Live Page

https://campus.barracuda.com/doc/73719548/

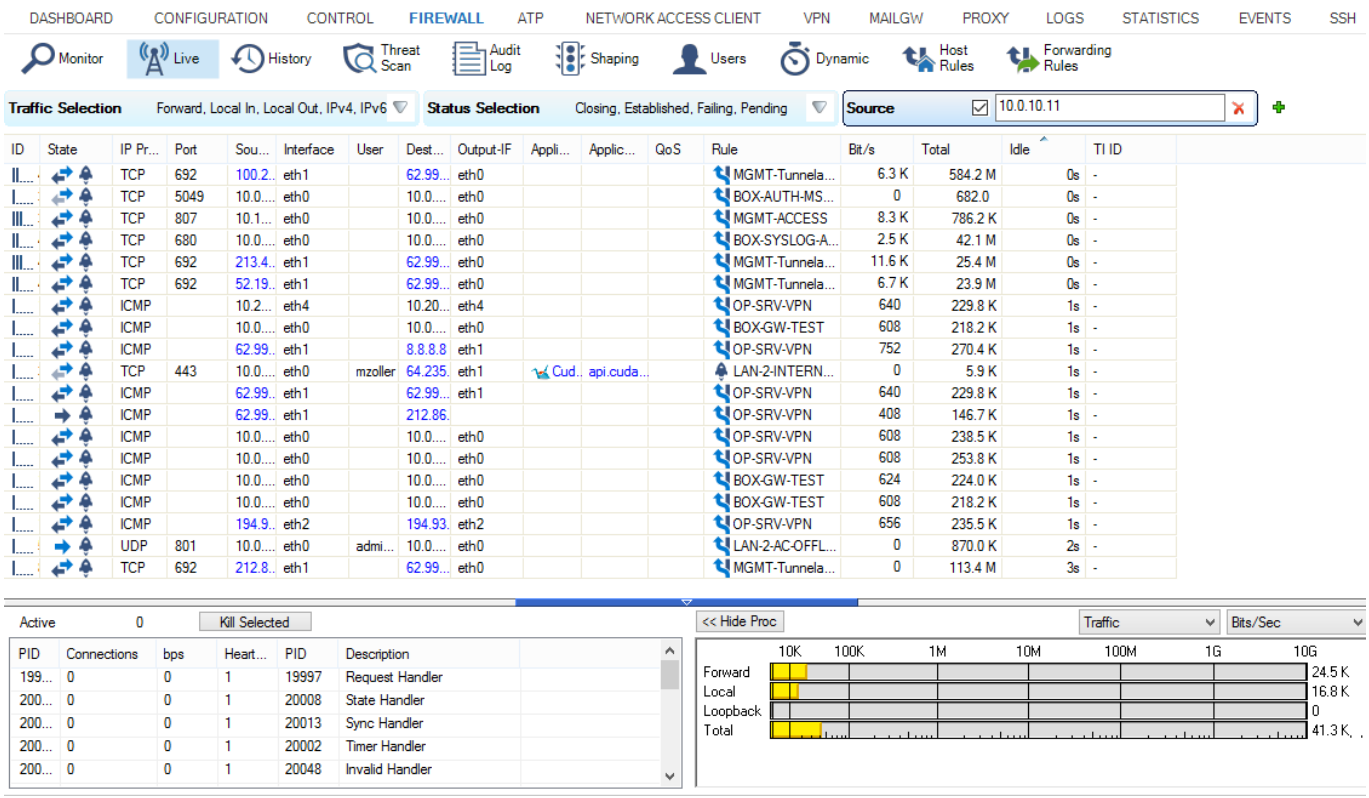
The **Live** tab lets you view and filter real-time information for the traffic that passes through the Barracuda CloudGen Firewall. You can also manage the traffic sessions. To access the **Live** page, click the **FIREWALL** tab and select the **Live** icon in the ribbon bar.

