



# Port bond modes for E5600SG controller ports

StorageGRID

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# Port bond modes for the E5600SG controller ports

When configuring network links for the E5600SG controller ports, you can use port bonding for the 10-GbE ports that connect to the Grid Network and optional Client Network, and the 1-GbE management ports that connect to the optional Admin Network. Port bonding helps protect your data by providing redundant paths between StorageGRID networks and the appliance.

## Related information

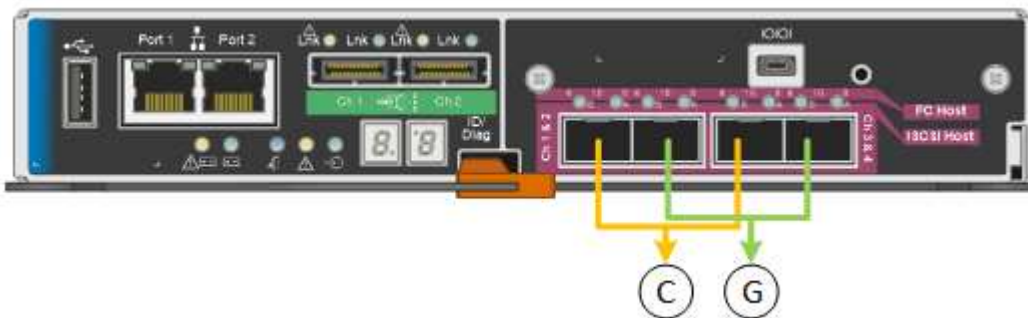
[Configure network links \(SG5600\)](#)

## Network bond modes for 10-GbE ports

The 10-GbE networking ports on the E5600SG controller support Fixed port bond mode or Aggregate port bond mode for the Grid Network and Client Network connections.

### Fixed port bond mode

Fixed mode is the default configuration for the 10-GbE networking ports.



Callout	Which ports are bonded
C	Ports 1 and 3 are bonded together for the Client Network, if this network is used.
G	Ports 2 and 4 are bonded together for the Grid Network.

When using Fixed port bond mode, the ports can be bonded using active-backup mode or Link Aggregation Control Protocol mode (LACP 802.3ad).

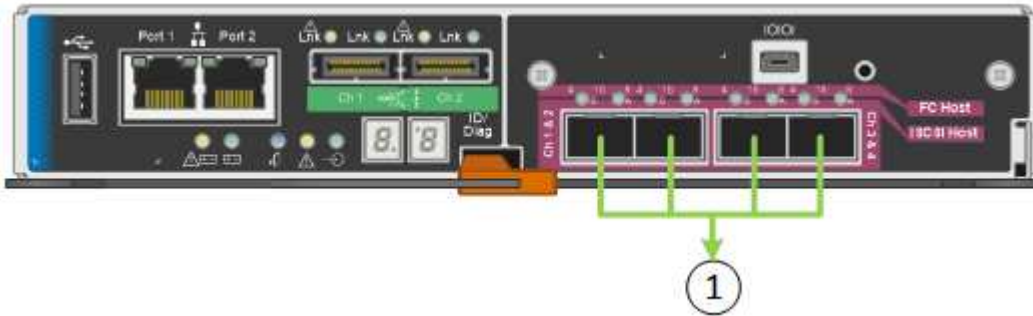
- In active-backup mode (default), only one port is active at a time. If the active port fails, its backup port automatically provides a failover connection. Port 4 provides a backup path for port 2 (Grid Network), and port 3 provides a backup path for port 1 (Client Network).
- In LACP mode, each pair of ports forms a logical channel between the controller and the network, allowing for higher throughput. If one port fails, the other port continues to provide the channel. Throughput is reduced, but connectivity is not impacted.



If you do not need redundant connections, you can use only one port for each network. However, be aware that an alarm will be raised in the Grid Manager after StorageGRID is installed, indicating that a cable is unplugged. You can safely acknowledge this alarm to clear it.

## Aggregate port bond mode

Aggregate port bond mode significantly increases the throughput for each StorageGRID network and provides additional failover paths.



Callout	Which ports are bonded
1	All connected ports are grouped in a single LACP bond, allowing all ports to be used for Grid Network and Client Network traffic.

If you plan to use Aggregate port bond mode:

- You must use LACP network bond mode.
- You must specify a unique VLAN tag for each network. This VLAN tag will be added to each network packet to ensure that network traffic is routed to the correct network.
- The ports must be connected to switches that can support VLAN and LACP. If multiple switches are participating in the LACP bond, the switches must support multi-chassis link aggregation groups (MLAG), or equivalent.
- You must understand how to configure the switches to use VLAN, LACP, and MLAG, or equivalent.

If you do not want to use all four 10-GbE ports, you can use one, two, or three ports. Using more than one port maximizes the chance that some network connectivity will remain available if one of the 10-GbE ports fails.



If you choose to use fewer than four ports, be aware that a **Services appliance link down** alert might be triggered in the Grid Manager after the appliance node is installed, indicating that a cable is unplugged. You can safely disable this alert rule for the triggered alert. From the Grid Manager, select **ALERTS > Rules**, select the rule, and click **Edit rule**. Then, uncheck the **Enabled** check box.

## Network bond modes for 1-GbE management ports

For the two 1-GbE management ports on the E5600SG controller, you can choose Independent network bond mode or Active-Backup network bond mode to connect to the optional Admin Network.

In Independent mode, only management port 1 is connected to the Admin Network. This mode does not provide a redundant path. Management port 2 is left unwired and available for temporary local connections (use IP address 169.254.0.1)

In Active-Backup mode, both management ports 1 and 2 are connected to the Admin Network. Only one port is active at a time. If the active port fails, its backup port automatically provides a failover connection. Bonding these two physical ports into one logical management port provides a redundant path to the Admin Network.



If you need to make a temporary local connection to the E5600SG controller when the 1-GbE management ports are configured for Active-Backup mode, remove the cables from both management ports, plug your temporary cable into management port 2, and access the appliance using IP address 169.254.0.1.



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