

BROCHURE

Orchestrating Autonomous Networks and Private 5G with Red Hat Ansible

Transform agentic AI insights into governed operations across multi-vendor telco and private 5G edge environments





Rethinking Network Operations for the Autonomous Era

Day-to-day network operations in telco and enterprise environments are reactive, slow, error-prone, and inconsistent due to reliance on manual CLI changes, leading to configuration drift across multi-domain environments. The complexity of 5G, the need to reduce operational costs, AI-native performance optimization, and the delivery of real-time, zero-touch service experiences have further made autonomous network operations a top priority for telcos. The enterprise adoption of private 5G networks, which is increasing by 59% annually, fueled by demand for ultra-low latency, enhanced Fsecurity, and exclusive bandwidth to power mission-critical automation for Industry 4.0 and smart factories, has led enterprises to transition to autonomous, AI-driven architectures.

We are orchestrating autonomous networks solution, now extended with the autonomous service assurance for private 5G (ASAP), provides agentless, policy-driven automation that serves as the execution layer for agentic AI. It allows autonomous network functions by turning insights into production-grade operations across both macro telco clouds and distributed enterprise edges.



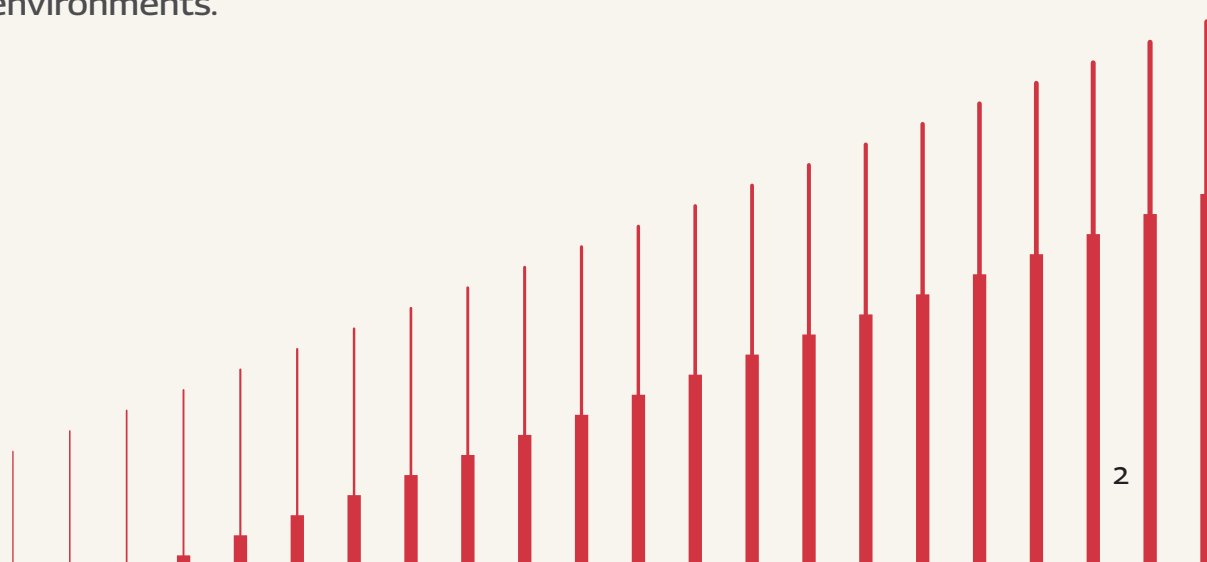


Our solution is built on the Red Hat Ansible automation platform and Red Hat OpenShift, delivering unified, event-driven automation for Day-0 provisioning, Day-1 configuration, and Day-2 operations. The solution extends to private 5G and other enterprise use cases through ASAP, which enables rapid deployment and orchestration of virtualized central units (vCU), virtualized distributed units (vDU), and multi-access edge computing (MEC) applications.

Tech Mahindra enhances the core Red Hat platform with:

