

Amdocs Autonomous Network Operations

Solution Brief

For CSPs, network automation is already underway. The challenge is what comes next: reaching Level 4 autonomy and above across domains, at scale, without starting over.

Three obstacles consistently stall the journey to Autonomous Networks Level 4 and above:

- Operational complexity rooted in siloed systems and rigid processes
- Fragmented, AI-unready data compounded by scarce AI skills
- Limited trust in AI, restricting integration into live workflows

An agentic operating system for autonomous networks

Amdocs Autonomous Network Operations delivers end-to-end autonomy across network domains and operational processes, from problem resolution and preventive operations through to planning, optimization, and change management. It runs on aOS, Amdocs' agentic operating system for telco, built on decades of network operations expertise and designed to integrate with any OSS stack without displacing it. Leveraging high-performance AI acceleration across AWS, Google Cloud, Microsoft Azure, and NVIDIA, aOS is engineered for deployment at hyperscaler scale.

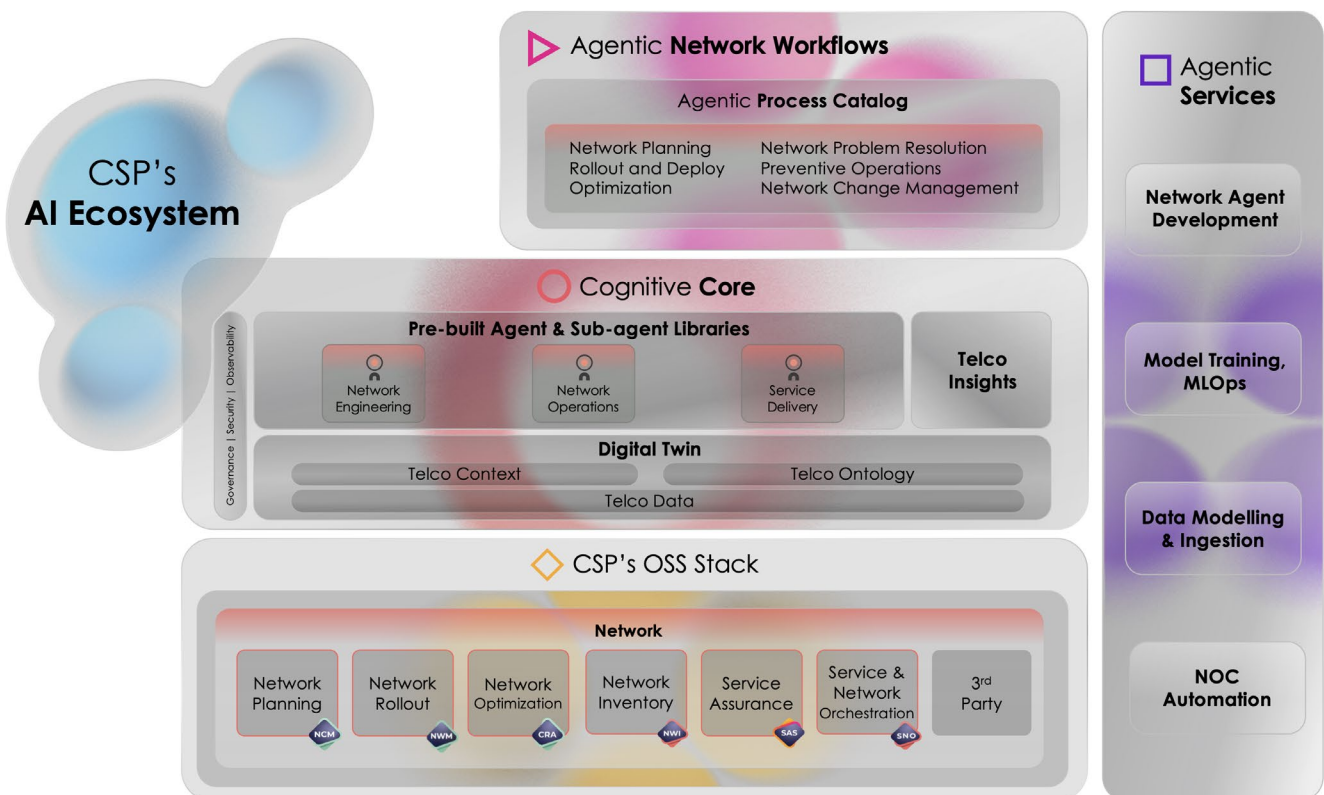


Figure 1: Amdocs Autonomous Network Operations, powered by aOS

Cognitive Core

At the center of Autonomous Network Operations is the Cognitive Core – rich libraries of telco-specific agents and ML-trained insights that integrate with any OSS stack and AI ecosystem. Open by design, it gives CSPs the flexibility to adopt individual assets selectively, without committing to a complete architectural change.

Agents are organized in hierarchies built around real operational responsibilities, such as network engineering, service delivery and network operations. Each hierarchy is accountable for a defined outcome and coordinates specialized sub-agents to reach it. A Monitor and Triage agent, for example, directs sub-agents for problem identification and isolation, applying consistent logic across domains, with governance, lifecycle control, and accountability maintained at every level.

Operational Digital Twin

Autonomous execution depends on accurate, contextualized data. The Cognitive Core includes an operational digital twin that maintains a continuously reconciled view of the network, drawing from OSS and network systems through telco-specific ontologies.

Ingest agents consolidate fragmented information into a coherent operational model, surface gaps, reconcile inconsistencies, and resolve conflicts autonomously where possible, escalating to humans when the decision warrants it. ML models then train on real alarms and performance data, augmented with synthetic data to cover rare and complex scenarios, producing a reliable intelligence layer that supports agentic decision-making at production scale.

