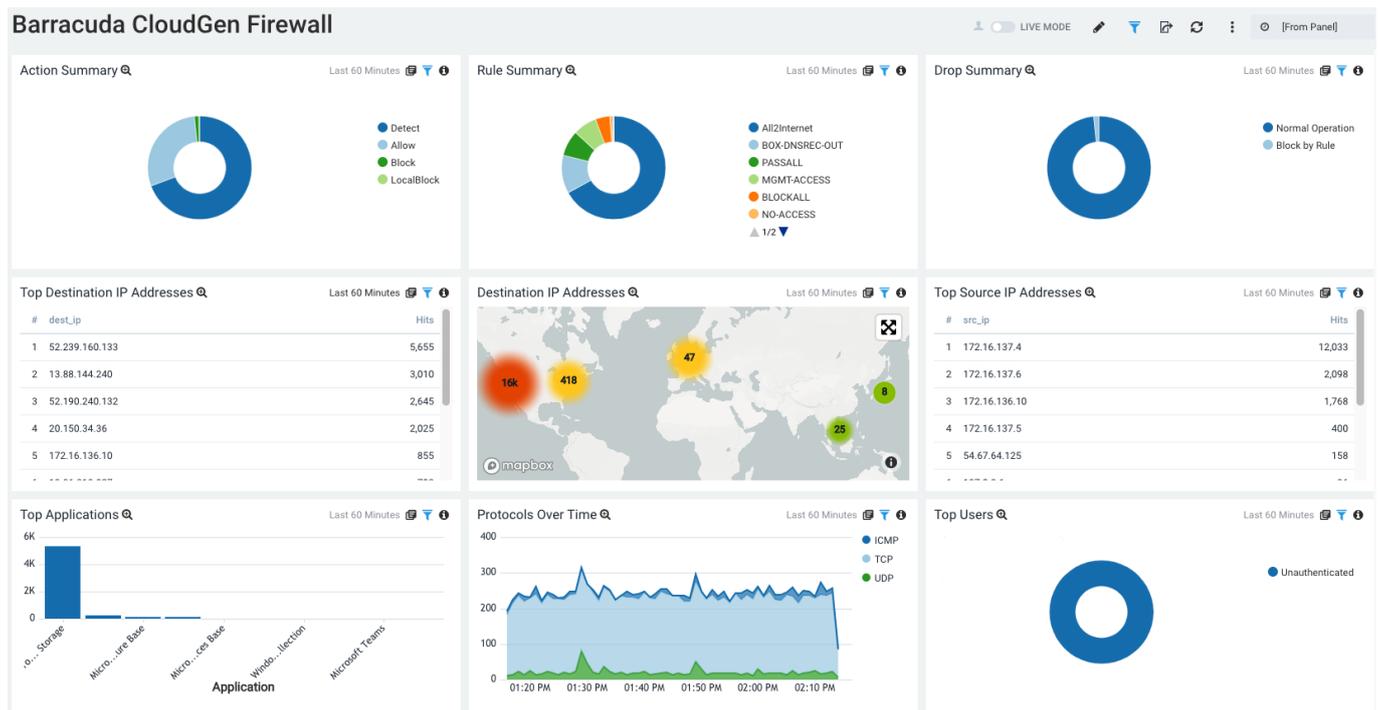


## Sumo Logic Integration

<https://campus.barracuda.com/doc/17807/>

Sumo is a third-party log management and analytics service, transforming your data into sources of operations, security, and compliance intelligence. The Barracuda CloudGen Firewall app provides a dashboard to monitor actions, IP addresses, and rule and application usage. Data is imported into Sumo via syslog streaming of the Firewall logs.



### Before You Begin

- Configure a cloud syslog source in your Sumo account. For the **Source Category**, it is recommended to use a self-explanatory name like 'CGFW'. For information and help, see also <https://help.sumologic.com/03Send-Data/Sources/02Sources-for-Hosted-Collectors/Cloud-Syslog-Source>.
- Run and configure syslog-ng on a host within your network. For information and help, see also [https://help.sumologic.com/03Send-Data/Sources/02Sources-for-Hosted-Collectors/Cloud-Syslog-Source#Send\\_data\\_to\\_cloud\\_syslog\\_source\\_with\\_syslog-ng](https://help.sumologic.com/03Send-Data/Sources/02Sources-for-Hosted-Collectors/Cloud-Syslog-Source#Send_data_to_cloud_syslog_source_with_syslog-ng).