Video

To get a feel for how to use the **FIREWALL > Live** page in Firewall Admin, watch the following video:

The **Live** tab provides three separate sections:

- Session Details
- Work Processes
- Traffic Meter



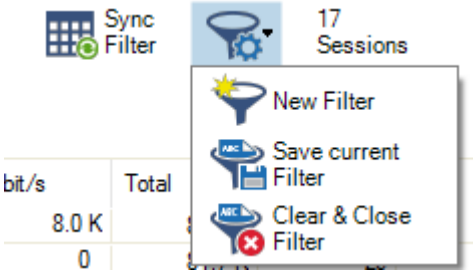
The **Live** page provides the following information for each session:

- **ID** – The icons indicating the amount of traffic (Low to High...). The number provided is the unique access ID for the connection.
- **State** – The connection status: One-way traffic; connection established (TCP); two-way traffic (all other); connection could not be established; closing connection. The icon next to the status symbol indicates the application policy.
- **IP Protocol** – The protocol used. If the protocol can be determined only by the source/destination port, it is displayed in light-gray. If the protocol was detected by the firewall engine it is displayed in black. For example, TCP, UDP, or ICMP.
- **Application Context** – The context of the affected application.
- **Application** – The name of the affected application.
- **File Content** – The content of the affected file.
- **Rule** – The name of the affected firewall rule.
- **Type** – The origin, as specified by the following abbreviations:
  - **LIN** – Local In. The incoming traffic on the box firewall.
  - **LOUT** – Local Out. The outgoing traffic from the box firewall.
  - **LB** – Loopback. The traffic via the loopback interface.
  - **FWD** – Forwarding. The outbound traffic via the Forwarding Firewall.
  - **IFWD** – Inbound Forwarding. The inbound traffic to the firewall.
  - **PXY** – Proxy. The outbound traffic via the proxy.
  - **IPXY** – Inbound Proxy. The inbound traffic via the proxy.
  - **TAP** – Transparent Application Proxying. The traffic via stream forwarding.
- **Source** – The source IP address.

- **Src. Port** – The source port.
- **Src./Dst. Prefix** – The source/destination prefix.
- **Destination** – The destination IP address.
- **Port** – The destination port (or internal ICMP ID).
- **User** – The username of the affected user and group.
- **bit/s** – The bits per second (during the last second).
- **Idle** – Time since the last data transfer.
- **Total** – The total number of bytes transferred over this connection.
- **In** – The total number of bytes transferred over this connection from the source.
- **Out** – The total number of bytes transferred over this connection to the source.
- **Start** – Time since the connection was established.
- **SNAT** – The source NAT address.
- **DNAT** – The destination NAT address.
- **Output-IF** – The outgoing interface.
- **Policy** – The affected policy. For descriptions of the available policies, see the Policy Overview section below.
- **QoS** – QoS band used by this session.
- **FWD Shape** – The forward Traffic Shaping (IN/OUT). The shape connectors for ingress and egress shaping, respectively, in the forward direction. Ingress shaping takes place at the inbound interface. Egress shaping takes place at the outbound interface.
- **REV Shape** – The reverse Traffic Shaping (IN/OUT).
- **Protocol** – The affected protocol.
- **User Agent** – User agent for HTTP and HTTPS connections.
- **Status** – The status of the connection. For descriptions of the available status types, see Status Overview below.
- **Src./Dst. Geo** – The geographic source/destination of the active connection.
- **TI ID** – The transport rating setting (Bulk, Quality, or Fallback with IDs 0-7). For more information, see Traffic Shaping below.
- **URL Category** – Category of the destination URL.

Filter Options

You can filter the list of sessions by traffic type, status, and properties. Click the **Filter** icon on the top right of the ribbon bar to access the filtering options.



