

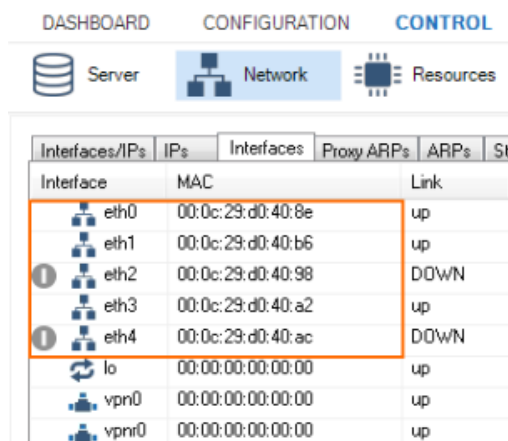
## How to Configure MAC to Interface Mapping

<https://campus.barracuda.com/doc/73719046/>

If you are running a firewall with multiple configured network interfaces, the mapping of the interface names to the corresponding MAC addresses and the order of the interface names (e.g., eth0, eth1, eth2...) are the result of your first configuration. However, it might be necessary at a later time to add further interfaces or change the mapping of interface names to the MAC addresses. To ensure that a special MAC address maps to the correct interface name, you must bind the interface names to their corresponding MAC addresses in a special **MAC to Interface Mapping** table.

### Before You Begin

- Go to **CONTROL > Network**.
- In the upper area, click **Interfaces** to see which MAC addresses map to which interface names and write down their mapping.



Interface	MAC	Link
eth0	00:0c:29:d0:40:8e	up
eth1	00:0c:29:d0:40:b6	up
eth2	00:0c:29:d0:40:98	DOWN
eth3	00:0c:29:d0:40:a2	up
eth4	00:0c:29:d0:40:ac	DOWN
lo	00:00:00:00:00:00	up
vpn0	00:00:00:00:00:00	up
vpn0	00:00:00:00:00:00	up

### Step 1. Verify the Mapping of MAC Addresses to the Interface Names

1. Go to **CONTROL > Network**.
2. Verify the mapping of MAC addresses to the interface names after adding the new Ethernet adapter. In this example, the newly added interface (eth3) incorrectly shows up between the previous order of interfaces.

Depending on your configuration, the order of interfaces can differ!

DASHBOARD CONFIGURATION CONTROL

Server Network Resources

Interfaces/IPs	IPs	Interfaces	Proxy ARP's	ARP's	St
Interface	MAC				Link
eth0	00:0c:29:d0:40:8e				up
eth1	00:0c:29:d0:40:b6				up
eth2	00:0c:29:d0:40:98				DOWN
eth3	00:0c:29:d0:40:c0				up
eth4	00:0c:29:d0:40:a2				DOWN
eth5	00:0c:29:d0:40:ac				DOWN
lo	00:00:00:00:00:00				up
vpn0	00:00:00:00:00:00				up
vpn0	00:00:00:00:00:00				up

## Step 2. Add a Mapping Table to Correctly Bind the MAC Addresses to the Corresponding Interface Names

1. Go to **CONFIGURATION > Configuration Tree > Box > Network > Interfaces**.
2. Click **Lock**.
3. In the left menu, click **Switch to Advanced View**.
4. Click **Show...**
5. The **MAC Mapping** window opens.
6. Set **Use Assignment** to **yes**.
7. For each network interface name and its corresponding MAC address that you wrote down earlier, add two entries in the **MAC to Interface Assignment** table complying with the following template:

If a MAC address contains letters, **use only lowercase letters** when configuring the two corresponding templates for an interface, e.g.: a, b, c, d, e, f.

1. Entry #1: CM2I\_aa\_bb\_cc\_dd\_ee\_ff=ethX. Replace the letters aa to ff by the real numbers from the corresponding MAC address. Replace X by the number of the corresponding interface number. Example: CM2I\_00\_11\_22\_33\_44\_55=eth0.
2. Entry #2: CI2M\_ethX=aa\_bb\_cc\_dd\_ee\_ff. Replace the letters aa to ff by the real numbers from the corresponding MAC address. Replace X by the number of the corresponding interface number. Example: CI2M\_eth0=00\_11\_22\_33\_44\_55.

