TATA COMMUNICATIONS

Turning operational complexity into proactive control

How Tata Communications runs its global IT operations on ThreadSpan™

An AI-native control layer unifying a multi-vendor, hybrid estate — standardising workflows, automating execution, and enabling proactive IT operations.

88% MTTR reduction

20+ OEMs across 5 domains

100+ Autonomous agents

30,000+ Components under management

How ThreadSpan™ powers Tata Communications' global IT operations

As enterprises adopt hybrid and multi-cloud environments, IT teams face increasing complexity, fragmented visibility, and pressure to maintain service reliability across network, cloud, data centre, security, and end-user environments.

Tata Communications' own internal IT faces these same pressures — at the scale of a company serving customers in 190+ countries, connecting 300+ Fortune 500 enterprises, and carrying ~30% of the world's internet routes. ThreadSpan™ now runs across this entire estate as a single control layer.

Environment snapshot

Infrastructure domains:
5 (Network, cloud, security, infrastructure services, and end-user computing)

Geographic footprint:
Global (50+ regions)

Technology ecosystem:
Multi-vendor and heterogeneous landscape spanning 20+ OEMs

Infrastructure assets:
3,000+ servers

Current status:
Manual reactive operations

Infrastructure components managed:
30,000+ (servers, routers, switches, firewalls, APs, controllers)

The challenges of managing a complex IT estate

Like many global enterprises, Tata Communications' IT environment evolved organically across business units, technology refresh cycles, cloud adoption, and security initiatives. While this enabled scale, it also introduced operational complexity and limited real-time visibility across the IT estate.

Five interconnected challenges shaped day-to-day operations:

Limited enterprise-wide IT estate visibility

The foundation of effective IT operations is knowing what exists, where it resides, and how it is connected. Across a multi-domain, multi-vendor environment, approximately **20% of assets were undiscovered or inaccurately represented in the CMDB**, while **25% of configuration items had incomplete relationship mapping.** Asset inventories were maintained across multiple tools and teams, with limited correlation to the live infrastructure state.

High operational noise and slow root-cause analysis

Without correlated signals across infrastructure domains, identifying the root cause of incidents was often time consuming. Operations teams manually triaged millions of **monitoring events every month**, with **45% consisting of duplicate or non-actionable alerts.** Critical incidents could take an MTTR of **4 to 8 hours** to resolve.

Fragmented operational visibility across tools

Operational data was distributed across multiple monitoring and management platforms, preventing a unified view of the IT estate. Engineers spent **around 30% of troubleshooting time switching between tools**, while an internal assessment found **approximately 30% overlap in tool capabilities.**

Heavy reliance on manual operations

Core operational activities, including incident triage, configuration deployment, and service restoration, relied heavily on manual intervention. **Nearly 50% of operational tasks required manual effort**, increasing response times and limiting operational scalability.

Governance and compliance drift across a multi-vendor estate

Maintaining policy compliance across a heterogeneous OEM landscape required significant manual effort. Compliance validation was largely driven by **quarterly audits rather than continuous monitoring**, which regularly identified **12 to 15% of devices with active policy drift.** Preparing for each audit required **2 to 4 weeks of manual effort.**

"We deployed ThreadSpan™ inside Tata Communications to address the same operational challenges our customers face every day. Running it on our own IT environment gives us confidence in how it performs at scale — and allows us to demonstrate real outcomes."

— Puneet Sethi

Vice President and Global Head of Product, ThreadSpan™, Tata Communications

ThreadSpan™: One control layer across the entire enterprise

To address the operational drag created by tool sprawl, manual triage, and fragmented governance, Tata Communications deployed ThreadSpan™ as a unified control layer across its internal IT environment.

Rather than replacing existing systems, ThreadSpan™ sits above them — an adapter-based fabric that unifies monitoring, automation, governance, and execution across network, cloud, security, infrastructure services, and end-user computing. Existing OEM tools, ITSM systems, and vendor consoles keep running; ThreadSpan™ makes them act as one.

The shift is less about tooling and more about operating-model standardisation — common workflows for incident handling, change, and compliance, applied consistently across every domain.