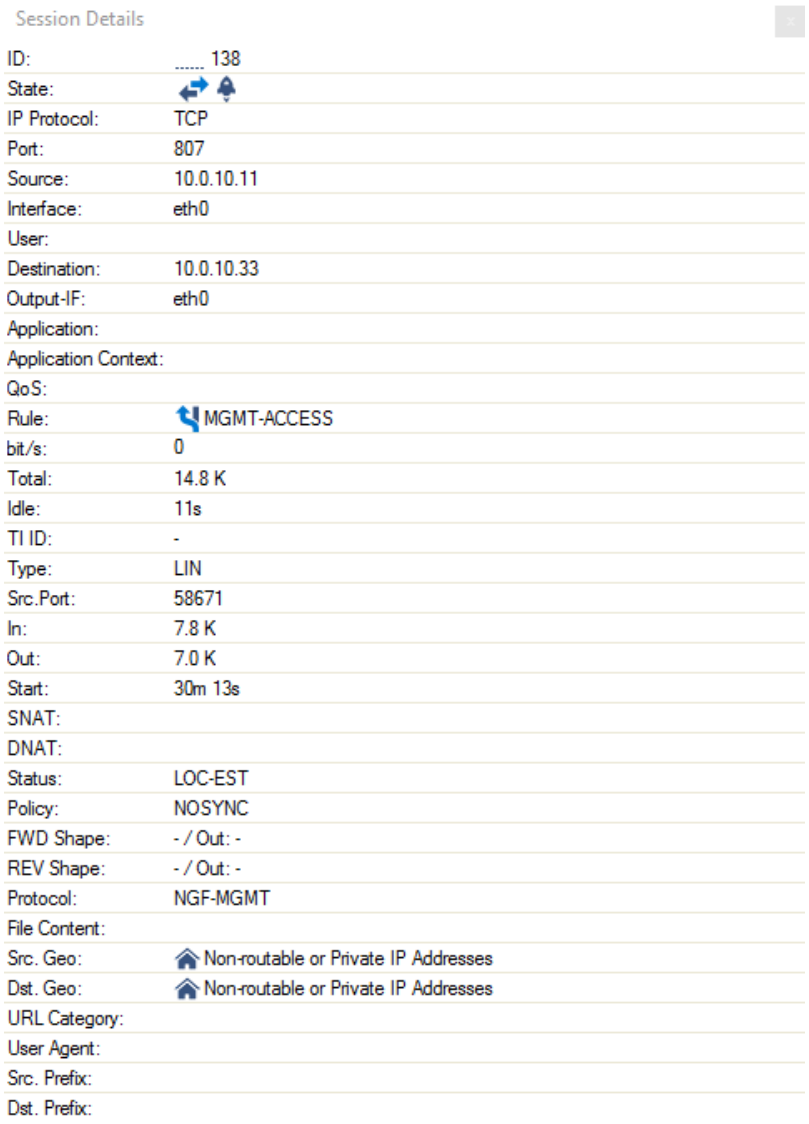
1. Click the **Filter** icon.
2. Select **New Filter**. The **Traffic Selection** section opens on the top left of the list.
3. Expand the **Traffic Selection** drop-down menu and select the required check boxes:
   - **Forward** – Sessions handled by the Forwarding Firewall.
   - **Loopback** – System internal data exchanged by the loopback interface.
   - **Local In** – Incoming sessions handled by the box firewall.
   - **Local Out** – Outgoing sessions handled by the box firewall.
   - **IPv4** – IPv4 traffic.
   - **IPv6** – IPv6 traffic.
4. From the **Status Selection** list, you can select the following options to filter for certain traffic statuses:
   - **Closing** – Closing connections.
   - **Established** – Established connections.
   - **Failing** – Failed connections.
   - **Pending** – Connections currently being established.
5. To define more filters for specific properties:
   1. Click the **+** icon.
   2. Select the required criteria.
   3. Select or enter the value in the blank field.

Some fields allow the use of wildcards (*?; !*?). Example: !Amazon* excludes all entries starting with Amazon; Y*|A* includes all entries starting with "Y" or "A".

Clicking the **Sync Filter** icon on the top right of the ribbon bar above the filters allows you to switch to the History Page but with the same filters applied.

Managing Sessions

You can view additional information for a specific session by double-clicking an entry.



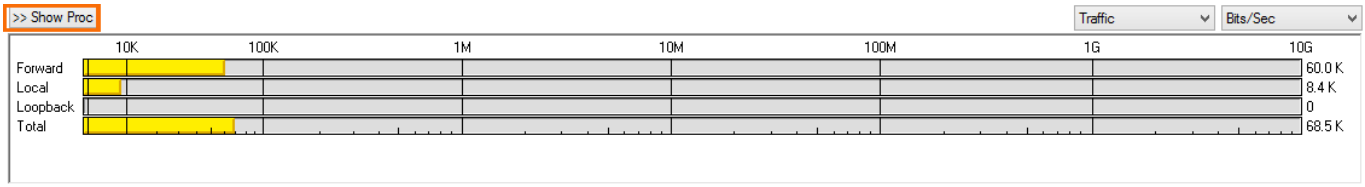
You can control, copy, print, export, and organize the sessions listed on the **Firewall > Live** page. When you right-click a session, you are provided with the following options:

- **Terminate Session** – Ends the session.
- **Abort Session (No TCP RST)** – Ends the session without a TCP request.
- **Change QoS / Reverse QoS** – Lets you change the QoS band. For more information, see Traffic Shaping below.
- **Toggle Trace** – The selected connections are immediately traced, and you will be able to see all data transferred within these connections in the **Trace** view. To stop tracing, select the traced connections, and select **Toggle Trace** again.
- **Change TI Setting**s – Lets you change the Traffic Intelligent settings. For more information, see Traffic Intelligence below.
- **Show Session Details** – Displays the session details.

