of ten client IP addresses at a time.
- The Top Client IP and Top Server IP tables rely on "whois" to populate the hostname field. If DNS connectivity and "whois" are blocked from running on the local server, it may take several minutes for these tables to populate.

#### **Performance**

- Multiple users running searches on a system at the same time can affect performance and search time.
- Starting and stopping searches in progress affects system performance. For best performance, let searches finish running, and minimize rapid midstream search direction changes, if possible.

#### **Resolution and Time Zones Used in Time-Based Charts**

All times shown in time-based charts are displayed using the time zone that is local to the user's client.

The resolution used in time-based charts is set automatically. The following table shows the resolutions used for various selectable time frames.

Time Frame	Resolution
15 minutes	1 minute
60 minutes	1 minute
4 hours	1 minute
Up to 6 hours	1 minute

Today	5 minutes
Last 24 hours	5 minutes
Yesterday	5 minutes
Last 7 days	30 minutes
Last 30 days	1 hour
Longer than 30 days	1 day

## **Basic Analytics Screens**

SecureWatch Analytics comprises four basic screens which provide access to a number of useful data displays, as well as tools for presenting and querying the data in those displays.

The <u>Home screen</u> acts as a dashboard; clicking something of interest in one of the displays on the Home screen focuses on that point of interest in the <u>Security Drilldown screen</u>, providing a more detailed look at it.

The <u>Top Charts screen</u> provides a set of tools that show you the elements of your security infrastructure that have experienced the greatest activity or utilization over the time frame you've specified.

The <u>Export screen</u> enables you to extract PDU data to a file for forensic analysis, providing controls for filtering syslog events and PDU data for exporting them to other applications, such as Wireshark.

#### **Home Screen**

The Home screen appears when you log in to Corero SecureWatch Analytics. It provides a tool bar followed by graphs and tables of analytical security information. Use the dropdown menus in the tool bar to search available data, and click on a line in a chart or a row in a table to drill down on that element and examine it in greater detail in the Security Drilldown screen.

#### **Home Screen Selection Area Field Descriptions**



- Select Site This dropdown contains a list of sites, or security groupings, that are configured for the customer.
- **Time Frame** –This dropdown contains a list of time ranges that can be applied to the results that are displayed. The default for this field is to show all data from the start of the day.

#### **Security Drilldown Screen**

Clicking on a line in a chart or a row in a table in the <u>Home screen</u> displays the Security Drilldown screen. The Security Drilldown screen search fields are populated based on elements you selected in the Home screen, or otherwise selected previously in the Security Drilldown screen. To drill down deeper into the table, keep clicking on lines or rows until you reach the level of detail you want. If you prefer to type, you can type directly into the search fields and click on the **Search** button. You can reset the search criteria by clicking on **Home** to return to the Home screen.

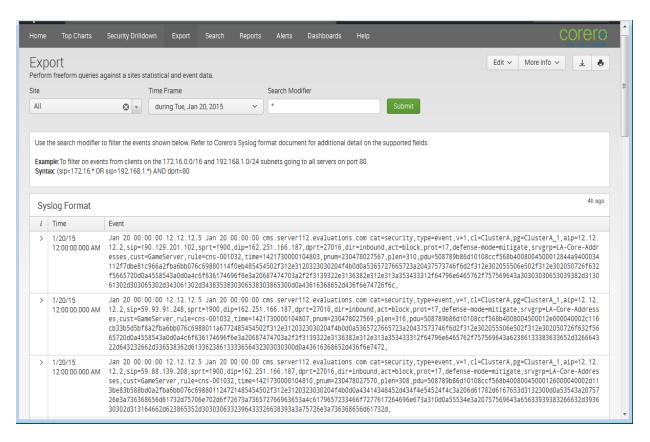
#### Security Drilldown Screen Selection Area Field Descriptions