How ThreadSpan™ was deployed across the enterprise

The deployment followed a structured arc — establish what exists, define what should happen, unify how it is seen, and secure how it operates.

Continuous discovery — establishing complete visibility across the estate

AI-led discovery created a live blueprint of the infrastructure estate — capturing assets, dependencies, and configuration state in near real time, rather than through periodic audits.

30,000+ devices brought under management across servers, routers, switches, firewalls, APs, and controllers.

Three-tier agentic execution — defining and automating workflows

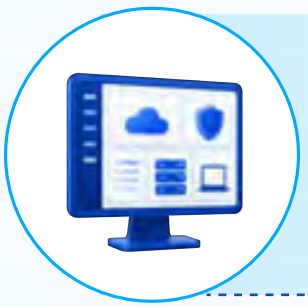
ThreadSpan™ established a three-tier agentic execution model — Threads, Journeys, and Minds that standardised operational workflows and enabled autonomous execution across the technology landscape. Threads execute individual actions. Journeys coordinate end-to-end workflows. Minds interpret context and make governed decisions.

Common workflows for configuration management, incident triage, compliance validation, and patch execution were embedded across domains, replacing tower-specific scripting with policy-driven, cross-domain orchestration.

100+ autonomous agents across **5** domains — network, cloud, security, infrastructure services, and end-user Computing

20+ vendors integrated through adapter-based connectors

Agentic AI applied to network CPU, memory, link utilisation, hardening, and patching