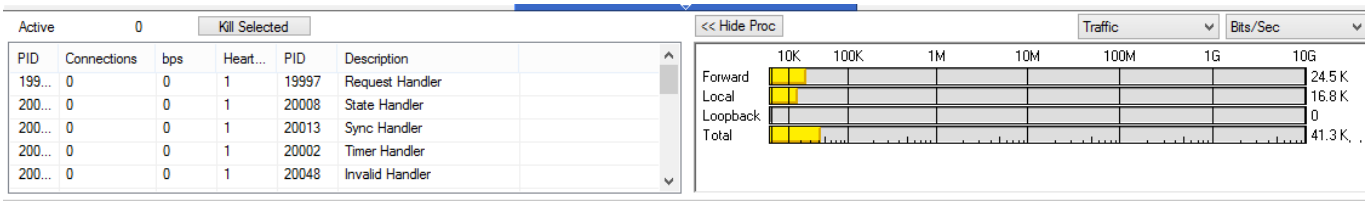
For more settings, see: Barracuda CloudGen Admin

Work Processes

In the lower left of the **Live** page, you can view and control firewall-related processes and workers. To access the status, click **>> Show Proc** on the lower left of the window.



The entry **Active** displays the currently active worker processes. The feature **Kill Selected** is used for terminating single workers.



The entry on the right of the **Kill Selected** button shows the status of the synchronization in case of active transparent failover. For more Information, see High Availability.

The following possible states are available:

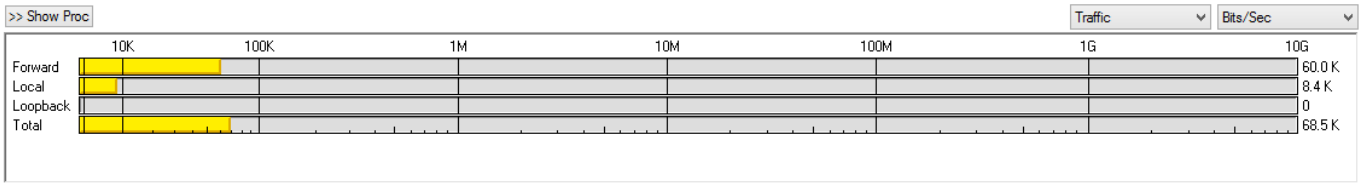
- **Active Sync (UP)** – Shown on active HA partner; synchronization works.
- **Active Sync (DOWN)** – Shown on active HA partner; sync would work, but box firewall is down.
- **Passive Sync (UP)** – Shown on passive HA partner; synchronization works.
- **Passive Sync (DOWN)** – Shown on passive HA partner; sync would work, but box firewall is down.

The window provides the following information about the processes:

- **PID** – System process ID.
- **Connections** – Number of connections handled by worker.
- **bps** – Bytes per second (during the last second).
- **Heartbeat** – Time in seconds the process stopped to answer. Should never be more than 2.
- **PID** – System process ID. Allows view on PID and fully extended description column.
- **Description** – Role description of worker.

Traffic Meter

A traffic meter is integrated on the lower right of the page. The firewall engine samples the amount of traffic over 10 seconds, and the traffic meter displays it based on the traffic origin (Forward, Loopback, Local, Total). Traffic can be displayed as Bits/sec, Bytes/sec, or Packets/sec.



The second available view is **TF Sync** (click the **Traffic** drop-down arrow) and contains detailed information concerning the **T**ransparent **F**ailover function of an HA Forwarding Firewall. The pull-down menu for the statistics type (with the options **Bits/sec**, **Bytes/sec** and **Packets/sec**) has no function for this type of view. The display consists of the following entries:

- **My Sync Addr** – IP address and connection port for synchronization of this box.
- **Partner Sync Addr** – IP address and connection port for synchronization of the HA partner box.
- **Synced Sessions** – Number of sessions successfully synchronized.
- **Pending Sessions** – Number of pending sessions not synchronized.

Status Overview

This table provides descriptions of the possible statuses displayed in the **Status** column for each session on the **Firewall > Live** page:

Status Name	Origin	Description
FWD-NEW	TCP Packet Forwarding Outbound	The session is validated by the firewall ruleset. Traffic has not been forwarded yet.
FWD-FSYN-RCV	TCP Packet Forwarding Outbound	The initial SYN packet received from the session source was forwarded.
FWD-RSYN-RSV	TCP Packet Forwarding Outbound	The session destination answered the SYN with a SYN/ACK packet.
FWD-EST	TCP Packet Forwarding Outbound	The SYN/ACK packet was acknowledged by the session source. The TCP session is established.
FWD-RET	TCP Packet Forwarding Outbound	Either source or destination are retransmitting packets. The connection might be dysfunctional.