- Site This dropdown contains a list of sites, or other security groupings, that are configured for a customer or the local system.
- Time Frame Define a time range to constrain the results that are displayed. The default for this field is to show all data from the start of the current day.
- Direction Choose Inbound, Outbound, or Inbound and Outbound.
- Action Filter results according to what was done with packets that triggered rules. Choose Blocked, Detected, or Blocked and Detected.
- **DNS Lookup** Indicate whether DNS is used to correlate IP addresses with domain names. Choose **Yes** or **No**. The default is **No**.
- **Customer** Type the name of a customer by which to filter.
- **Server Group** Type the name of a server group by which to filter.
- **Corero Rule** Specify a Corero rule by which to filter the results.
- IP Protocol Number Type the IANA-assigned ID for a protocol by which you want to filter. For example: 1 for ICMP, 6 for TCP, 17 for UDP, etc.
- **Packet Length** Specify the packet size, in bytes, by which to filter.
- **Server IP Address** Filter the query based on a destination IP address.
- Server Port Filter the query based on the destination port that was accessed when a security event was triggered.
- Client IP Address Filter the query based on a source IP address.
- **Client Port** Filter the query based on the port number at the source.
- **Submit** button Click this to execute the filters you've specified.

#### **Export Screen**

The Export screen (displayed below) enables you to extract PDU data to a file for forensic analysis, providing controls for filtering syslog events and PDU data for exporting them to other applications, such as Wireshark.



Filter event data by site and by time range to display the corresponding syslog events and PDU data. You can refine your results further by specifying an arbitrary search string in the Search Modifier field to narrow the results specifically to only those that match the string.

A set of icons appears at the bottom left of each pane in the tab; click the **Export** icon to write the filtered results to a file (up to a maximum of 1,000). For example, PDU data can be exported for use in Wireshark. Do this by exporting the PDU data in the **Raw Events** format.

In Wireshark, choose **Import** and select **Hexadecimal** as the format of the file. Make sure also to click on the **Date/Time** check box and specify a format of %D %T.

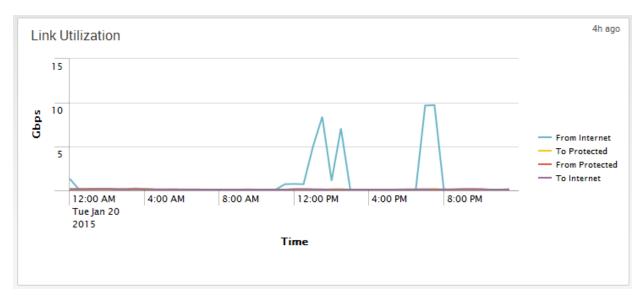
## **Analytics Tools**

SecureWatch Analytics provides these tools for assessing the nature of the traffic that your network encounters:

- Link Utilization Time Chart
- Packets Per Second Time Chart
- Flow Usage Time Chart
- Setup Rates Time Chart
- Top 10 Rule Types Blocked Chart
- Top 10 Rule Types Detected Chart
- Blocked Events Table
- Detected Events Table

#### **Link Utilization Time Chart**

The Link Utilization graph displays the average inbound and outbound traffic volume, in Gbps, reported by all Corero appliances at the selected customer and site over time.



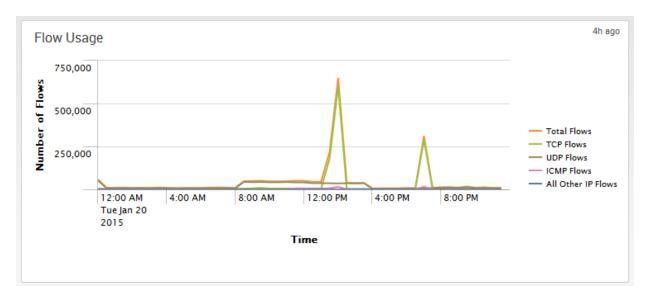
## **Packets Per Second Time Chart**

The Packets Per Second graph shows the average inbound and outbound packets per second reported by all Corero appliances at the selected customer and site over time.



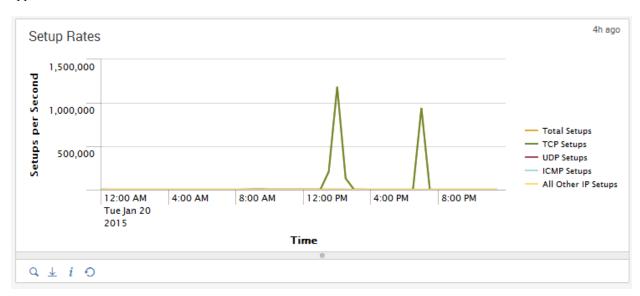
## Flow Usage Time Chart

The Flow Usage graph displays the number of flows that are being monitored by all Corero appliances at the selected customer and site over time.



