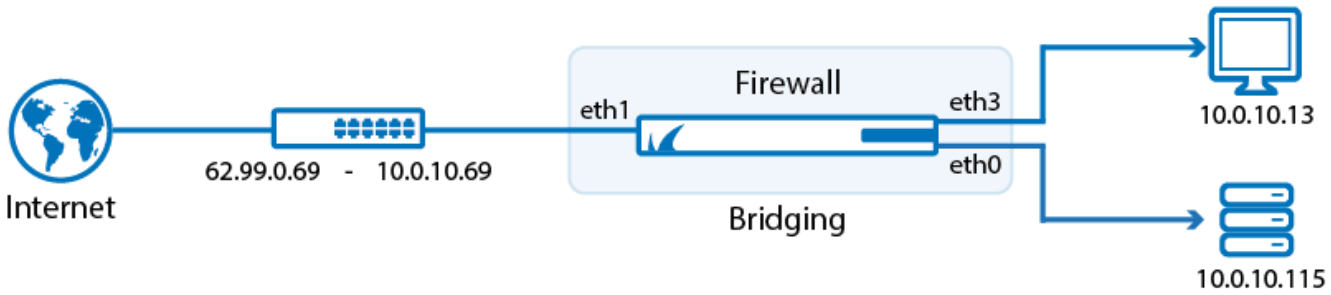
How to Activate RSTP

https://campus.barracuda.com/doc/79463038/

When performing layer 2 bridging the Barracuda CloudGen Firewall will be completely transparent to the user. The interface is not assigned an IP address and can not be directly contacted by the user in the bridged networks. Traffic passing through the layer 2 bridge will retain it's original MAC address with the bridge acting as a proxy ARP in the middle. Since the bridged network interface do not have an IP address you will need to use a separate interface to locally administer the Barracuda CloudGen Firewall. You can define multiple bridging groups on one interface. Traffic between the interface groups is forwarded on layer 3. Define a pass and a broad-multicast access rule for each bridge interface group.

> The bridge can only be used for IP based protocols.

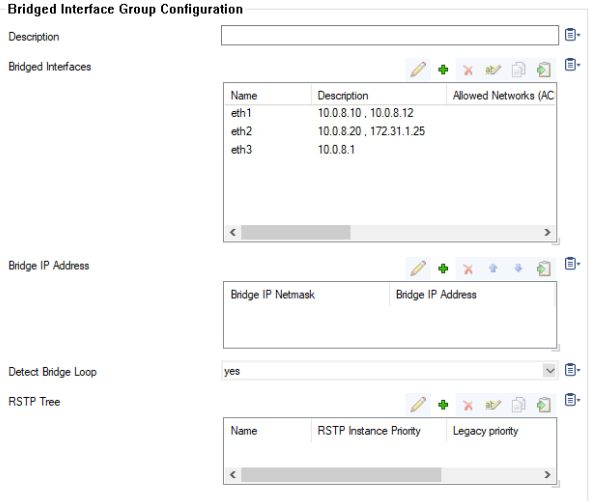
The user interface for configuring RSTP is fully intergrated in the UI for Layer 2 bridging. The configuration requires to define RSTP trees and then to assign the trees to the interfaces.



Step 1. Configure Transparent Layer 2 Bridging

1. Go to **CONFIGURATION** > **Configuration Tree** > **Box** > **Assigned Services** > **Firewall** > **Forwarding Settings**.
2. In the left menu, select **Layer 2 Bridging**.
3. Click **Lock**.
4. In the **Bridged Interface Group** table, click **+** to add an entry. For each interface group, you can edit the following settings:
   - **RSTP Tree** – If you want to use the Rapid Spanning Tree Protocol, click **+** to add a RSTP Tree.
     - The window for the name of the RSTP tree is displayed
     - **Name** – Enter the name for the RSTP tree.
     - **RSTP instance priority** – Assign a priority to the RSTP Tree. The lower the value, the more probable is that it becomes the root bridge in the LAN.

        - **Legacy priority** – Select this check-box if you don't want any adjustment to the entered value.
        - **Used Interfaces** – Interfaces within the RSTP tree. Add interfaces by choosing the RSTP Tree in the interface dialog.
    - **Bridged Interfaces** – Add all interfaces to be bridged together in this group. For each interface enter the following settings:
        - **Name** –The exact network interface label, as listed in the network configuration. E.g., eth1
        - **Allowed Networks (ACL)** – Networks that are allowed to communicate over the bridged interface. You can enter complete networks, individual client/server IP addresses, or network ranges.
        - **Unrestricted MACs** – List of MAC address for which the **Allowed Networks (ACL)** does not apply.
        - **MAC Change Policy** – Select **Allow-MAC-Change** to permit the MAC address of the interface to be changed, otherwise select **Deny-MAC-Change**.
        - **Assign to RSTP Tree** – If you want to use the Rapid Spanning Tree Protocol, select the RSTP to use. Otherwise select None.
        - **RSTP Interface Priority** – If you want to use the Rapid Spanning Tree Protocol, enter the interface priority value.
    - **Detect Bridge Loop** – Select yes if loops in bridged setups shall be detected.
    - **RSTP Tree** – Click **+** to add RSTP trees to the bridged interface group so that a subst of its interfaces can be assigned to those.



5. Click **OK**.
6. Click **Send Changes** and **Activate**.

Step 2. Create Access Rules for Layer 2 Bridging

To allow network traffic to pass between the bridged interfaces, create Pass and Broad-Multicast access rule for every bridged interface group.

1. Go to **CONFIGURATION > Configuration Tree > Box > Assigned Services > Firewall > Forwarding Rules**.

1. Click **Lock**.
2. Create a pass access rule with the following settings:
   - **Action** – Select **PASS**.
   - **Bi-Directional** – **Yes**.
   - **Source** – Select **Any (0.0.0.0/0)**
   - **Service** – Select **Any**
   - **Destination** – Select a network object containing all networks or IP addresses for the bridged interfaces. E.g., `10.0.8.0/24` and `172.31.1.25`
   - **Connection Method** – Select **Original Source IP**
3. Create a **Broad-Multicast** access rule with the following settings:
   - **Action** – Select **Broad-Multicast**.
   - **Source** – Select a network object containing all networks or IP addresses for the bridged interfaces. E.g., `10.0.8.0/24` and `172.31.1.25`
   - **Service** – Select **Any**
   - **Connection Method** – Select **Original Source IP**
   - **Destination** – Enter the destination networks/IP addresses. E.g., `10.0.8.25`

     Optional
     To use a DHCP server over the layer 2 bridge, also add **0.0.0.0** to the source and ***255.255.255.255*** to the destination IP addresses.
   - **Propagation List** – Enter the propagation interface or IP address(es). For more information, see How to Create a Broad-Multicast Access Rule.
4. Rearrange the order of the access rules so the new rules can match incoming traffic.
5. Click **Send Changes** and **Activate**.

Figures

1. fw_layer2_bridge.png
2. trans_l2_config.png