

AI in Network Operations: 4 Use Cases

The jobs where a model genuinely does something a threshold cannot

Four jobs worth automating

1. Anomaly detection on interface and traffic behavior

Learns each link's normal range and daily shape, then flags deviation from the baseline — so a degrading optic or flapping port is caught while it is still a performance issue, not an outage.

2. Alert correlation across devices, layers, and domains

Groups SNMP traps, syslog, and threshold events by topology and timing — one upstream failure becomes one incident with the probable origin on top, not hundreds of notifications.

3. Capacity trend forecasting for links and devices

Projects per-interface utilization forward against its own growth curve — upgrades are scheduled against a date rather than an incident.

4. Automated root-cause hints

Assembles the evidence an engineer would gather by hand: topology path, counters around the event window, adjacent events, recent changes, hardware health. A shortcut, not a verdict.

What has to be in place first

- An accurate topology — correlation is only as good as the dependency map
- Enough history to build a baseline for this link, not a generic one
- Normalized events across multi-vendor equipment
- Hardware-layer telemetry alongside the network view
- A defined boundary for automation: act, recommend, or record for audit

These use cases fail for data reasons far more often than for model reasons.

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