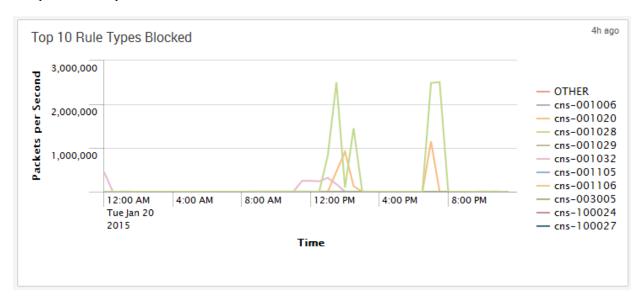
## **Setup Rates Time Chart**

The Setup Rates graph displays the number of flow setups that are being tracked by all Corero appliances at the selected customer and site over time.



## **Top 10 Rule Types Blocked Chart**

This chart shows the ten rules set to Block that were triggered most (based on packets per second) in the specified time period:



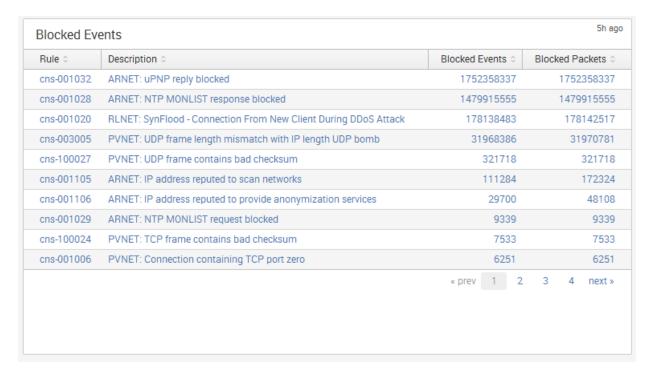
## **Top 10 Rule Types Detected Chart**

This chart shows the ten rules set to Detect that were triggered most (based on packets per second) in the specified time period:



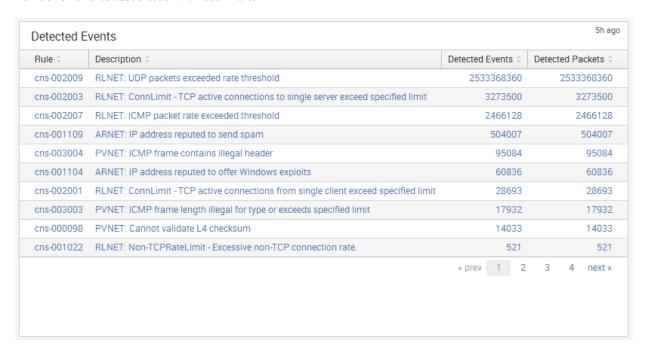
#### **Blocked Events Table**

This table shows the number of events and packets associated with triggered rules that were set to Block. The chart can be sorted using any field; by default, it is sorted in decreasing order of the number of events associated with each rule.



#### **Detected Events Table**

This table shows the number of events and packets associated with triggered rules that were set to Detect. The chart can be sorted using any field; by default, it is sorted in decreasing order of the number of events associated with each rule.



## **Top Charts**

Click **Top Charts** in the Analytics application tool bar to display the Top Charts screen. This screen provides a set of tools that show you the elements of your security infrastructure that have experienced the greatest activity or utilization over the specified time frame. Each of the Top Charts shows that type of activity/utilization as a percentage of the total at that time. These tools are useful in helping you to identify and characterize excessive or otherwise aberrant activity that may indicate attacks on your server infrastructure.

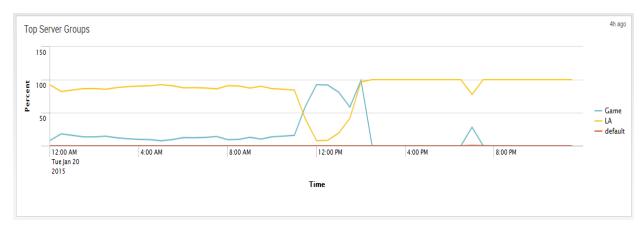
The Top Charts include:

- Top Server Groups
- Top Source IP Addresses
- Top Destination IP Addresses
- Top Source Ports
- <u>Top Destination Ports</u>
- Top TTL Values
- Top IP Packet Lengths

Control the content of your top charts by specifying the site and time frame for which to display data. Each chart shows the five largest contributors for that statistic, plus an "Other" entry that comprises all contributors that are not among the top five.

