

Driving Performance BEYOND THE TRACK

How Tata Communications powered a Formula 1™ team with intelligent, automated, and high-performance SD-WAN services

In Formula 1™, milliseconds define victory. A world-renowned racing team required a connectivity fabric that could match the speed of decision-making on the track—adaptive, predictive, and flawlessly reliable across 24 race venues worldwide.

Tata Communications delivered a next-generation SD-WAN-led network transformation that combined high-performance global connectivity with deep telemetry, automated operations, and intelligent service assurance—allowing the team to think faster, act faster, and win faster.

Today, the partnership equips the team with the performance, reliability, and speed required to stay ahead—both on and off the track.



The challenge: Precision at 300 km/h

The team's global race operations demanded more than bandwidth. They needed a network capable of understanding performance conditions and adjusting instantly.

Key challenges included:



01 Real-time performance visibility

Telemetry and video analytics needed sub-second awareness of path quality, application health, and network behaviour—continuously.



02 Consistent global experience

Each race location had different connectivity realities, yet the team needed predictable performance with uniform standards.



03 Rapid deployment cycles

Every venue had to be set up, validated, and torn down within tight windows, demanding a fully automated, "first-time-right" framework.



04 Proactive protection and fault prediction

IT teams wanted a system that could detect anomalies early, self-correct, and dramatically reduce human effort.

Traditional networks lacked this level of intelligence, automation, and operational predictability.

The solution: An intelligent SD-WAN fabric built for race-day criticality

Tata Communications delivered a hybrid SD-WAN solution engineered for performance, insight, and automation to meet Formula 1™ operational demands.



AI-driven performance assurance

The SD-WAN fabric continuously analyses a deep set of network behaviours—spanning availability, loss, jitter, congestion, application performance, and link quality.

This allowed operations teams to detect degradation before it impacted race telemetry.



Full-stack observability across 80+ real-time KPIs

From packet-level path characteristics to application-level QoE, the network provided one integrated view—enabling instantaneous understanding of race-critical conditions across venues.



Automated template-driven deployment

Every circuit was brought online using pre-validated, standardised configuration templates.

This ensured fast rollouts, consistent setups, and “first-time-right” provisioning—critical when venue windows were tight.



Predictive operations and self-healing workflows

The SD-WAN’s intelligent policy engine continuously evaluated conditions and optimised traffic flows. Combined with proactive monitoring, this reduced manual troubleshooting and accelerated decision-making.



High-performance global underlay

The flexible architecture combined global backbone connectivity with intelligent last-mile optimisation—ensuring predictable performance even in dynamic environments.



Expanded results and impact (with automation-led outcomes)

Tata Communications' intelligent SD-WAN fabric didn't just enhance connectivity — it transformed global race-day operations through automation, predictability, and deep telemetry.

Performance highlights

73%

reduction in latency
(1200 ms→320 ms)
enabling real-time
telemetry and live
strategy adjustments.

99.98%

network availability
maintained through
predictive fault
identification and
automated path
optimisation.

<15

minute MTTR
supported by
automated
diagnostics and
AI-driven incident
correlation.

30%

reduction in hardware
footprint enabling
leaner, faster
trackside
deployments.

50%

reduction in carbon
footprint due to
optimised network
design and reduced
logistics load.

Automation-driven operational gains

42%

faster deployment
time per race location
supported by
standardised
template-based
provisioning.

56%

reduction in network
incidents through
proactive anomaly
detection across 80+
performance KPIs.

99.8%

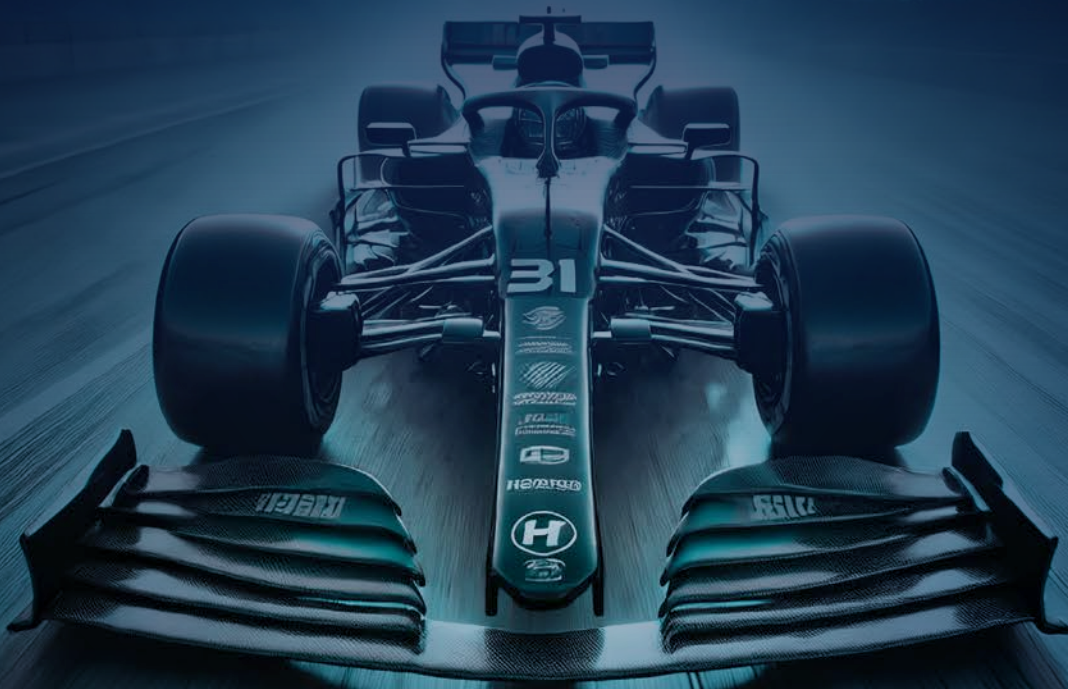
elimination of
configuration errors,
ensuring fully
“first-time-right”
implementations at
every venue.

38%

reduction in NOC
escalations due to
real-time
performance visibility
and predictive alerts.

65%

faster root-cause
identification
powered by
automated
correlation across
telemetry, underlay,



Business outcomes

The intelligence and automation built into Tata Communications SD-WAN didn't just improve the network — it elevated how the team operates, collaborates, and competes on race day.



Sharper race strategy decisions:

Real-time, reliable telemetry allowed engineers and strategists to make faster, more accurate calls during high-speed events.



Higher operational predictability:

Automated visibility and proactive issue detection reduced uncertainty across all 24 global race operations.

- **Stronger global collaboration:**

HQ analysts, remote experts, and trackside teams worked in sync, sharing live insights without delay, thus improving decision accuracy and responsiveness.

- **Consistent broadcast excellence:**

Stable, low-latency network performance ensured flawless live coverage for millions of viewers — a critical requirement for sponsors and global audiences.

- **Optimised resource usage:**

Faster deployments and a reduced hardware footprint lowered logistics costs and simplified race-week operations.

- **Sustainability aligned:**

Reduced transport, power usage, and equipment led to measurably lower environmental impact

Tata Communications helped the team achieve what every racing outfit strives for — total reliability and peak performance, both on and off the track.

The Tata Communications advantage

With its Tier-1 global backbone spanning over 200 countries and deep expertise in network and security transformation, Tata Communications empowers enterprises to accelerate innovation while maintaining agility, visibility, and control.

Building the network foundations for your next win.

Explore our SASE solutions

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

CONTACT



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