

How to Configure Syslog Streaming

<https://campus.barracuda.com/doc/96026562/>

The syslog streaming configuration defines the handling of log files. Log messages of centrally managed firewalls can be transmitted to the Firewall Control Center Syslog service, but they can just as well be transmitted to any other system designed for log file collection or to another Barracuda CloudGen Firewall.

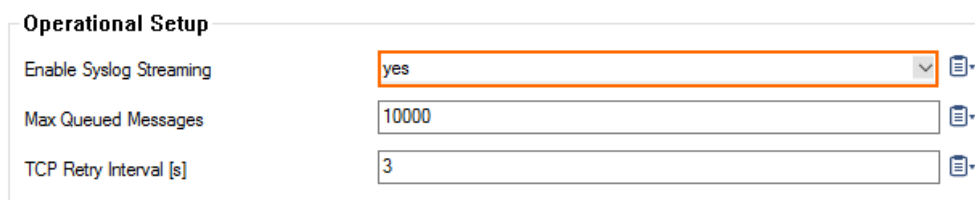
Before You Begin

To send log data from the same source (e.g., VPN) to multiple destinations, there must be only a single entry in the Logdata Filters table that contains the definition of that source. The various Logstream Destinations must be assigned to that single source when configuring log data streams:

Entry #	Logdata Filters	Logdata Streams	Logstream Destinations
1	FW	--- S1 -->	D1
2	DHCP	--- S2 -->	D2
3	VPN	--- S3 -->	D1, D2

Step 1. Enable the Syslog Service

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



Operational Setup	
Enable Syslog Streaming	yes
Max Queued Messages	10000
TCP Retry Interval [s]	3

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

Step 2. (optional) Upload External TLS Certificates

If the syslog stream is TLS encrypted, the box certificate and key are used by default. You can upload custom TLS certificates if you want to use them.

1. Go to **CONFIGURATION > Full Configuration > Box > Infrastructure Services > Syslog Streaming**.
2. Click **Lock**.
3. In the left menu, expand the **Configuration Mode** section and click **Switch to Advanced View**.
4. From the **Use Box Certificate/Key** list, select **no**.
5. Import the **TLS Private Key** and **TLS Certificate**.
6. Click **Send Changes** and **Activate**.

Step 3. Configure Logdata Filters

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

1. Go to **CONFIGURATION > Full Configuration > Box > Infrastructure Services > Syslog Streaming**.
2. In the left menu, select **Logdata Filters**.
3. Expand the **Configuration Mode** menu and select **Switch to Advanced View**.
4. Click **Lock**.
5. Click the + icon to add a new entry.
6. Enter a descriptive name in the **Filters** dialog and click **OK**.
7. In the **Data Selection** table, add the log files to be streamed. You can select:
 - **Fatal_log** - Log contents of the fatal log (log instance name: fatal)
 - **Panic_log** - Log contents of the panic log (log instance name: *panic*)
8. In the **Affected Box Logdata** section, define what kind of box logs are to be affected by the syslog daemon from the **Data Selection** list.
9. When choosing **Selection** (default):
 1. Click the + icon next to **Data Selection** to add an entry.
 2. Enter a descriptive name for the group and click **OK**. The **Data Selection** window opens.
 3. Add the **Log Groups** for selection or select **Other** and specify an explicit selection. For more information, see [User Defined Log Groups](#).
 4. Set a **Log Message Filter**. When choosing **Selection**,
 - Add the explicit log type to the **Selected Message Types** table.
 5. Click **OK**.
10. In the **Affected Service Logdata** section, define what kind of logs created by services are to be affected by the syslog daemon from the **Data Selection** list.
11. When choosing **Selection** (default),
 1. Click the + icon next to **Data Selection** to add an entry.
 2. Enter a descriptive name for the group and click **OK**. The **Data Selection** window opens.
 3. In the **Log Groups** table, add the server and services where log messages are streamed from, or select **Other** and specify a more granulated selection. For more information, see [User Defined Log Groups](#).
 4. Set a **Log Message Filter**. When choosing **Selection**,
 - Add the explicit log type to the **Selected Message Types** table.

5. Click **OK**.

12. Click **Send Changes** and **Activate**.

User Defined Log Groups

For selective syslog streaming, a configured log stream destination is required. This can either be a Barracuda Firewall Control Center or a dedicated third-party syslog server. For granulated selection, configure log data filters, using the **Data Selection > Log Groups** parameter **Other** and enter a string up to sample:

- <modulname>_<logfile>

Example (for Affected Service Logdata):

- virscan_cas
- firewall_auth
- firewall_Rule*

This selection would stream:

- srv_<virscan-servername>_<virscan-servicename>_cas.log
- srv_<firewall-servername>_<firewall-servicename>_auth.log
- srv_<firewall-servername>_<firewall-servicename>_Rule*.log

This selection would not stream:

- srv_<virscan-servername>_<virscan-servicename>.log
- srv_<virscan-servername>_<virscan-servicename>_clamav.log
- srv_<firewall-servername>_<firewall-servicename>.log

