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# WatchGuard® High Availability Guide

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The WatchGuard High Availability option enables the installation of two Fireboxes on one network in a failover configuration. At any given moment, one Firebox is in active mode while the other is in standby mode. The standby Firebox activates when the first Firebox goes offline. After a Firebox becomes active, it stays active until it is taken offline and the other Firebox resumes as the primary unit. Both Fireboxes in a High Availability installation must have identical configuration files.

## The High Availability Failover Process

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In a High Availability configuration, the two Fireboxes take turns using a single IP address. One Firebox is the primary unit and assumes the IP address while the other is the standby. The primary/standby relationship is dynamic: The first Firebox to reboot becomes the primary Firebox. If they boot up simultaneously, the two Fireboxes negotiate primary and standby status. When the primary Firebox first boots, it brings up the standby Firebox, which then runs without an IP address. This failover process can take as long as 90 seconds to complete both the heartbeat time and the soft reboot.

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After rebooting, the standby Firebox makes a connection to the primary Event Processor and starts a control channel over which it constantly monitors the active Firebox. If the standby no longer detects the active Firebox, it switches to active mode, running with the last configuration file it received.

To put a new configuration file onto the failover cluster, the Management Station must have network access to both the active and standby Fireboxes.

## Preparing a Network for High Availability

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Prepare for installation according to the heading that best describes your situation:

### **Adding a second Firebox to a functioning Firebox installation**

- If your second Firebox has the WatchGuard LiveSecurity (Firebox) System 4.1 or later installed in its flash memory, use the network connection to configure the Fireboxes via TCP/IP instead of the direct-connect serial cable.
- If your second Firebox has not been initiated with the Firebox Security System 4.1 software, connect it to the Management Station with a serial cable and run the QuickSetup Wizard to initialize it. Then install it on the Trusted interface.

Refer to the “Firebox Read-Only System Area” section of the *Reference Guide* for instructions on installing and configuring a Firebox using a serial cable.

### **Creating a new High Availability installation with two uninstalled Fireboxes**

- If both Fireboxes are packaged with WatchGuard LiveSecurity System (Firebox) software 4.1 or later, use a network connection to configure the Fireboxes via TCP/IP.
- If either Firebox is packaged with LiveSecurity (Firebox) System 4.0 or a previous version of the WatchGuard software, connect that Firebox to the Management Station with a serial cable and run the QuickSetup

Wizard to initialize it. Disconnect the Firebox you just initialized from the serial cable, and attach the second Firebox. Run QuickSetup Wizard a second time. Install both initialized Fireboxes on the Trusted Interface.

Refer to the “Firebox Read-Only System Area” section of the Firebox Security System *Reference Guide* for instructions on installing and configuring a Firebox using a serial cable.

## Installing High Availability

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Your purchase of WatchGuard High Availability includes a license key certificate. You enter your license key when you install the WatchGuard Firebox System software:

- 1 Insert the WatchGuard Firebox System CD.  
If the installation wizard does not start automatically, double-click `install.exe` in the root directory of the CD.
- 2 On the Select Components screen of the installation wizard, click the checkbox marked **High Availability**.
- 3 Enter the High Availability license key found on your license key certificate.
- 4 Continue with the installation of the WatchGuard Firebox System, as described on the QuickStart poster included with your Firebox.

## Configuring High Availability

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Before configuring your firewall for High Availability, you should complete the following:

- The optional High Availability module must be downloaded and installed on the Management Station.
- The two Fireboxes must be identical models.
- Both Fireboxes must be initialized with the LiveSecurity System 4.1 or later software.
- Both Fireboxes should be installed on the Trusted interface, ready to be configured.

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- Identify the active Firebox (configured and currently protecting the network) and the standby Firebox (being added to implement High Availability).

From the Windows desktop:

- 1 Select **Start ⇒ Programs ⇒ WatchGuard ⇒ QuickSetup Wizard**.  
The QuickSetup Wizard appears.
- 2 Use the **Configuration Option** drop list to select **Establish a High-Availability Firebox Cluster**. Click **Next**.  
The High Availability Configuration screen appears.
- 3 Enter the Trusted IP address of the currently active Firebox in the **Active Firebox IP Address** field.
- 4 Enter an unused IP address in the **Stand-By IP Address** field. Click **Next**.  
The Enter Active Firebox Passwords screen appears.
- 5 Enter and confirm the active Firebox read-only password in the **Status Password** and (first) **Confirm** fields.
- 6 Enter and confirm the active Firebox read-write password in the **Configuration Password** and (second) **Confirm** fields.
- 7 Click **Next**.  
The Copy Active Firebox Setup for Fail-safe Operation screen appears.
- 8 Connect both Fireboxes the Ethernet via TCP/IP. Use the **Access Method** drop list to select **Use TCP/IP to Configure (Recommended)**.
- 9 Enter or view the temporary IP address for the new standby Firebox. Click **Next**.  
The Enter Pass Phrase dialog box appears.
- 10 Enter or accept the **Current Configuration Pass Phrase** (this is the read-write password for the standby Firebox). If this is a new Firebox, accept the default password, wg. Click **OK**.
- 11 Turn on the standby Firebox when prompted by the Wizard.  
The Firebox Selector dialog box appears.
- 12 Select the standby Firebox from the **Firebox Selector** list.  
If you are unsure which serial number corresponds to which Firebox on your network click the Blink Lights button. It causes the highlighted Firebox's front panel lights to blink and flash.
- 13 When you have selected the standby Firebox, click **OK**.  
High Availability copies the configuration file from your primary Firebox and uploads it to the standby Firebox. Then both Fireboxes reboot. The first box to finish rebooting becomes the primary Firebox until it is shut off or fails. The active

Firebox front panel lights up to indicate the flow of traffic through the Firebox. The standby Firebox indicates standby mode by alternately blinking the SysA and SysB lights on its front panel.

- 14 [Optional] You can test the High Availability mechanism by turning off the active Firebox.

Within a minute the standby Firebox boots into active mode. When you turn the other Firebox back on, the standby Firebox resumes standby mode.

## Troubleshooting High Availability

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If the second Firebox does not respond to the new configuration, you may need to upload the LiveSecurity (Firebox) System 4.1 version to the Firebox flash disk memory. To do so:

- 1 Connect the second Firebox directly to the Management Station with the serial cable as described in the “Firebox Read-Only System Area” section of the Firebox Security System *Reference Guide*.
- 2 Perform the full Firebox initialization procedure where you start with an unpowered Firebox and turn it on to flash its memory when prompted to do so by the QuickSetup Wizard. See the “Firebox Read-Only System Area” section of the Firebox Security System *Reference Guide*.
- 3 Place the second Firebox on the network next to the first Firebox, on the Trusted Interface.
- 4 Run the QuickSetup Wizard to configure High Availability as described in “Preparing a Network for High Availability” on page 2.

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