



Redundant Ethernet Ports

ETH4 / ETH5 Failover

Technical Bulletin

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Introduction

Redundant Ethernet ports protect network connectivity against a single physical link failure. When enabled, the **ETH4** and **ETH5** ports operate as a primary/secondary pair connected to the same subnet. If the active link goes down, traffic automatically switches to the other port with minimal interruption.

Because both ports are wired to the same network, only one port forwards traffic at any given time. This prevents network loops while keeping a hot standby ready to take over.

How It Works

- **Primary / secondary roles:** ETH4 is the primary port and ETH5 is the secondary (standby) port.
- **Single active port:** forwarding is enabled on ETH4 and disabled on ETH5 while ETH4 is up. The two ports are never active at the same time, so no loop can occur between them.
- **Failover:** if the primary port (ETH4) link goes down while the secondary (ETH5) is up, forwarding is disabled on ETH4 and enabled on ETH5.
- **Automatic revert:** when ETH4 comes back up while ETH5 is in use, traffic automatically reverts to the primary port (ETH4).
- **Detection timing:** link state is polled every 500 ms. A switchover typically completes within 1 to 3 seconds.

Configuration Parameter

Redundancy is controlled by a single configuration parameter:

Property	Value
Parameter	Eth.RedundantPorts
Values	Disable (0) — redundancy off Eth4Eth5 (100) — redundancy on
Default	Disable
SNMP OID	.1.3.6.1.4.1.4935.1000.100.200.100.2400.1.10100.100

Notes:

- Setting the value to **Eth4Eth5** enables automatic switchover of ETH4 traffic to ETH5 on a link failure.
- A service or device restart is required for the change to fully take effect. Check the **NeedRestartInfo** status to confirm whether a restart is pending.
- This feature is not supported on every hardware platform. Confirm that your unit exposes ETH4 and ETH5.

Configuration Steps

- 1) **Wire both ports:** connect ETH4 and ETH5 to the same subnet (typically two ports on the same switch, or two switches on the same LAN).
- 2) **Enable redundancy:** set **Eth.RedundantPorts** to **Eth4Eth5** with command:
`eth.redundantPorts=Eth4Eth5`
- 3) **Restart the unit: Reboot** the unit to apply changes.
- 4) **Confirm the active port:** after restart, verify that ETH4 is the active forwarding port and ETH5 is on standby.

Verification and Monitoring

Checking Port and Link Status

- **Ethernet Ports Status table:** shows the connection state, speed, and duplex of each Ethernet port. Use it to confirm whether ETH4 and ETH5 are physically connected.
- **LinkStatus / LinkState:** indicates whether each link is Up or Disconnected.

Notification Messages

When redundancy is enabled, the following events are reported. Set the notification minimum severity (**MinSeverity**) to **Warning** or lower to receive them.

Event	Severity	Meaning
Link down detected	Warning	A link failure was detected on one of the redundant ports.
Link up detected	Warning	The link is back up on one of the redundant ports.
Switching over to redundant port	Warning	A failure on the primary port triggered a switchover to the secondary port.
Switching back to primary port	Warning	The primary port is back up, and traffic has reverted to it.

Considerations and Warnings

- ETH4 and ETH5 must be connected to the same subnet. The feature provides failover, not load balancing.
- Only one port forwards traffic at a time, so no network loop is possible between ETH4 and ETH5 once the feature is enabled and the unit has rebooted.
- Verify platform support before relying on this feature in production; it is not available on all hardware models.
- Remember that the configuration change only becomes fully effective after the required reboot.

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