

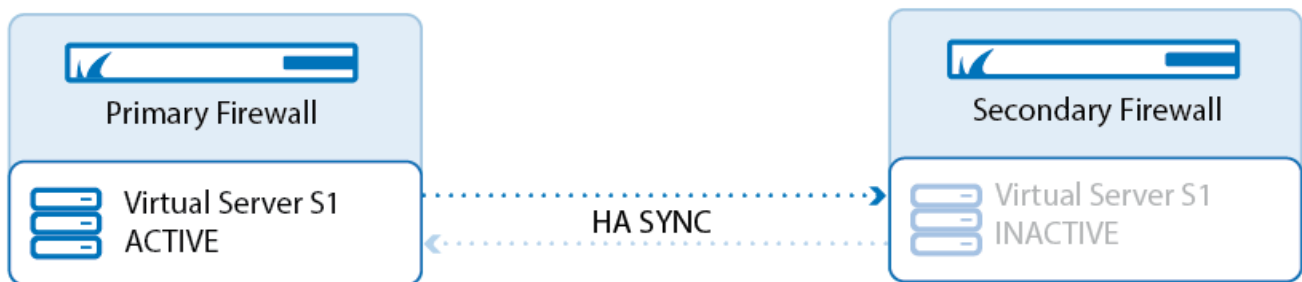
How to Set Up a High Availability Cluster

<https://campus.barracuda.com/doc/79463112/>

Both of the systems that you set up in a high availability (HA) cluster must be the same model and firmware version, but do not have to be the same hardware revision. For instructions on how to configure an HA cluster using different revisions of the same appliance model, see [How to Restore the High Availability Cluster Configuration after an RMA](#).

The functionality of stand-alone and managed high availability clusters are the same. However, the configuration differs. For a stand-alone HA cluster, the primary firewall downloads the licenses for both firewalls, and when the secondary firewall is joined to the HA cluster, the license for the secondary firewall is transferred over. The licenses are bound to the MAC addresses of the primary and secondary firewall. The primary firewall is also the configuration master for all configurations, except the Network page. All configurations and session information are synced from the primary firewall to the secondary firewall. To protect against failure of network components, you can use a dedicated private link as a secondary HA connection.

Standalone HA Cluster



Before You Begin

- Connect the primary firewall and secondary firewall to a network switch.
- Verify the **Product Type** in the **Box Properties** and **Server Properties** match your appliance.






Step 1. (Virtual only) Verify the Product Type


Set the product type matching your license if you are using a virtual Barracuda CloudGen Firewall. This is not necessary on hardware appliances.


1. Go to **CONFIGURATION > Configuration Tree > Box > Box Properties**.
2. Click **Lock**.

3. Select the model from the **Product Type** list. E.g., **CloudGen Firewall VF50**
4. Select the model from the **Hardware Model** list.

Product and Model

OS Platform	NG Firewall	
Product Type	NG Firewall VF50	
Hardware Model	NG Firewall VF50	
Encryption Level	Full-Featured-Encryption	
Storage Architecture	Hard disk	<input type="checkbox"/> Other 

 To activate the unit: open 'Status' page and see 'Appliance' section.

 A set SF model is required for activation on commodity hardware and legacy appliances.

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

Step 2. Create the DHA Firewall

On the primary firewall, create DHA configuration for the secondary firewall.

1. Go to **CONFIGURATION > Configuration Tree > Box**.
2. Right-click **Box** and select **Create DHA box**. At the bottom of the **Config Tree**, the **HA Box** configuration node is added.
3. Open the **HA Network** page (**Configuration > Full Configuration > Box > HA Box**).
4. Enter the **Management IP (MIP)** for the secondary firewall.
5. Click **Send Changes** and **Activate**.

Step 3. Create the PAR File for the Secondary Firewall

On the primary firewall, export the PAR file for the secondary firewall.

1. On the primary firewall, create the PAR file:
2. Go to **CONFIGURATION > Configuration Tree > Box**.
3. From the **Config Tree**, right-click **Box** and select **Create PAR file for HA box**.
4. Save the PAR file to your local hard disk drive.