### Configure Syslog Streaming on a Barracuda CloudGen Firewall

Configure and enable syslog streaming for every Barracuda CloudGen Firewall you want to include in the Sumo app.

### Step 1.1. Enable Syslog Streaming

1. Go to **CONFIGURATION > Configuration Tree > Box > Infrastructure Services > Syslog Streaming**.
2. Click **Lock**.
3. Set **Enable the Syslog service** to **yes**.



Operational Setup

Enable Syslog Streaming

4. Click **Send Changes** and **Activate**.

### Step 1.2. Configure Logdata Filters

Define profiles specifying the log file types to be transferred / streamed.

1. Go to **CONFIGURATION > Configuration Tree > Box > Infrastructure Services > Syslog Streaming**.
2. In the left menu, select **Logdata Filters**.
3. Click **Lock**.
4. Click **+** to add a new filter.
5. Enter an expressive **Name** that refers to Sumo, e.g., *SumoFilter*.
6. Click **OK**.
7. The **Filters** window opens.
8. Click **+** in the **Data Selection** table and select **Firewall\_Audit\_Log**.  
**Fatal\_log** and **Panic\_log** data can also be streamed to the Sumo server but are currently not processed by the Barracuda CloudGen Firewall Sumo app.
9. In the **Affected Box Logdata** section, select **All** from the **Data Selector** drop-down menu.
10. In the **Affected Service Logdata** section, select **All** from the **Data Selector** list.
11. Click **OK**.
12. Click **Send Changes** and **Activate**.

**Top Level Logdata**

Data Selection + X

Firewall_Audit_Log
--------------------

**Affected Box Logdata**

Data Selector All

Data Selection + X ab

Name	Log Groups	Log Message Filter

**Affected Service Logdata**

Data Selector All

Data Selection + X ab

Name	Log Groups	Log Message Filter

### Step 1.3. Configure the Logstream Destinations

Configure the data transfer settings for the Sumo server. You can optionally choose to send all syslog data via an SSL-encrypted connection.

1. Go to **CONFIGURATION > Configuration Tree > Box > Infrastructure Services > Syslog Streaming**.
2. In the left menu, select **Logstream Destinations**.
3. Click **Lock**.
4. Click **+** in the **Destinations** table.
5. The **Destinations** window opens.
6. For **Name**, enter an expressive name that refers to Sumo, e.g., *Sumo*.
7. Click **OK**.
8. The window for configuring the specific destination to Sumo is displayed.
9. Configure the syslog-ng server logstream destination:
  1. **Logstream Destination** - Select **explicit-IP**.
  2. **Destination** - Enter the IP address of the syslog-ng server that will be forwarding logs to Sumo.
  3. **Destination Port** - Enter **5140** for plaintext or **5141** for SSL-encrypted connections.
  4. **Transmission Mode** - Select **TCP** or **UDP** (only for unencrypted connections).

5. **(optional) Explicit Source IP** – Enter the management IP address of the Barracuda CloudGen Firewall, or leave blank for the CloudGen Firewall to do a routing lookup to determine the sender IP address.
  6. **(optional) Use SSL Encapsulation** – Select **yes** to send the syslog stream over an SSL-encrypted connection.
  7. **(optional) Peer SSL Certificate** – Import the SSL certificate configured on the syslog-ng server for this stream.
  8. **Override Node Name** – Select **no**.
10. Click **OK**.