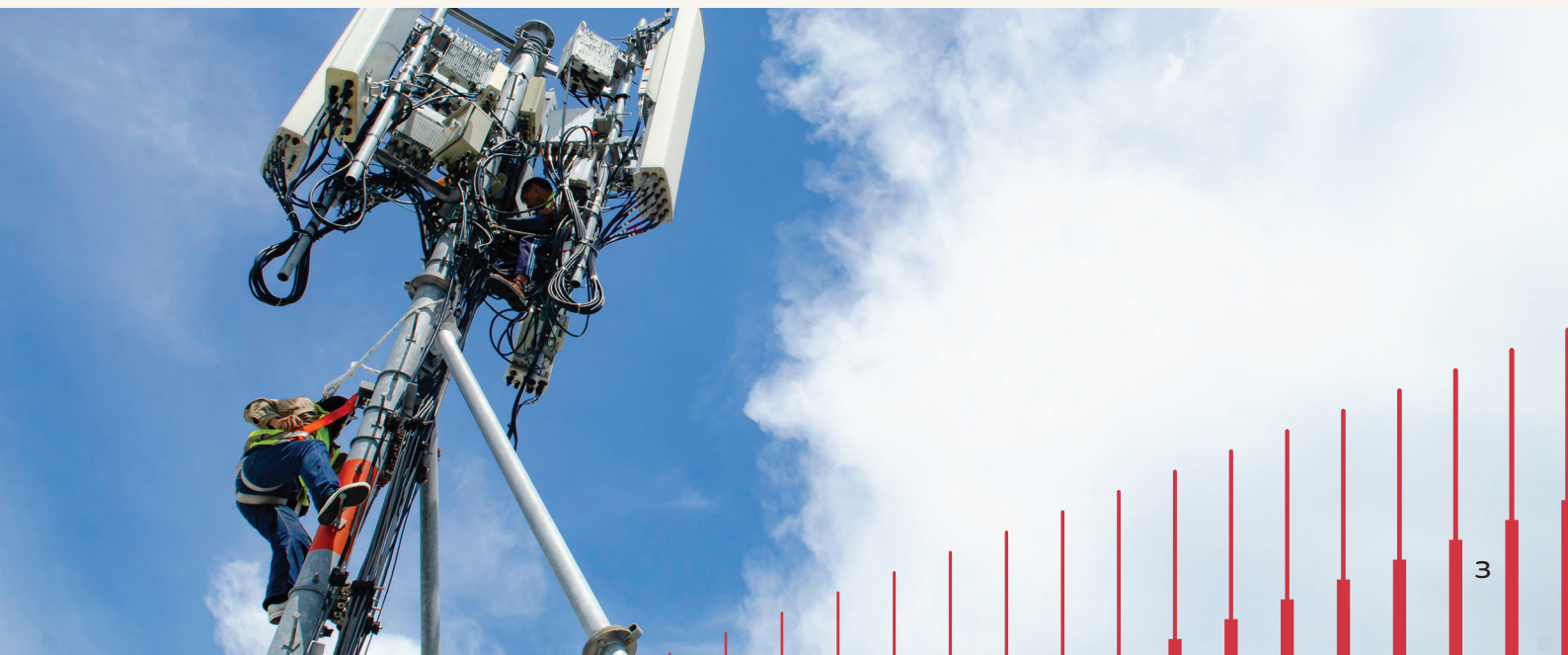
- **TechM ASAP** is a tailored framework for deploying and managing private 5G and multi-edge computing (MEC) environments on Red Hat OpenShift. It enables local data breakout, high security, and ultra-low latency for enterprise on-demand services.
- **Event-Driven Ansible (EDA) and Ansible Lightspeed (GenAI)** provide capabilities for closed-loop remediation across both core networks and distributed private 5G enterprise nodes.
- **Telco-specific Automation Blueprints** equip pre-built OSS/BSS and ITSM mappings for both enterprise and telco use cases.
- **Deep Integration with Observability and AI Layers** for dynamic resource allocation and state-aware network operations.

In this framework, the Agentic AI layer determines 'what' needs to be executed by learning from network data, while Ansible controls 'how' and 'when' to scale that action, ensuring strict role-based access control (RBAC) and compliance across hybrid environments.



Benefits

- Accelerates 5G rollout through end-to-end deployment of enterprise private 5G and MEC environments on Red Hat OpenShift, reducing time-to-market and provisioning time from days to minutes.
- Enables proactive self-healing at the edge by leveraging event-driven Ansible workflows enhanced with AI anomaly detection, reducing mean time to repair (MTTR) by 50-75% in highly distributed private 5G and MEC environments.
- Delivers dynamic network slicing that guarantees SLAs for diverse private 5G use cases over the same physical infrastructure. This includes use cases such as low-latency uRLLC for robotics, high-bandwidth eMBB for AR/VR, and mMTC for smart sensors
- Embeds data sovereignty and security through local MEC breakout and governed, auditable automation policies that enable strict enterprise data privacy and compliance with regulations.
- Provides a scalable foundation for progressing from manual operations to TM Forum Level 4 autonomous network operations maturity across 5G core, transport, and enterprise edge environments.





Accelerating Next-gen Autonomous Network Operations

The velocity and complexity of modern multi-domain and edge networks have made autonomous network operations a key priority for telcos and enterprises. This shift necessitates a transformation from traditional network operations that rely on manual processes and ungoverned scripts to fully autonomous networks as defined by the TM Forum. The explosion of private enterprise 5G further extends autonomous networks into multi-agent systems and agentic NetOps. Tech Mahindra's solution eliminates traditional pain points and challenges by delivering governed, AI-augmented automation that ensures reliability, compliance, and speed.

TechM Advantage

- Premier Red Hat partner
- Proven netOps.ai blueprints
- Industry-leading toolkits to enable end-to-end delivery
- Comprehensive lifecycle management tailored for both CSPs and enterprise customers
- 15 joint solutions co-engineered with Red Hat
- Deep telecom domain expertise with governed AI-to-action frameworks
- 5,000+ certified professionals and over 15 proven joint GTM solutions

Next Steps

Visit techmahindra.com/Redhat or write to NSMarketing@techmahindra.com to schedule an assessment and discover tailored ROI opportunities.



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