

LACP for G series switches

Application notes



LAG (Link Aggregation Group) is a technology that combines multiple physical links into a single logical link. In practice, you rarely see a static LAG - the standard is a **Link Aggregation Control Protocol (LACP)** deployment. This protocol solves two major infrastructure problems: **lack of bandwidth** on critical links and **resilience to outages (high availability)**.

Main deployment scenarios:

- **Core/Distribution layer:** Typically interconnections between core and distribution switches where a single 1G or 10G uplink is no longer sufficient for peak traffic.
- **Server room and storage connectivity:** Aggregation links for hypervisors (VMware vSphere) and disk arrays (NAS/SAN) where continuous availability and high throughput for backups and vMotion VMs are required.

What LACP brings to the table compared to static LAG:

- **Automatic Failover (High Availability):** if a single cable or port failure occurs, LACP then takes the link out of the LAG (within 1~4 seconds) and traffic flows through the remaining active members.
- **Misconfiguration Protection (Liveliness Detection):** if a technician plugs a cable into the wrong port or the switch on the other side loses configuration, the LACP line is disabled. For a static LAG, this would result in a broadcast loop or massive packet loss (blackholing).
- **Load Balancing:** traffic is distributed across all physical links in the LAG (based on source/destination MAC address hashing). The maximum throughput is not determined by the sum of the maximum throughput of each link, but is affected by the traffic itself (who is communicating with whom).

LACP support in METEL G-Series switches

Firmware	Supported models	First Release
From 8.*.*	20G-2X.8.0.G-BOX 20G-2X.8C.0.G-UNIT/1U	June 5, 2026

Nomenclature

- **LAG:** Logical Link Aggregation (Link Aggregation).
- **LACP:** Control Protocol (IEEE 802.1ax) for automatic negotiation and management of port membership in a LAG.

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Description of LACP integration in Metel switches

The switches support up to 8 LAGs. By default, all ports are standalone and do not belong to any LAG. You can always assign any port to a maximum of one LAG (there is no limit to the number of ports in a group), but the maximum number of concurrently active ports in a LAG is 8.

The switch does not control or block the combination of ports in a LAG with RING protocol and RSTP protocol.

Configuration for use with RING protocol

- Do not assign ports that are part of RING to LAGs.

Configuration for use with RSTP protocol

- If RSTP is enabled on the device, you must disable it on ports that are assigned to a LAG.

VLANs must be configured identically for all ports in the LAG.

Applicable scenarios

- Scenario 1: Increase the transmission capacity between two switches using 2 or more links (Max Active Links: 2-8)
- Scenario 2: Redundancy between two switches using 2 or more links (Max Active Links: 1)
- Scenario 3: Redundancy between two stacked switches and two Metel switches using 4 cross-over links (Max Active Links: 1, one common LAG on the stacked switches side)

Note

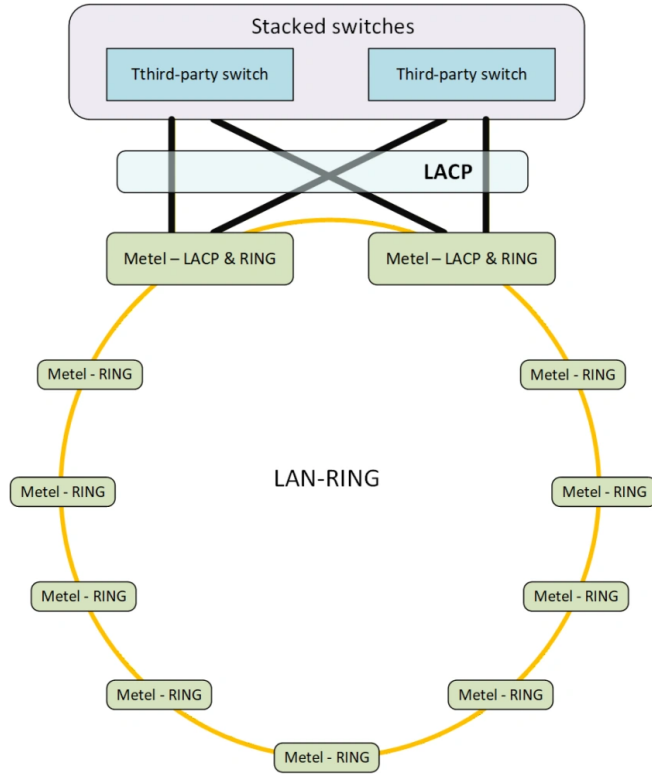
This is the first firmware release with LACP support. As this is a new feature, the software may have minor bugs in isolated cases. We will work hard to fix them in upcoming updates. If you notice any non-standard behavior on your device, please contact us as soon as possible.

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Typical wiring (scenario 3)



Example setup from SIMULand.v4

Device list Configuration 10.104.0.1 [20G-2X8.0.G-BOX]

	LAG	Actor Priority	Actor Mode	Actor Short Timeout	Actor Aggregation	Partner Admin System Priority	Partner Admin System ID	Partner Admin Key	Partner Admin Port	Partner Admin Port Priority
G1	LAG1	128	Active	<input type="checkbox"/>	<input checked="" type="checkbox"/>	0	00:00:00:00:00:00	0	0	0
G2	LAG1	128	Active	<input type="checkbox"/>	<input checked="" type="checkbox"/>	0	00:00:00:00:00:00	0	0	0
G3	None	128	Active	<input type="checkbox"/>	<input checked="" type="checkbox"/>	0	00:00:00:00:00:00	0	0	0
G4	None	128	Active	<input type="checkbox"/>	<input checked="" type="checkbox"/>	0	00:00:00:00:00:00	0	0	0
G5	None	128	Active	<input type="checkbox"/>	<input checked="" type="checkbox"/>	0	00:00:00:00:00:00	0	0	0
G6	None	128	Active	<input type="checkbox"/>	<input checked="" type="checkbox"/>	0	00:00:00:00:00:00	0	0	0
G7	None	128	Active	<input type="checkbox"/>	<input checked="" type="checkbox"/>	0	00:00:00:00:00:00	0	0	0
G8	None	128	Active	<input type="checkbox"/>	<input checked="" type="checkbox"/>	0	00:00:00:00:00:00	0	0	0
X1	None	128	Active	<input type="checkbox"/>	<input checked="" type="checkbox"/>	0	00:00:00:00:00:00	0	0	0
X2	None	128	Active	<input type="checkbox"/>	<input checked="" type="checkbox"/>	0	00:00:00:00:00:00	0	0	0

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Device list Configuration 10.104.0.1 [20G-2X.8.0.G-BOX] X

	Enable	System priority	System ID	Admin Key	Max Active Links
L1	<input checked="" type="checkbox"/>	32768	00:23:36:68:00:01	100	1
L2	<input checked="" type="checkbox"/>	32768	00:23:36:68:00:01	200	8
L3	<input checked="" type="checkbox"/>	32768	00:23:36:68:00:01	300	8
L4	<input checked="" type="checkbox"/>	32768	00:23:36:68:00:01	400	8
L5	<input checked="" type="checkbox"/>	32768	00:23:36:68:00:01	500	8
L6	<input checked="" type="checkbox"/>	32768	00:23:36:68:00:01	600	8
L7	<input checked="" type="checkbox"/>	32768	00:23:36:68:00:01	700	8
L8	<input checked="" type="checkbox"/>	32768	00:23:36:68:00:01	800	8