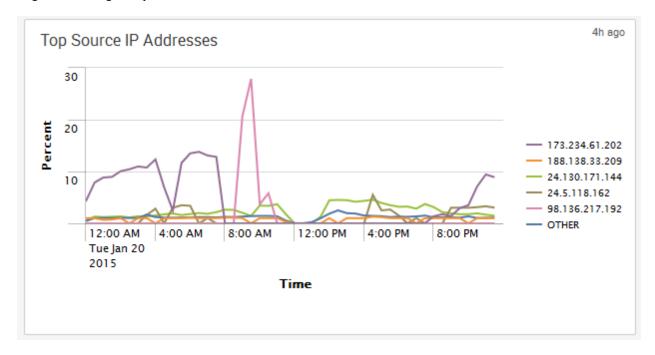
## **Top Server Groups**

The Top Server Groups chart shows the five most heavily accessed server groups in the selected site for the specified time frame.



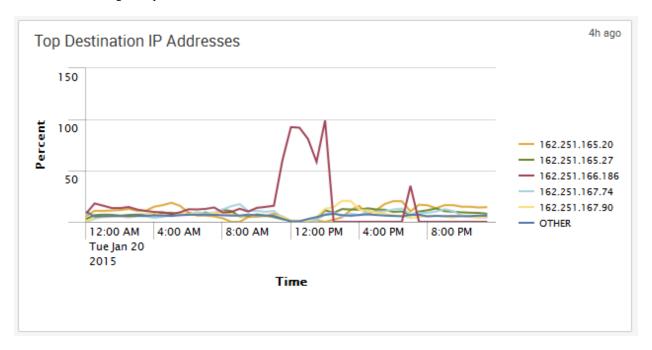
## **Top Source IP Addresses**

The Top Source IP Addresses chart shows the five IP addresses from which the most inbound traffic originated during the specified time frame.



## **Top Destination IP Addresses**

The Top Destination IP Addresses chart shows the five IP addresses to which the most inbound traffic was directed during the specified time frame.



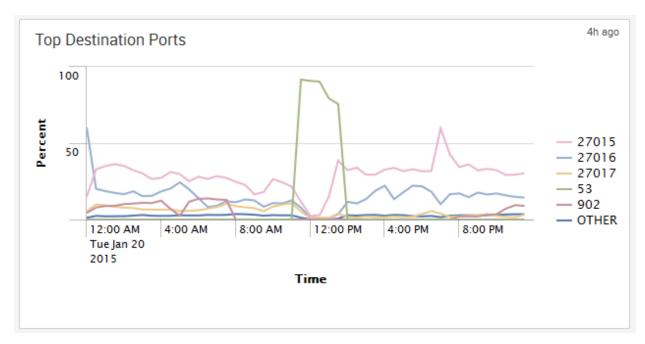
## **Top Source Ports**

The Top Source Ports chart shows the five port IDs from which the most inbound traffic originated during the specified time frame.



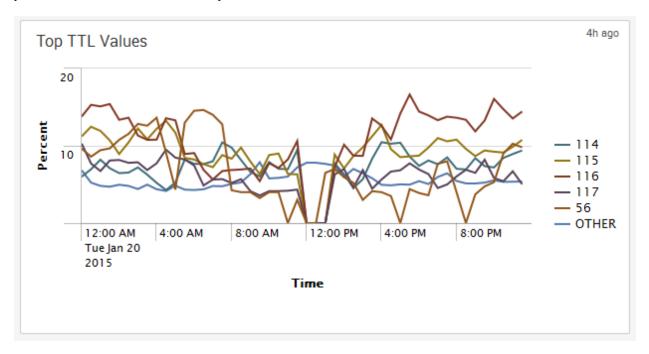
## **Top Destination Ports**

The Top Destination Ports chart shows the five port IDs to which the most inbound traffic was directed during the specified time frame.