Agentic Network Workflows

Amdocs Agentic Network Workflows translate the intelligence of the Cognitive Core into daily operations. Each workflow is a ready-to-deploy process built around telco-specialized AI agents that orchestrate end-to-end execution across network domains:

- Network problem resolution
- Preventive operations
- Network change management
- Network rollout & deploy
- Network planning & optimization

Agents, decision boundaries, escalation points, and performance KPIs, such as MTTI and MTTR, are defined within each workflow, while engineering teams gain outcome-based automation with full operational visibility and control at every stage.

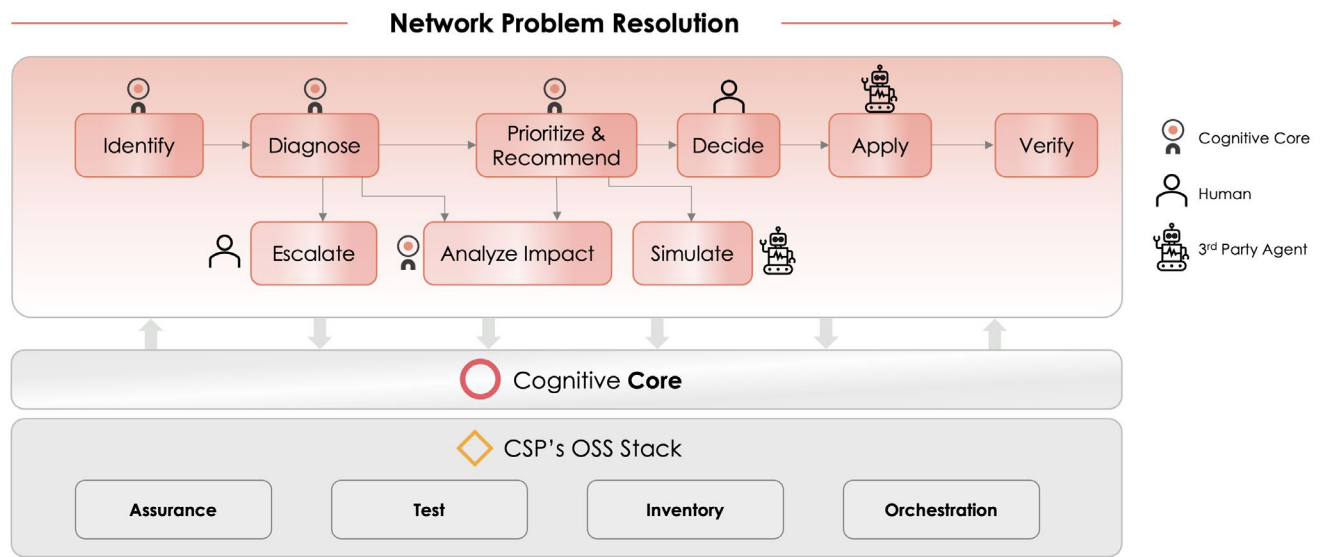


Figure 2: Network problem resolution workflow

Amdocs Networks products

Autonomous Network Operations operates across the full network lifecycle, integrating with any underlying OSS. Amdocs Networks products provide a telco-grade foundation layer spanning network planning, rollout, orchestration, activation, inventory, and assurance, pre-integrated with Autonomous Network Operations for CSPs who want to move quickly without added integration work. This combination enables:

- End-to-end lifecycle automation across network domains
- Intent-driven execution that connects desired outcomes to automated action
- Progressive OSS modernization that works with existing infrastructure

Ready to take the next step?

See how Amdocs Autonomous Network Operations performs in a live demo. Speak with one of our network operations specialists to explore what the journey looks like for your OSS architecture.

[Autonomous network operations with AI agents & digital twins](#)

Why Amdocs

Autonomous Network Operations demands a deep understanding of how telco operations run, where failure occurs, and how trust is built over time.

With 25+ years of OSS and network operations leadership and deployments across 100+ CSPs spanning fixed, mobile, and satellite networks, Amdocs brings the combination of AI innovation, telco depth, and delivery track record this transition requires.

- **Built-in GenAI & Agentic AI:** Driving autonomous network operations at production scale
- **Patented, proven AI/ML:** Field-proven ML for real-time anomaly detection and root cause resolution
- **End-to-end service & network lifecycle:** Unified orchestration from design and fulfillment through assurance and optimization
- **Vendor- and hyperscaler-agnostic:** Open, multi-vendor architecture with flexible cloud deployment across leading hyperscalers
- **Modular, standards-aligned design:** Phased adoption model that lowers TCO while reducing integration risk
- **Award-winning OSS portfolio:** Recognized by customers and leading industry analysts for innovation and delivery



Amdocs helps the world's leading communications and media companies deliver exceptional customer experiences through reliable, efficient, and secure operations at scale. We provide software products and services that embed intelligence into how work runs across business, IT, and network domains – delivering measurable outcomes in customer experience, network performance, cloud modernization, and revenue growth. With our talented people, and more than 40 years of experience running mission-critical systems around the globe, Amdocs runs billions of transactions daily. Our technology is relied on every day, connecting people worldwide and advancing a more inclusive, connected world. Together, we help those who shape the future to make it amazing.

Amdocs is listed on the NASDAQ Global Select Market (NASDAQ: DOX) and reported revenue of \$4.53 billion in fiscal 2025.

For more information, visit www.amdocs.com

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