Destination Address	
Logstream Destination	Explicit
Destination	10.0.10.44
Destination Port	5140

AWS CloudWatch	
Group Name	
Stream Name	<Instance ID> <input type="checkbox"/> Other

Data Transfer Setup	
Transmission Mode	TCP
Explicit Source IP	10.0.10.88
Use SSL Encapsulation	no
Peer SSL Certificate	Show... Ex/Import No certificate present
SSL Peer Authentication	verify peer with locally installed certificate

Log Data Tagging	
Add Range/Cluster Info	yes
Override Node Name	no
Explicit Node Name	
Explicit Hierarchy Info	Range-Cluster
Add UTC Offset	no
Date Format	Syslog-Timestamp

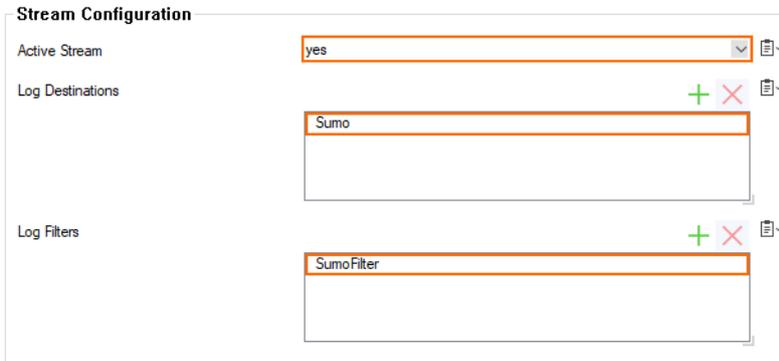
11. Click **Send Changes** and **Activate**.

#### Step 1.4. Configure Logdata Streams

Create a logdata stream configuration combining the previously configured **Log Destinations** and **Log Filters**.

1. Go to **CONFIGURATION > Configuration Tree > Box > Infrastructure Services > Syslog Streaming**.
2. In the left menu, select **Logdata Streams**.
3. Click **Lock**.
4. Click **+** in the **Streams** table.
5. Enter a **Name** and click **OK**.

6. The **Streams** window opens.
7. In the **Log Destinations** table, click + and select the **Log Destination** created in Step 1.3, e.g., *Sumo*.
8. In the **Log Filters** table, click + and select the **Log Filter** created in Step 1.2, e.g., *SumoFilter*.



The screenshot shows the 'Stream Configuration' window with the following details:

- Active Stream:** A dropdown menu with 'yes' selected.
- Log Destinations:** A table with one row containing 'Sumo'.
- Log Filters:** A table with one row containing 'SumoFilter'.

9. Click **OK**.
10. Click **Send Changes** and **Activate**.

#### Step 1.5 Configure WebLog Streaming (optional)

As a first step, you must activate web log streaming:

1. Go to **CONFIGURATION > Configuration Tree > Box > Infrastructure Services > Syslog Streaming**.
2. In the left menu, select **Logdata Streams**.
3. Click **Lock**.
4. **Enable Web Log Streaming** - Select **yes**.

As the second step, you must configure the web log syslog streaming:

1. **Streaming Protocol** - Select **TCP** or **UDP** (only for unencrypted connections).
2. **Destination IP Address** - Enter the IP address of the syslog-ng server that will be forwarding logs to Sumo.
3. **Destination Port** - Enter **5140** for plaintext or **5141** for SSL-encrypted connections.
4. **SSL ...** (optional) - Configure the key and certificates to send logs to this server.

#### Step 1.6 Configure Audit and Reporting

Configure the settings for log policies.

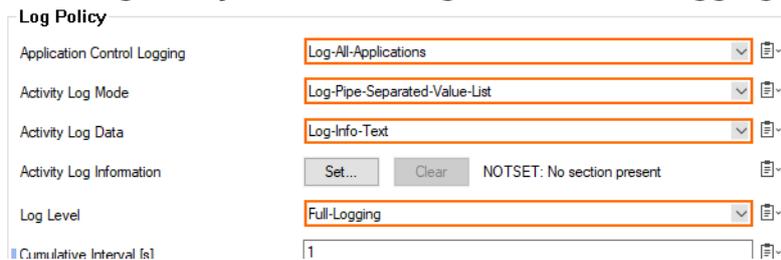
1. Go to **your CloudGen firewall > Infrastructure Services > General Firewall Configuration**.
2. In the **Configuration Mode** section of the left menu, click **Switch to Advanced View**.
3. In the left menu, click **Audit and Reporting**.
4. Click **Lock**.
5. In the section **Statistics Policy**, set **Generate Dashboard Information** to **yes**.
6. In the section **Statistics Policy**, set **Generate Monitor Information** to **yes**.