List of Available Box Module Names

Group	Sub-Group	File System Log
Auth	Auth-All	/var/phion/logs/*Auth*.log
	Auth-Access-Only	/var/phion/logs/*Auth_access*.log
	Auth-SMS-Only	/var/phion/logs/*Auth_SMS*.log
Broadcaster		/var/phion/logs/*broadcaster*.log
Cloud	Cloud-All	/var/phion/logs/*Cloud*.log
	Cloud-Control	/var/phion/logs/*Cloud_control*.log
	Cloud-AWS-AutoScale	/var/phion/logs/*Cloud_awsautoscale*.log

	Cloud-AWS-Log-Daemon	/var/phion/logs/*Cloud_awsconfigsyncd*.log
Config	Config-All	/var/phion/logs/*Config*.log
Control	Control-All	/var/phion/logs/*Control*.log
Event	Event-All	/var/phion/logs/*Event*.log
	Event-Data-Only	/var/phion/logs/*Event_eventS*.log
Firewall	Firewall-All	/var/phion/logs/*Firewall*.log
	Firewall-Activity-Only	/var/phion/logs/*Firewall_Activity*.log
	Firewall-Threat-Only	/var/phion/logs/*Firewall_threat*.log
	Firewall-IPS-Download-Only	/var/phion/logs/*Firewall_IPSDownload*.log
Logs	Logs-All	/var/phion/logs/*Logs*.log
Network	Network-All	/var/phion/logs/*Network *.log
Release	Release-All	/var/phion/logs/*Release*.log
Settings	Settings-All	/var/phion/logs/*Settings *.log
	Settings-DNS-Only	/var/phion/logs/*Settings_DNS*.log
	Settings-Time-Only	/var/phion/logs/*Settings_time*.log
SNMP	SNMP-All	/var/phion/logs/*Snm_Snm*.log
SSH	SSH-All	/var/phion/logs/*Snm_Snm*.log
	SSH-SShd-Only	/var/phion/logs/*SSH_sshd*.log
Statistics	Statistics-All	/var/phion/logs/*Statistics*.log
Watchdog	Watchdog-All	/var/phion/logs/*Watchdog*.log
	Watchdog-SMART-Only	/var/phion/logs/*Watchdog_smartd*.log
	Watchdog-Repair-Only	/var/phion/logs/*Watchdog_repair*.log
	Watchdog-Monitor-Only	/var/phion/logs/*Watchdog_monitor*.log

List of Available CC-managed Box Modules

- AV-Scanner: **virscan**
- DHCP-Enterprise-Server: **dhcpe**
- DHCP-Relay: **dhcprelay**
- DNS: **dns**
- Firewall: **firewall**
- FW-Audit-Service: **fwaudit**
- C-Firewall: **cfirewall**
- FTP-Gateway: **ftpgw**
- HTTP-Proxy: **proxy**
- HTTP/HTTPS-Proxy: **sslprx**
- Mail-Gateway: **mailgw**
- OSPFv2-Router: **ospf**

- Policy-Service: **policyserver**
- Secure-Web-Proxy: **sslprx**
- SPAM-Filter: **spamfilter**
- SNMP-Service: **snmp**
- SSH-Proxy: **sshprx**
- ISS-ProventiaWebFilter: **cofs**
- VPN-Server: **vpnserver**

List of Available Single Box Module Names

- AV-Scanner: **virscan**
- DHCP-Enterprise-Server: **dhcpe**
- DHCP-Relay: **dhcprelay**
- DNS: **dns**
- Firewall: **firewall**
- FTP-Gateway: **ftpgw**
- HTTP-Proxy: **proxy**
- HTTP/HTTPS-Proxy: **sslprx**
- ISS-ProventiaWebFilter: **cofs**
- Mail-Gateway: **mailgw**
- OSPFv2-Router: **ospf**
- Policy-Service: **policyserver**
- Secure-Web-Proxy: **sslprx**
- SNMP-Service: **snmp**
- SPAM-Filter: **spamfilter**
- SSH-Proxy: **sshprx**
- VPN-Server: **vpnserver**

List of Available Control Center-Module Names (CC Box)

- DNS: **dns**
- Firewall: **firewall**
- MC-Audit: **fwaudit**
- MC-Conf: **rangeconf**
- MC-Event: **mevent**
- MC-Log: **msyslog**
- MC-PKI: **pki**
- MC-Entegra: **mpolicyserver**
- MC-Reporter: **rsdstats**
- MC-StatView: **qstatm**
- MC-StatCollect: **dstatm**
- MC-VPN: **mastervpn**

List of Available Reporter Module Names (Reporter Box)

- Reporter DB: **reporter**

Configure Logstream Destinations

Define profiles specifying the transfer/streaming destination of log messages. Log lines from remote systems will be added as they are received but also get their creation time in ISO8601 format enclosed in parentheses appended at the end, e.g.: (2013-07-01T18:37:17+00:00). Selecting CloudGen Firewall as the destination will stream the log data to another unit in exactly the same file structure as on the sender system.