FWD-FFIN-RCV	TCP Packet Forwarding Outbound	The session source sent a FIN datagram to terminate the session.
FWD-RLACK	TCP Packet Forwarding Outbound	The session destination answered the FIN packet with a FIN reply and awaits the last acknowledgement for this packet.
FWD-RFIN-RCV	TCP Packet Forwarding Outbound	The session destination sent a FIN datagram to terminate the session.
FWD-FLACK	TCP Packet Forwarding Outbound	The session source answered the FIN packet with a FIN reply and awaits the last acknowledgement for this packet.
FWD-WAIT	TCP Packet Forwarding Outbound	The session was reset by one of the two participants by sending an RST packet. During a wait period of five seconds, all packets belonging to the session will be discarded.
FWD-TERM	TCP Packet Forwarding Outbound	The session is terminated and will be removed from the session list.
IFWD-NEW	TCP Packet Forwarding Inbound	The session is validated by the firewall ruleset. Traffic has not been forwarded yet.
IFWD-SYN-SND	TCP Packet Forwarding Inbound	A SYN packet was sent to the destination initiating the session. Note that the session with the source is already established.
IFWD-EST	TCP Packet Forwarding Inbound	The destination replied to the SYN with a SYN/ACK. The session is established.
IFWD-RET	TCP Packet Forwarding Inbound	Either source or destination are retransmitting packets. The connection might be dysfunctional.
IFWD-FFIN-RCV	TCP Packet Forwarding Inbound	The session source sent a FIN datagram to terminate the session.
IFWD-RLACK	TCP Packet Forwarding Inbound	The session destination answered the FIN packet with a FIN reply and awaits the last acknowledgement for this packet.
IFWD-RFIN-RCV	TCP Packet Forwarding Inbound	The session destination sent a FIN datagram to terminate the session.
IFWD-FLACK	TCP Packet Forwarding Inbound	The session source answered the FIN packet with a FIN reply and awaits the last acknowledgement for this packet.
IFWD-WAIT	TCP Packet Forwarding Inbound	The session was reset by one of the two participants by sending an RST packet. During a wait period of five seconds, all packets belonging to the session will be discarded.
IFWD-TERM	TCP Packet Forwarding Inbound	The session is terminated and will be removed from the session list.
PXY-NEW	TCP Stream Forwarding Outbound	The session is validated by the firewall ruleset. Traffic has not been forwarded yet.

PXY-CONN	TCP Stream Forwarding Outbound	A socket connection to the destination is being established.
PXY-ACC	TCP Stream Forwarding Outbound	A socket connection to the source is being accepted.
PXY-EST	TCP Stream Forwarding Outbound	Two established TCP socket connections to the source and destination exist.
PXY-SRC-CLO	TCP Stream Forwarding Outbound	The socket to the source is closed or is in the closing process.
PXY-DST-CLO	TCP Stream Forwarding Outbound	The socket to the destination is closed or is in the closing process.
PXY-SD-CLO	TCP Stream Forwarding Outbound	The source and the destination socket are closed or in the closing process.
PXY-TERM	TCP Stream Forwarding Outbound	The session is terminated and will be removed from the session list.
IPXY-NEW	TCP Stream Forwarding Inbound	The session is validated by the firewall ruleset. Traffic has not been forwarded yet.
IPXY-ACC	TCP Stream Forwarding Inbound	A socket connection to the source is being accepted.
IPXY-CONN	TCP Stream Forwarding Inbound	A socket connection to the destination is being established.
IPXY-EST	TCP Stream Forwarding Inbound	Two established TCP socket connections to the source and destination exist.
IPXY-SRC-CLO	TCP Stream Forwarding Inbound	The socket to the source is closed or is in the closing process.
IPXY-DST-CLO	TCP Stream Forwarding Inbound	The socket to the destination is closed or is in the closing process.
IPXY-SD-CLO	TCP Stream Forwarding Inbound	The source and the destination socket are closed or in the closing process
IPXY-TERM	TCP Stream Forwarding Inbound	The session is terminated and will be removed from the session list.
UDP-NEW	UDP Forwarding	The session is validated by the firewall ruleset. Traffic has not been forwarded yet.
UDP-RECV	UDP Forwarding	Traffic has been received from the source and was forwarded to the destination.
UDP-REPL	UDP Forwarding	The destination replied to the traffic sent by the source.
UDP-SENT	UDP Forwarding	The source transmitted more traffic after receiving a reply from the destination.
UDP-FAIL	UDP Forwarding	The destination or a network component on the path to the destination sent an ICMP indicating that the request cannot be fulfilled.
ECHO-NEW	ECHO Forwarding	The session is validated by the firewall ruleset. Traffic has not been forwarded yet.