Statistics Policy

Generate Dashboard Information	yes	📄
Generate Monitor Information	yes	📄

7. In the **Log Policy** section, set **Application Control Logging** to **Log-All-Applications**.
8. In the **Log Policy** section, set **Activity Log Mode** to **Log-Pipe-Separated-Value-List**.
9. In the **Log Policy** section, set **Activity Log Data** to **Log-Info-Text**.
10. In the **Log Policy** section, set **Log Level** to **Full-Logging**.



Log Policy

Application Control Logging	Log-All-Applications	📄
Activity Log Mode	Log-Pipe-Separated-Value-List	📄
Activity Log Data	Log-Info-Text	📄
Activity Log Information	Set... Clear NOTSET: No section present	📄
Log Level	Full-Logging	📄
Cumulative Interval (s)	1	📄

All firewall log data is now being streamed to Sumo via the syslog-ng server.

## Enable Application Logging in the Firewall

Application data is collected on a per-access-rule basis. Set the **Application Log Policy** to **Log All Applications** in the **Advanced Firewall Rule Settings** for each access rule that matches traffic you want to include in the data collected on the Sumo server.

For more information, see [Advanced Access Rule Settings](#).



```
est_ip>[^\|]*)\|dstPort=(?<dest_port>[^\|]*)\|dstService=(?<dstservice>[^\|]*)\|
dstIF=(?<dstif>[^\|]*)\|rule=(?<rule>[^\|]*)\|info=(?<info>[^\|]*)\|srcNAT=(?<sr
cnat>[^\|]*)\|dstNAT=(?<dstnat>[^\|]*)\|duration=(?<duration>[^\|]*)\|count=(?<c
ount>[^\|]*)\|receivedBytes=(?<receivedbytes>[^\|]*)\|sentBytes=(?<sentbytes>[^\
|]*)\|receivedPackets=(?<receivedpackets>[^\|]*)\|sentPackets=(?<sentpackets>[
^\|]*)\|user=(?<user>[^\|]*)\|protocol=(?<protocol>[^\|]*)\|application=(?<appli
cation>[^\|]*)\|target=(?<target>[^\|]*)\|content=(?<content>[^\|]*)\|urlcat=(?<
urlcat>[^\|]*)"
```

### CGFW Web Log

```
parse " - * 1 * * * * * BYF * * * * * * (*) * * * * * * * [*] * - - 0" as
timestamp, src_ip, dest_ip, content_type, srcip, uri, content_length, action,
reason, version, match, tq, action_type, src_type, src_detail, dst_type,
dst_detail, spy_type, spy_id, inf_score, host, urlcat, user, host2
```

### ATP Event Log

```
parse regex
"(\S\|\d\|\S+\|\d\|\S+\|\d+\|(?<atp_action>[^\|]*)\|(?<hostname>[^\|]*)\|(?<at
p_timestamp>\d+)\|(?<atp_message>.*)\|"|parse regex field=atp_message
"(?<src_ip>\d+\.\d+\.\d+\.\d+):( ?<src_port>\d+) ->
(?<dest_ip>\d+\.\d+\.\d+\.\d+):( ?<dest_port>\d+)"
```

### ATP Scan

```
parse " - * 1 * * * * * BYF * * * * * * (*) * * * * * * * [*] * - - 0" as
timestamp, src_ip, dest_ip, content_type, srcip, uri, content_length, action,
reason, version, match, tq, action_type, src_type, src_detail, dst_type,
dst_detail, spy_type, spy_id, inf_score, host, urlcat, user, host2
```

## Figures

1. 1App\_Dashboard.png
2. sumo\_logic\_enable\_syslog\_streaming.png
3. sumo\_logic\_logdata\_filters.png
4. sumo\_logic\_logstream\_destinations.png
5. sumo\_logic\_stream\_configuration.png
6. sumo\_logic\_configure\_statistics\_policy.png
7. sumo\_logic\_configure\_log\_policy.png
8. sumo\_logic\_configure\_access\_rule\_advanced\_app\_log\_policy.png

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