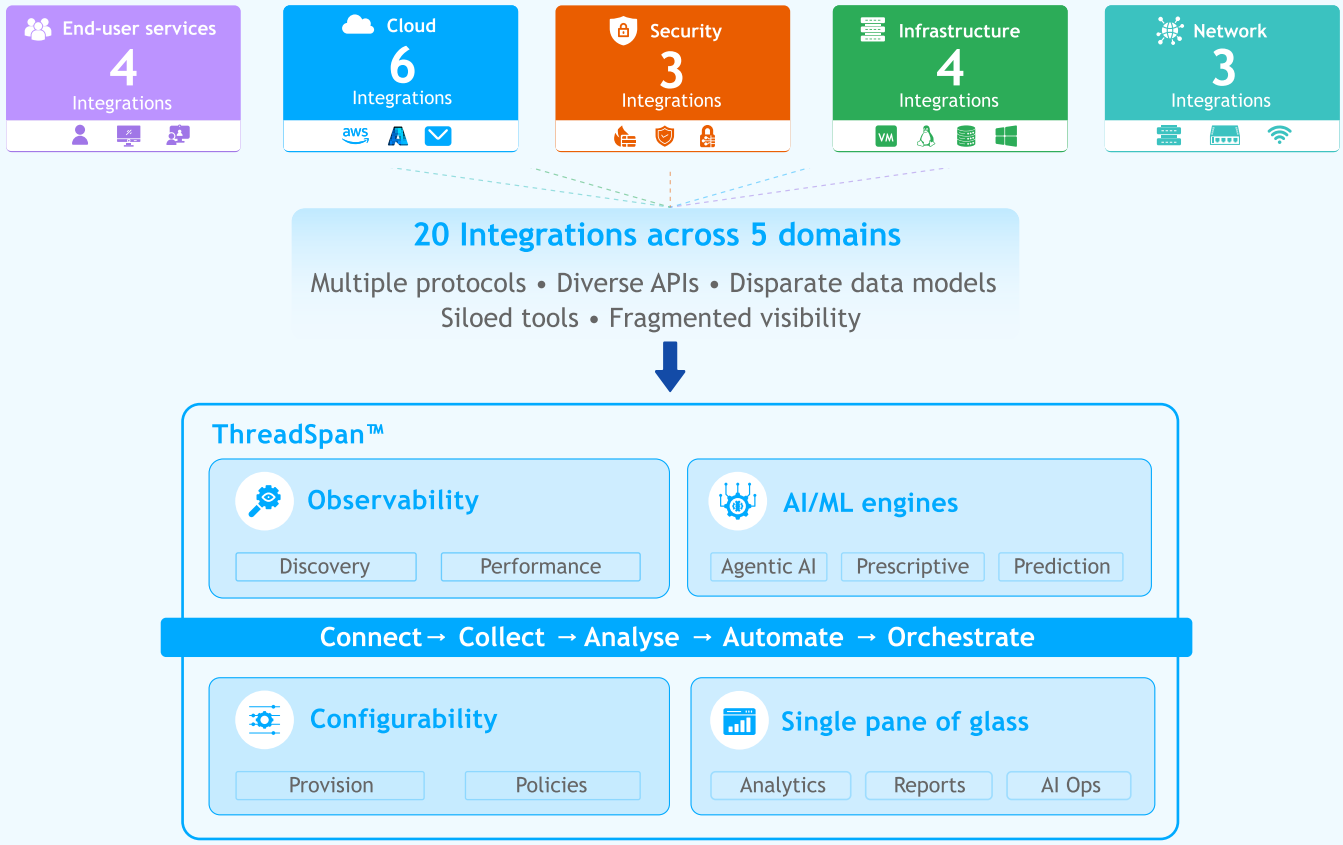


Single pane of glass

ThreadSpan™ consolidated visibility across every discovered asset and workflow into a single operational view — replacing tool-switching and fragmented dashboards with one integrated pane across network, cloud, security, infrastructure services, and end-user computing.

Security and compliance

Enterprise-grade security and governance are built into every layer of the platform, ensuring that autonomous execution is always governed, auditable, and aligned to enterprise policy. Key controls include Human-in-the-Loop (HITL) approvals, centralised authentication, and complete audit trail. On-premises deployment gives enterprises full control over data residency and access policy.



How ThreadSpan™ delivers value

The deployment translated into three operational shifts — the same three we deliver to enterprise customers.

See clearly — unified observability and continuous discovery

Single pane visibility across **30,000+** components spanning network, cloud, security, and end-user environments across the organisation (LOBs). Continuous discovery maintains a live blueprint of dependencies, removing reliance on periodic asset audits.

- *99% estate visibility*
- *70% reduction in unknown assets*
- *Monitoring cadence improved 2X*
- *25% fewer P1 incidents*

Resolve faster — AI-led automated remediation

Cross-domain event correlation, AI-driven automated remediation replaced manual triage cycles that previously stretched across days. Entire workflow now executes within 2-3 mins, freeing operations capacity for higher-value engineering work.

- *3X faster change execution*
- *5X faster triage*
- *80%+ first-call resolution*
- *88% reduction in MTTR*

Stay compliant — continuous, policy-driven governance

Continuous, policy-driven governance replaced quarterly audits. Golden configurations enforced across vendor environments; drift detected and corrected automatically; policies remain consistent regardless of OEM or domain.

- *100% policy-aligned infrastructure*
- *35-50% reduction in config drift*
- *87.5% reduction in compliance effort*
- *CDCC: 8 person-days → 1 person-day/month*

*Results derived from Tata Communications internal deployment metrics measured over **Apr-Jun '26.**

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From internal deployment to enterprise operating model

The deployment of ThreadSpan™ within Tata Communications demonstrates how large enterprises can transition from fragmented, tool-driven operations to a unified, workflow-driven operating model — improving execution, reducing operational overhead, and shifting to more proactive infrastructure management. Because ThreadSpan™ is deployed within Tata Communications' own IT environment, enterprises adopting it benefit from lessons, AI agents, and operational playbooks already tested at scale.

> *"ThreadSpan™ has helped us bring more structure to how we manage configurations and operational workflows. Routine activities are now more automated and consistent across teams, reducing manual effort and improving execution speed. It is also enabling us to move towards a more proactive operations model, with earlier identification and resolution of issues."*
>
> **— Sunandan Das**
> **Vice President and Head — Information Technology**

One AI platform to see clearly, act faster, and stay compliant

Built for enterprise operations. Proven first within Tata Communications.

Explore how ThreadSpan™ can unify your IT estate

For more information, visit us at www.tatacommunications.com

Contact us

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