Step 4. Import the PAR File on the Secondary Firewall

On the secondary firewall, import the boxha.par PAR file created on the primary firewall:

1. Go to **CONFIGURATION > Configuration Tree > Box**.
2. From the **Config Tree**, right-click **Box** and select **Restore from PAR file**.
3. Click **OK**.
4. Select the boxha.par file created in Step3 and click **OK**.
5. Click **Activate**.

Step 5. Activate the New Network Configuration for the Secondary Firewall

On the secondary firewall, activate the network configuration.

1. Go to **CONTROL > Box**.
2. In the left navigation pane, expand **Network** and click **Activate new network configuration**.
3. Select **Failsafe** as the activation mode.
4. In the left menu, expand **Operating System** and click **Reboot**.

Step 6. Select the Active and Backup Firewall

In the virtual server settings of the primary firewall, select where the virtual server should be running.

1. Open the **Server Properties** page (**Configuration > Full Configuration > Box > Virtual Server > your virtual server**).
2. Click **Lock**.
3. Verify that the **Product Type** matches your license.
4. To run the virtual server on the primary firewall per default:
 - **Active Box** – Select **This-Box**.
 - **Backup Box** – Select **Other-Box**.
5. To run the virtual server on the secondary firewall per default:
 - From the **Active Box** list, select **HA-Box**.
 - From the **Backup Box** list, select **Other-Box** or **No-Backup** if you do not want this virtual server to be part of the high availability cluster.
6. Click **Send Changes** and **Activate**.

Step 7. Install Licenses

You must install licenses on both firewalls. For instructions, see [How to Activate and License a Standalone High Availability Cluster](#).

Set up an HA Cluster in the Control Center

Before you Begin

Select two firewalls in the same cluster.

Set up an HA Cluster

1. Log into the Barracuda Firewall Control Center.
2. Open the **Config** page.
3. From the **Config Tree**, expand **Multi-Range** and navigate to the cluster that contains your HA firewalls.

4. Create a virtual server.
5. Open the **Server Properties** page.
6. In the **Virtual Server Definition** section, define the primary firewall and secondary firewall.
 - **Primary Box** - The active system.
 - **Secondary Box** - The HA partner.
7. Click **Send Changes** and **Activate**.

The primary and secondary servers are created and configured as HA partners on both firewalls.

Figure 3. Virtual Server Settings for an HA Cluster on the Control Center

Virtual Server Definition	
Server Name	borderS1
Description	
Product Type	netfence-standard
Encryption Level	Full-Featured-Encryption
Unique Server ID	5bc5bcc8-c279-4d8c-1b12-36e9ab3ab4a0
Primary Box	HQ-Perimeter-HA1
Secondary Box	HQ-Perimeter-HA2

Next Steps

Configure a Private Uplink

To avoid the switch connecting the primary and secondary firewall from becoming the single point of failure for the HA cluster, configure a private uplink for HA sync. Connect both firewalls with a crossover cable. Each firewall receives an additional management IP address in the /30 subnet used for the private uplink. The HA sync can use the private uplink as an alternative to the normal connection between the management IPs, or it can use both links simultaneously.

For more information, see [How to Configure a Private Uplink for a High Availability Cluster](#).

Check the Virtual Server HA Status

Check the server status on both HA firewalls to verify that the virtual servers have been correctly assigned.

1. On the primary firewall, go to the **CONTROL > Server** page. In the **Server Status** table, verify that the virtual server is correctly assigned. The **Status** column must display **primary**. The **Status HA Partner** column must display **standby**.

- On the secondary firewall, go to the **CONTROL > Server** page. In the **Server Status** table, verify that the virtual server is correctly assigned. The **Status** column must display **standby**. The **Status HA Partner** column must display **primary**.

When the primary firewall goes down, the secondary firewall changes its status to **primary** and replaces the primary firewall with all its functionalities. Depending on whether your primary firewall is running or down, the **Control > Server** page displays as follows:

Primary firewall state	Secondary firewall state																																																																																								
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Figures

1. ha_sync_01-01.png
2. HA_set_product_type.png
3. cc_adm1.jpg
4. HA_state_up_primary.png
5. HA_state_up_secondary.png
6. HA_state_down_secondary.png

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