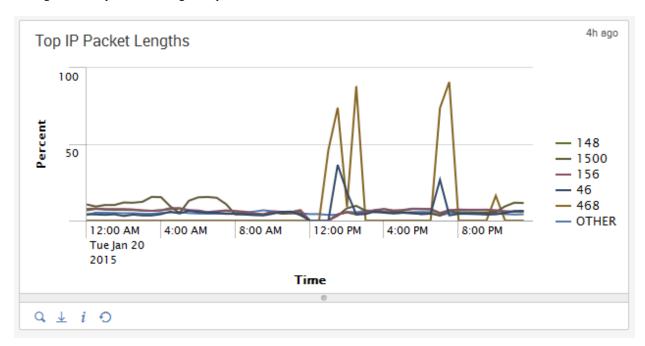
## **Top TTL Values**

The Top TTL Values chart shows the five time-to-live values that occurred most frequently among inbound packets during the specified time frame. A disproportionate or otherwise unusual number of packets with the same TTL value may be indicative of an attack.



## **Top IP Packet Lengths**

The Top IP Packet Lengths chart shows the five packet length values that occurred most frequently among inbound packets during the specified time frame.



## **Drilldown Charts**

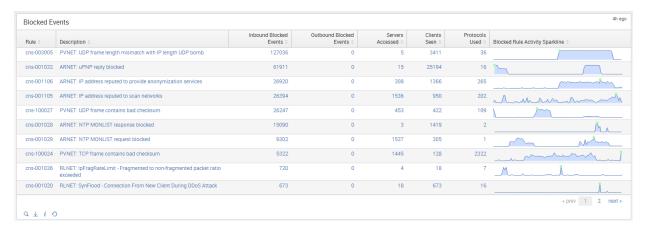
The Drilldown charts show greater detail.

The Drilldown charts include:

- Blocked Events
- Detected Events
- Servers Involved in Security Events
- Top Server Ports That Are Involved in Security Events Table
- Clients Involved in Security Events
- Client Ports Involved in Security Events
- Packet Lengths Involved in Security Events
- Syslog Events

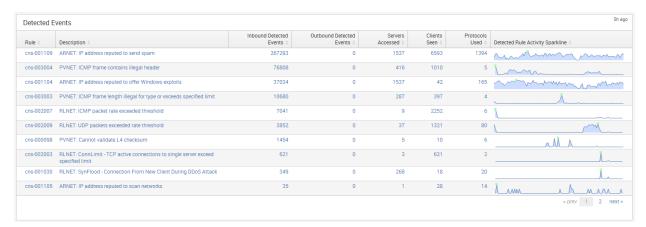
#### **Blocked Events**

This chart provides detailed information about each event associated with the trigger of a blocking rule during the specified time interval.



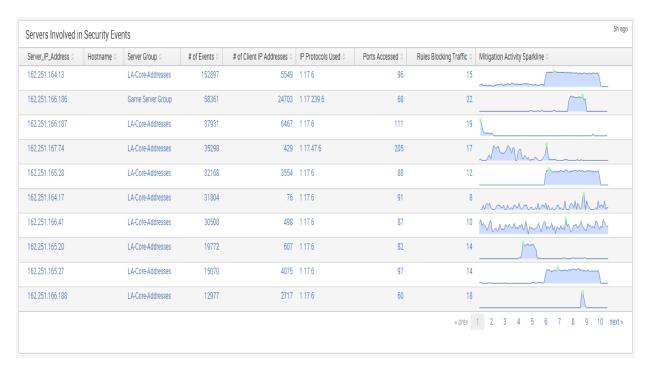
#### **Detected Events**

This chart provides detailed information about each event associated with the trigger of a detecting rule during the specified time interval:



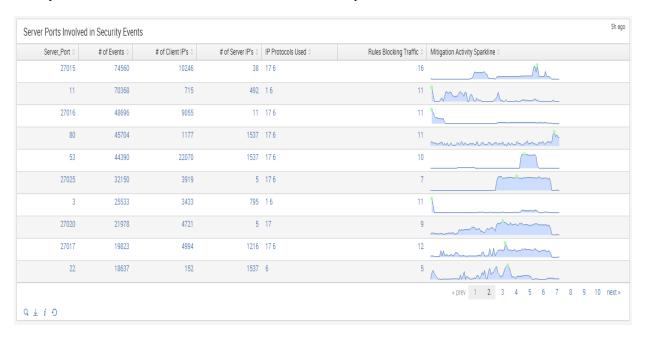
## **Servers Involved in Security Events**

This chart lists the servers associated with any security event that has been identified by the SmartWall Threat Defense System. The chart can be sorted using any field; by default, it is sorted in decreasing order of the number of events associated with each server.



