

SWITCHING | REV 2.0 | REVIEWED 2026-10-10

LACP & port-channel troubleshooting

01 / Quick reference and concepts

Check whether links are actually participating in a bundle and explain why a single flow does not use its total capacity.

IEEE LACP on Catalyst IOS XE and Junos ae interfaces. Static channels, multi-chassis features and vendor flags have separate semantics.



LACP decides participation. The forwarding hash chooses a member for a flow; two 10G members do not guarantee 20G for one transfer.

Item	Meaning	Check
Active / passive	At least one active peer initiates	Passive + passive does not initiate
Actor / partner	Local and peer negotiation state	Correct peer system and key
Collecting / distributing	Member eligible to receive/send	Not just physical link up
Logical interface	Port-channel or ae	VLANs, MTU and L3 config
Minimum links	Threshold for bundle operation	Design versus surviving members
Hashing	Flow-to-member selection	Distribution across multiple flows

What to understand first

- Treat the aggregate as one logical forwarding interface. Confirm member compatibility and the logical interface configuration rather than only comparing physical status.
- Negotiated LACP and a forced static channel are different mechanisms. Mixing them can leave individual links or create an unsafe forwarding topology.
- Cisco summary flags must be read against the legend in that output. Junos actor/partner state and collecting/distributing indicate negotiation and participation.
- A surviving member may satisfy link state but fail a capacity or minimum-links requirement. Monitor both health and the service acceptance threshold.

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02 / Commands and worked example

Replace documentation addresses, example interfaces and every <PLACEHOLDER>. Check command help for your model/release and routing context. Examples are documentation-reviewed, not executed on customer equipment.

Cisco IOS XE

Read-only EXEC

```
show etherchannel summary
show lacp neighbor
show interfaces port-channel 1
show interfaces trunk
```

Inspect: Verify bundled member flags, the expected peer, logical errors and carried VLANs.

Junos

Read-only operational

```
show lacp interfaces
show interfaces ae0 extensive
show interfaces terse
```

Inspect: Check actor/partner synchronization and eligible members; compare ae0 counters with physical members.

Illustrative bundle evidence

Illustrative teaching example, not captured device output.

```
Expected members: 2 x 10G
Member A: collecting / distributing
Member B: link up, not synchronized
Logical bundle: up on Member A
```

- Service may remain reachable while redundancy and capacity are degraded. Inspect partner state on Member B.
- This is a normalized teaching example; vendor output names and flags differ.

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03 / Troubleshooting and acceptance

1. Check the actual cabling and peer system on every member.
2. Compare LACP mode, system/key information and compatible link settings at both ends.
3. Verify member participation, logical VLAN/L3 configuration and minimum-links behavior.
4. Compare timed error samples; run multiple representative flows for a capacity test.
5. Perform only an approved member-loss test and observe application continuity.

Common mistakes

- Forcing channel mode to conceal a negotiation mismatch.
- Expecting a single TCP flow to fill every member.
- Declaring success because the logical interface remains up with a missing member.

Acceptance checks

- All planned members participate with the correct peer.
- Logical VLANs, MTU and routing match the intended service.
- Member-loss behavior and available capacity meet acceptance criteria.

Primary references

[Cisco IOS XE EtherChannels](#)[Junos LACP inspection](#)[Cisco IOS XE VLAN trunks](#)

Original Wolex diagrams, scenarios and troubleshooting sequences. Vendor names identify platform scope; no affiliation is implied.

[Read the full web guide and supporting references](#)

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