

TCS HOBS™ Digital Network Operations



Communication Service Providers (CSPs) encounter several challenges transitioning to digital network operations. These challenges include:

- Legacy infrastructure that lacks the agility and flexibility required for digital operations.
- Manage the complexity of modern networks with a diverse range of technologies and devices.
- Data scattered across multiple tool sets, models, and mediums, orchestration capabilities to streamline operations.
- Capture, process, and analyze data to derive actionable insights.

Leveraging data, automation, artificial intelligence, and machine learning to monitor, analyze, and optimize network performance in real time is the key to transforming and modernizing networks.

Overview

TCS HOBS Digital Network Operations is a highly scalable, multitenant, and cloud-based digital OSS platform. It provides a single pane of glass for monitoring and management needs across original equipment manufacturers (OEMs), networks, and domains. With data analytics and AI-based insights, the platform enables CSPs to proactively identify and address potential network issues before they escalate into service disruptions.

Our solution

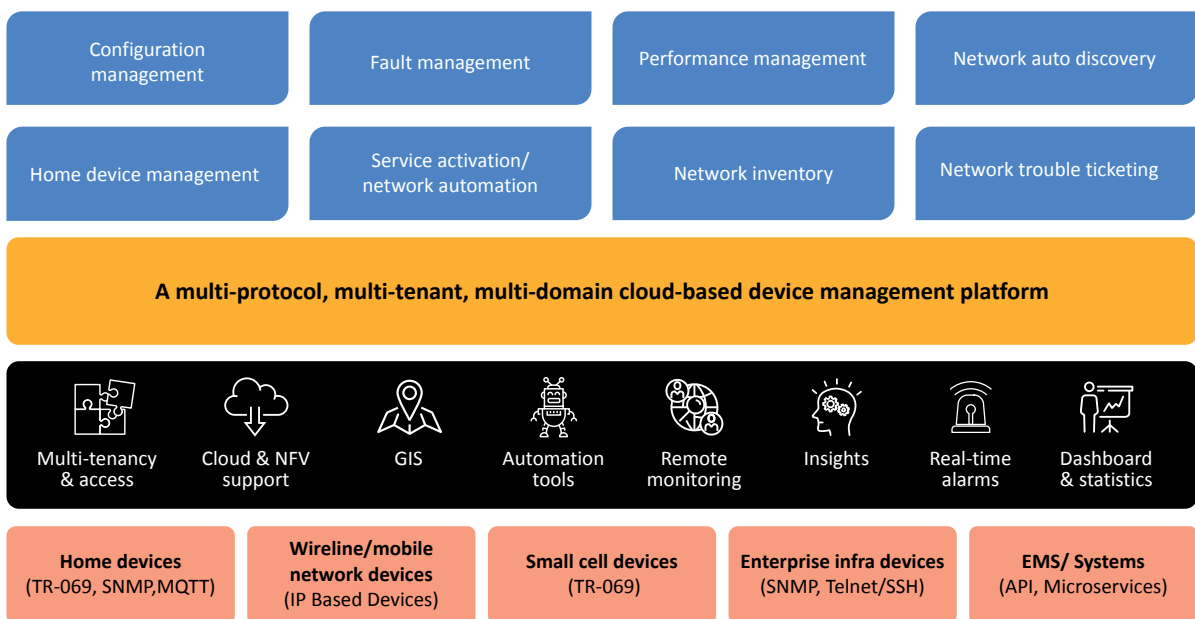


Figure 1. An overview of the TCS HOBS™ Digital Network Operations

The platform suite, shown in fig.1 above, comprises:

- **Network configuration management:** Manages baseline configuration, performs audits and diagnostics, and runs remedial procedures.

- **Fault management:** Enables focused network fault and trap handling and monitoring, rule engine and filters, geographical view, and dynamic dashboards and alarms.
- **Performance management:** Provides network performance and availability monitoring, link service level agreement (SLA) monitoring, server performance, key performance indicator (KPI) monitoring and threshold breaches, device statistics, and geographical view.
- **Network auto-discovery:** Discovers devices/elements in the network automatically by running scheduled campaigns. It also reconciles the discovered data with network inventory/configuration management database (CMDB) systems.
- **Home device management:** Facilitates device provisioning, remote diagnostics, customer service agent empowerment, and reactive and proactive monitoring.
- **Service activation:** Automates network functions, performs technical order orchestration, bulk resource activation or deactivation, rollbacks, and prioritization.
- **Network inventory management system:** Acts as a single source of truth for physical, logical, and virtual resources. It also manages IP addresses and service inventory.
- **Network trouble ticketing:** Tracks and addresses network disruptions and ensures quick resolution by handling ticket lifecycles. This system also maintains a knowledge base to suggest resolutions based on past experiences.

The platform goes beyond conventional network management by giving CSPs access to a data lake and a shared data bus. This facilitates them in building their analytics and dashboards by leveraging the data shared on the data bus. Further, the data lake can be used for efficient analytics and data-driven decision-making, enabling CSPs to optimize network performance and drive strategic insights.

The key highlights of TCS HOBS Digital Network Operations include:

- A unified activation, configuration, fault, performance, and home device management platform.
- Standardized, automated solution supporting several protocols – including Telnet, secure shell (SSH), simple network management protocol (SNMP), TR-069 Family, CPE WAN management protocol (CWMP), open mobile alliance (OMA) device management (DM), network configuration protocol (NETCONF), and common object request broker architecture (CORBA).
- Unified OSS database uniform data model that helps achieve end-to-end monitoring and management.
- Provides complete automation of network tasks to move towards zero-touch automation.
- Enables extending specific features to information technology or channel partners.

Benefits

With TCS HOBS Digital Network Operations, CSPs and media operators can:

- Transform network operations by leveraging the data-first approach
- Save up to 70% of operational efforts by simplifying and automating processes
- Reduce network downtime by up to 15% and mean time to repair (MTTR) by up to 20%
- Unify data to achieve end-to-end monitoring and management
- Integrate OSS stack with a faster launch in three to five months

TCS Advantage

We partner with enterprises to drive growth and transformation with the following:



Future-proof digital platform: The platform considers scalability, performance, integration, and security. With a machine-first approach, business-centric product-based operating model, and enterprise-wide agile adoption, we build differentiating capabilities to ensure success.



Domain expertise: Partnering with us unlocks access to technology and domain experts who follow industry-leading practices, driving impactful business outcomes.



Implementation ownership: At the core of our approach lies a well-established practice for executing transformation programs, where we take on full ownership during solution implementation to attain expected results.



Awards and accolades



Contact

Visit the <https://www.tcs.com/what-we-do/products-platforms/tcs-hobs/solution/hobs-digital-network-operations> page on <https://www.tcs.com>

Email: hobs.marketing@tcs.com

About Tata Consultancy Services Ltd (TCS)

Tata Consultancy Services is an IT services, consulting and business solutions organization that has been partnering with many of the world’s largest businesses in their transformation journeys for over 56 years. Its consulting-led, cognitive powered, portfolio of business, technology and engineering services and solutions is delivered through its unique Location Independent Agile™ delivery model, recognized as a benchmark of excellence in software development.

A part of the Tata group, India’s largest multinational business group, TCS has over 601,000 of the world’s best-trained consultants in 55 countries. The company generated consolidated revenues of US \$29 billion in the fiscal year ended March 31, 2024, and is listed on the BSE and the NSE in India. TCS’ proactive stance on climate change and award-winning work with communities across the world have earned it a place in leading sustainability indices such as the MSCI Global Sustainability Index and the FTSE4Good Emerging Index.

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