**MAC to Ethernet Interface Mapping**

Use Assignment

*You may have to include the mapping upon initial installation on commodity server x86 hardware.*

MAC to Interface Assignment

```

CM2I_00_0c_29_d0_40_8e=eth0
CI2M_eth0=00_0c_29_d0_40_8e
CM2I_00_0c_29_d0_40_b6=eth1
CI2M_eth1=00_0c_29_d0_40_b6
CM2I_00_0c_29_d0_40_98=eth2
CI2M_eth2=00_0c_29_d0_40_98
CM2I_00_0c_29_d0_40_a2=eth3
CI2M_eth3=00_0c_29_d0_40_a2
CM2I_00_0c_29_d0_40_ac=eth4
CI2M_eth4=00_0c_29_d0_40_ac
  
```

8. Add two further entries for the new interface name and MAC address according to the two templates shown above. In this example, the new Ethernet adapter must be placed at the end (=eth5) of the former list of Ethernet adapters:

1. Entry #1: CM2I\_aa\_bb\_cc\_dd\_ee\_ff=ethX.
2. Entry #2: CI2M\_ethX=aa\_bb\_cc\_dd\_ee\_ff.

**MAC to Ethernet Interface Mapping**

Use Assignment

*You may have to include the mapping upon initial installation on commodity server x86 hardware.*

MAC to Interface Assignment

```

CM2I_00_0c_29_d0_40_8e=eth0
CI2M_eth0=00_0c_29_d0_40_8e
CM2I_00_0c_29_d0_40_b6=eth1
CI2M_eth1=00_0c_29_d0_40_b6
CM2I_00_0c_29_d0_40_98=eth2
CI2M_eth2=00_0c_29_d0_40_98
CM2I_00_0c_29_d0_40_a2=eth3
CI2M_eth3=00_0c_29_d0_40_a2
CM2I_00_0c_29_d0_40_ac=eth4
CI2M_eth4=00_0c_29_d0_40_ac
CM2I_00_0c_29_d0_40_c0=eth5
CI2M_eth5=00_0c_29_d0_40_c0
  
```

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

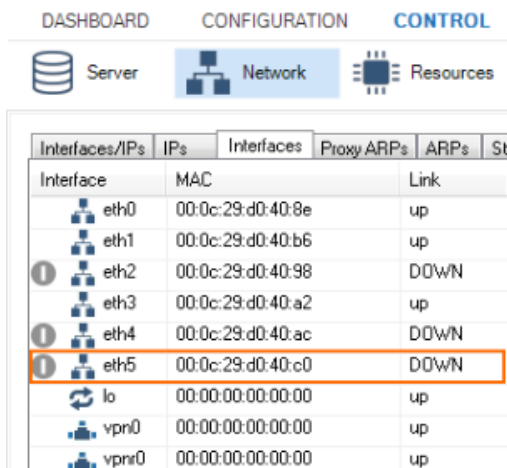
### Step 3. Activate the Network Configuration

You must activate the network changes.

1. Go to **CONTROL > Box**.
2. In the left menu, expand the **Network** section and click **Activate new network configuration**.
3. Select **Failsafe**. The 'Failsafe Activation Succeeded' message is displayed after your new network configurations have been successfully activated.

## Step 4. Verify the Correct Mapping of All MAC Addresses to Their Corresponding Interface Names

1. Go to **CONTROL > Network**.
2. In the upper area, click **Interfaces** to see which MAC addresses map to which interface name and write down the mapping.



The screenshot shows the 'CONTROL' section of the firewall interface, specifically the 'Network' configuration page. The 'Interfaces' tab is active, displaying a table of network interfaces. The table has columns for 'Interface', 'MAC', and 'Link'. The 'eth5' interface is highlighted with an orange border, indicating it is the newly added interface mentioned in the text.

Interface	MAC	Link
eth0	00:0c:29:d0:40:8e	up
eth1	00:0c:29:d0:40:b6	up
eth2	00:0c:29:d0:40:98	D0wN
eth3	00:0c:29:d0:40:a2	up
eth4	00:0c:29:d0:40:ac	D0wN
eth5	00:0c:29:d0:40:c0	D0wN
lo	00:00:00:00:00:00	up
vpn0	00:00:00:00:00:00	up
vpn1	00:00:00:00:00:00	up

The newly added interface is now listed according to the **MAC to Interface Mapping** table.

## Figures

1. MAC\_interface\_mapping\_before\_adding\_interface.png
2. MAC\_interface\_mapping\_after\_adding\_interface.png
3. add\_mapping\_former\_MAC\_interfaces\_names.png
4. add\_mapping\_new\_MAC\_interfaces\_names.png
5. MAC\_interface\_mapping\_with\_correct\_interface\_order.png

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