

Maximizing Throughput on the ASA 5550 Adaptive Security Appliance

The Cisco ASA 5550 Series Security Appliance is designed to deliver maximum throughput when configured according to the guidelines described in this chapter.

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Embedded Network Interfaces

The adaptive security appliance has two internal buses providing copper Gigabit Ethernet and fiber Gigabit Ethernet connectivity:

- Slot 0 (corresponding to Bus 0) has four embedded copper Gigabit Ethernet ports
- Slot 1 (corresponding to Bus 1) has four embedded copper Gigabit Ethernet ports and four embedded SFPs that support fiber Gigabit Ethernet connectivity

**Note**

To establish fiber connectivity on the adaptive security appliance, you must order and install SFP modules for each fiber port you want to use. For more information on fiber ports and SFP modules, see the [“Installing SFP Modules” section on page 3-6](#).

Figure 2-1 shows the embedded ports on the FWSM.

Figure 2-1 Embedded Ports on the ASA 5550

**Note**

Although Slot 1 has four copper Ethernet ports and four fiber Ethernet ports, you can use only four Slot 1 ports at a time. For example, you could use two Slot 1 copper ports and two fiber ports, but you cannot use fiber ports if you are already using all four Slot 1 copper ports.

Balancing Traffic to Maximize Throughput

To maximize traffic throughput, configure the adaptive security appliance so that traffic is distributed equally between the two buses in the device. To achieve this, lay out the network so that all traffic flows through both Bus 0 (Slot 0) and Bus 1 (Slot 1), entering through one bus and exiting through the other.

In [Figure 2-2](#) and [Figure 2-3](#), network traffic is distributed so that all traffic flows through both buses in the device, enabling the adaptive security appliance to deliver maximum throughput.

Figure 2-2 *Traffic Evenly Distributed for Maximum Throughput (Copper to Copper)*

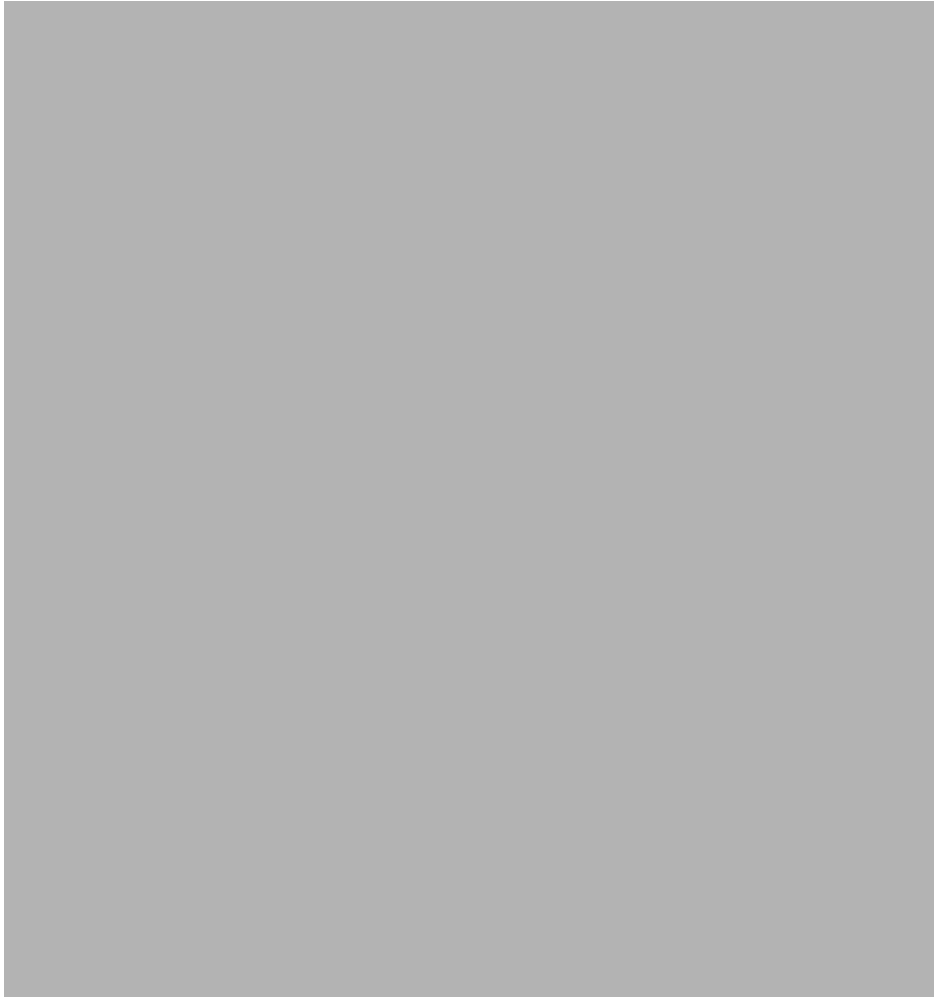


Figure 2-3 *Traffic Evenly Distributed for Maximum Throughput (Copper to Fiber)*



Figure 2-4 illustrates several configurations that do not enable the adaptive security appliance to deliver maximum throughput because network traffic flows through only one bus on the device.

Figure 2-4 ***Configurations Not Enabling Maximum Throughput***



**Note**

You can use the **show traffic** command to see the traffic throughput over each bus. For more information about using the command, see the *Cisco Security Appliance Command Reference*.

What to Do Next

Continue with [Chapter 3, “Installing the Cisco ASA 5550 Security Appliance.”](#)