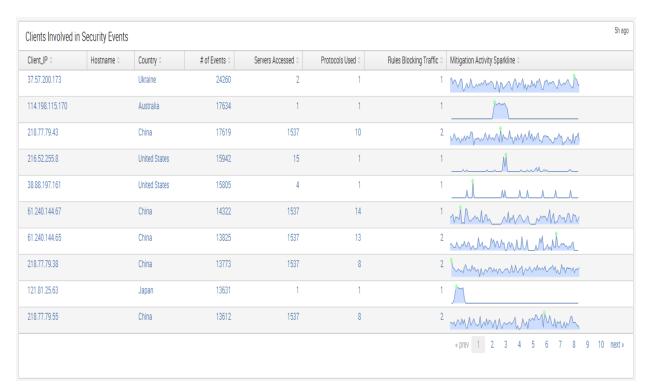
#### **Server Ports Involved in Security Events Table**

The Top Server Ports That Are Involved in Security Events table displays the top 50 server ports that inbound blocked security events were triggered for during the time period. This report is created by reviewing top talker reports to determine the most active destination server port during a given time period based on a time based statistical sampling algorithm. These destination ports are cross-referenced with security event information to determine what security events are triggering due to this activity. Click on one of the rows to drill down to the server port in that row.



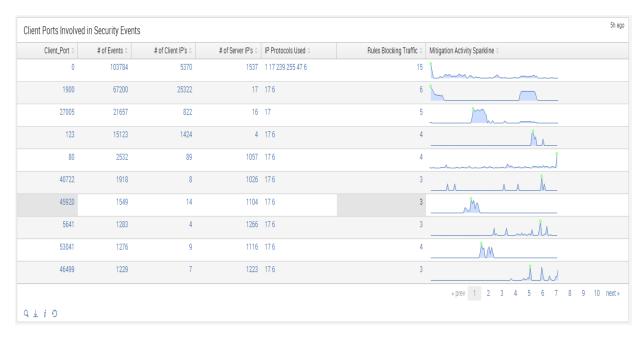
## **Clients Involved in Security Events**

This chart lists the clients associated with any security event that has been identified by the SmartWall Threat Defense System. The chart can be sorted using any field; by default, it is sorted in decreasing order of the number of events associated with each client.



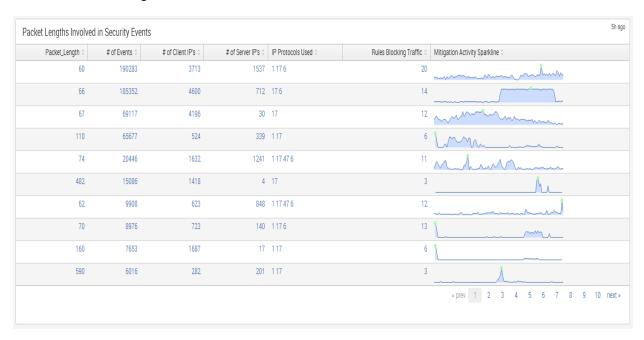
## **Client Ports Involved in Security Events**

This chart lists the client ports associated with any security event that has been identified by the SmartWall Threat Defense System. The chart can be sorted using any field; by default, it is sorted in decreasing order of the number of events associated with each client port.



## **Packet Lengths Involved in Security Events**

This chart lists the packet lengths associated with any security event that has been identified by the SmartWall Threat Defense System. A disproportionate or otherwise unusual number of packets with the same packet length may be indicative of an attack. The chart can be sorted using any field; by default, it is sorted in decreasing order of the number of events associated with each client.



#### **Syslog Events**

This chart lists the syslog events that are associated with the data that you are examining.