1. Go to **CONFIGURATION > Full Configuration > Box > Infrastructure Services > Syslog Streaming**.
2. In the left menu, select **Logstream Destinations**.
3. Expand the **Configuration Mode** menu and select **Switch to Advanced View**.
4. Click **Lock**.
5. Click the **+** icon to add a new entry.
6. Enter a descriptive name in the upcoming dialog and click **OK**. The **Destinations** window opens.
7. Select the **Logstream Destination**. When an external log host is used:
 1. Select **Explicit IP** (default).
 2. Configure the destination host:
 1. If you have only an IP address – Enter the destination IP address in the **Destination IP Address** field.
 2. If you have configured an IP or hostname network object on the Multi-Range, Range, or Cluster level, you can also click the small icon inside of the edit field to specify the log stream destination by selecting a hostname.
8. Enter the **Destination Port** for delivering syslog messages. The Barracuda Networks CC syslog service listens on port TCP 5143 for TLS connections and on TCP and UDP port 5144 for unencrypted streaming. The default is to use encryption for delivery; therefore, port 5143 is preconfigured.

When changing the port, you must also adapt the host firewall rule for syslog traffic to use the new port.
9. Select the **Transmission Mode (TCP or UDP - default; for TLS connections TCP is automatically set)**.

You may specify a particular **Sender IP** address used for sending the log data. When sending to a Barracuda Firewall Control Center, either the VIP or, in the absence of a management tunnel, the MIP is selected automatically.

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

You may specify a particular address to be used in order to send the log data.

TLS Encapsulation

The option **Use TLS Encapsulation** may be turned off when the log stream is transmitted to the Barracuda Firewall Control Center and the box has a management tunnel to the Control Center. For CC transmission without a box tunnel, activating TLS encapsulation is recommended. Note also that transmission to a non-Barracuda CloudGen Firewall system should be TLS encapsulated for reasons of privacy.

TLS Peer Authentication defines the way in which a destination system is authenticated when using TLS-based authentication (authentication of the destination server by the box being a client). The list offers the following choices:

- **verify_peer_with_locally_installed_certificate** – (default) The destination system is verified against a locally stored certificate either in the respective destination section or the Barracuda Firewall Control Center's certificate. This setting is useful when log messages are delivered to a system outside the scope of Barracuda Firewall Control Centers. For centrally administered firewalls, this is the only applicable option.

If the destination system is not a Barracuda Firewall Control Center, the peer TLS certificate may be required
- **verify_peer_certificate** – The destination system is verified against a locally stored CA certificate. Copy the root certificate into the field **Certificate Chain** in the section **Data Transfer Setup** at **CONFIGURATION > Configuration Tree > Infrastructure Services > Syslog Streaming > Logstream Destinations**.
- **no_peer_verification** – The peer is considered trusted without verification. For security reasons, this option is NOT recommended.

Log Data Tagging

The log entities sent to an external log host contain the name and structural information (range/cluster) of the sending box and the name of the log file. With **Override Node Name** enabled this information can be overridden (default: disabled). If **Override Node Name** is enabled, specifying an explicit node name is possible. This node name is inserted into each log entity sent to the external log host. The setting **Prepend Hierarchy Info** allows fine-tuning of the prefix, which is inserted into each log entity sent to the external log host.

Log files generated on a box are stamped with the local box time. The UTC time offset compared to the local time is recorded, though, and can be examined in the TZ column in the Log Viewer. The UTC time offset information is not included by default when log files are streamed to the Barracuda Firewall Control Center. Enabling Add UTC Offset adds the UTC time offset information to streamed log files, so that these files may be analyzed uniformly in case the Barracuda Firewall Control Center

collects log files from multiple boxes placed in various time zones.

Configure Logdata Streams

By configuring this section, relations between log patterns and log destinations are established. It is, therefore, possible to make a combination of each log pattern (a sort of filter) and log destination to allow fine-granulated target selection.

With **Barracuda CC Control** selected as **Remote Loghost**, the streamed log files will be stored under */phion0/mlogs/range/cluster/box* on the Control Center.

1. Go to **CONFIGURATION > Full Configuration > Box > Infrastructure Services > Syslog Streaming**.
2. In the left menu, select **Logdata Streams**.
3. Expand the **Configuration Mode** menu and select **Switch to Advanced View**.
4. Click the **+** icon to add a new entry.
5. Enter a descriptive name in the upcoming dialog and click **OK**.
6. Configure the following settings:
 - **Active Streams** - This parameter allows you to activate/deactivate the selected log stream profile. By default, for example, when creating a new profile, this parameter is set to **yes**.
 - **Log Destinations** - Here the available log destinations (defined in the section **Logstream Destinations**) can be selected.
 - **Log Filters** - Here the available log patterns (defined in the section **Logdata Filters**) can be selected.
7. Click **Send Changes** and **Activate**.

Figures

1. cloudwatch_01.png
2. IP_or_hostname_edit_field.png

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