ECHO-RECV	ECHO Forwarding	Traffic has been received from the source and forwarded to the destination.
ECHO-REPL	ECHO Forwarding	The destination replied to the traffic sent by the source.
ECHO-SENT	ECHO Forwarding	The source sent more traffic after receiving a reply from the destination.
ECHO-FAIL	ECHO Forwarding	The destination or a network component on the path to the destination sent an ICMP indicating that the request cannot be fulfilled.
OTHER-NEW	OTHER Protocols Forwarding	The session is validated by the firewall ruleset. Traffic has not been forwarded yet.
OTHER-RECV	OTHER Protocols Forwarding	Traffic has been received from the source and forwarded to the destination.
OTHER-REPL	OTHER Protocols Forwarding	The destination replied to the traffic sent by the source.
OTHER-SENT	OTHER Protocols Forwarding	The source sent more traffic after receiving a reply from the destination.
OTHER-FAIL	OTHER Protocols Forwarding	The destination or a network component on the path to the destination sent an ICMP indicating that the request cannot be fulfilled.
LOC-NEW	Local TCP Traffic	A local TCP session was granted by the local ruleset.
LOC-EST	Local TCP Traffic	The local TCP session is fully established.
LOC-SYN-SND	Local TCP Traffic	A Local-Out TCP session is initiated by sending a SYN packet.
LOC-SYN-RCV	Local TCP Traffic	A Local-In TCP session is initiated by receiving a SYN packet.
LOC-FIN-WAIT1	Local TCP Traffic	An established local TCP session started the closing process by sending a FIN packet.
LOC-FIN-WAIT2	Local TCP Traffic	A local TCP session in the FIN-WAIT1 state received an ACK for the FIN packet.
LOC-TIME-WAIT	Local TCP Traffic	A local TCP session in the FIN-WAIT1 or in the FIN-WAIT2 state received a FIN packet.
LOC-CLOSE	Local TCP Traffic	An established local TCP session is closed.
LOC-CLOSE-WAIT	Local TCP Traffic	An established local TCP session received a FIN packet.
LOC-LAST-ACK	Local TCP Traffic	Application holding an established TCP socket responded to a received FIN by closing the socket. A FIN is sent in return.
LOC-LISTEN	Local TCP Traffic	A local socket awaits connection request (SYN packets).
LOC-CLOSING	Local TCP Traffic	A local socket in the FIN_WAIT1 state received a FIN packet.
LOC-FINISH	Local TCP Traffic	A local TCP socket was removed from the internal socket list.

Policy Overview

This table provides descriptions of the possible policies that you might see in the **Policy** column for each session on the **Firewall > Live** page:

Policy	Description
NO_MATCH_IIF	The received packet (Forward Direction) must NOT match initial input interface.
NO_MATCH_OIF	The received packet (Reverse Direction) must NOT match initial output interface.
INBOUND	The Inbound Accept Policy is used.
FWD_FILTER	The content filter is applied for forward traffic.
REV_FILTER	The content filter is applied for reverse traffic.
TRACE	The session is traced.
NOTIFY_CONECT	The Firewall Service is notified about successful or failing TCP establishment. These notifications are required for multiple redirection status.
Source-Based NAT	The bind IP address is determined by the routing table.
NOLOG	Log file entries are not generated by the session.
NOSTAT	Statistics are not generated by the session.
NOCACHE	An access cache entry is not generated by the session.
NONAGLE	The Nagle algorithm is turned OFF.
LOG_STATE	Every state change of this session is logged.
OWN_LOG	The session will log to the firewall rule log file.
SRVSTAT	The session resolves service object names when generating statistics.
DYNAMIC_PORT	The session is dynamically NAT'd. The outgoing source port will differ from the original client port.
NOSYNC	The session is not synchronized for transparent failover.
CLEAR_ECN	The session clears any ECN bits in the IP header.

Figures

1. fw_live_01.png
2. filter_options.png
3. sessions.png
4. fw_live_02.png
5. fw_live_03.png
6. fw_live_04.png