



McLaren

How McLaren goes faster by adopting cloud and global network from NTT Communications

Services: Enterprise Cloud, Cloud Management Platform, Global Networks, SD-WAN.

“Every single movement we do in the car - every steering wheel input, every throttle input, every brake pressure input - is transmitted immediately in real time to the engineering team in the garage.”

Fernando Alonso
Formula 1 driver, McLaren



Customer profile

Name: McLaren Technology Group

Revenue: £277.5 million (as of 2015)

Number of Employees: Over 1500 plus many strategic partnerships, dealerships and suppliers.

Business: McLaren is globally renowned as one of the world's most illustrious high-technology brands. Since its foundation in 1963, McLaren has been pioneering and innovating in the competitive world of Formula 1, forging a formidable reputation which has seen the racing team win 20 World Championships and over 180 races.

URL: www.mclaren.com

Challenges

Formula 1 visits 20 cities around the world each year in a PhD-fueled whirlwind of innovation, speed, and purpose. McLaren's business is about much more than just racing.

Solution

By integrating advanced global networks, cloud infrastructure, and cloud management, we support McLaren's effort to analyze and share huge volumes of data globally.

Benefits

Reliable and flexible networking with SD-WAN. Enterprise Cloud for compute power. Cloud management for single pane view at critical times.

Challenges:

Provide a robust, reliable, rapid and flexible data transfer capability along to support McLaren businesses globally. Cloud infrastructure, operational excellence, and R&D capabilities to help make McLaren go faster.

"If you step back from the spectacle of racing, McLaren is a modern, medium sized business, with IT challenges similar to many others, albeit with a focus on high technology and rapid innovation," says Jonathan Neale, Chief Operating Officer, McLaren.

Outside of the racing environment McLaren has a number of global engineering and design specialists that need access to data. It runs a staggering number of simulations to support race analysis and also for its Applied Technologies business.

There is a global network of dealerships to support its automotive business and just like other businesses, McLaren has many offices around the world where staff need to connect and collaborate.

To achieve McLaren's cloud and mobility goals, it needed an ICT solution that met the requirements of all of its group companies.



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Jonathan Neale
Chief Operating Officer, McLaren



Solution

Solid, reliable infrastructure with a dedication to continual review, innovative thinking, R&D, challenging the status quo, and providing incremental improvement.

Data drives racing

Whether at the racetrack or at headquarters, NTT Communications infrastructure underpins every racing decision McLaren makes during a Formula 1 weekend, seamlessly connecting the operational hub at the race circuit with Mission Control, the strategic powerhouse within the McLaren Technology Centre (MTC) in Woking.

McLaren's Mission Control houses 32 engineers who are connected directly to the race team at the circuit. These engineers make 90% of the strategic decisions during a race. This team receives telemetry data in real time; in Mission Control engineers see what's happening on the track 10 seconds before it appears on the broadcast feed.

Global network

Working with NTT Communications, McLaren leverages the industry's largest dedicated transpacific Internet bandwidth managed under one global policy, backed by industry-leading SLAs.

Positioned as a leader in Gartner's 2018 Magic Quadrant for Network Services Global for the fifth consecutive year*, and winner of the Best Global Operator at the 2017 World Communication Awards, NTT Communications has one of the most advanced portfolios of network services, and continually rates highly for customer service.

Software-defined networking (SD-WAN)

SD-WAN is a new approach for enterprise-grade wide-area networks which is benefiting McLaren immensely in its battle against bandwidth restrictions during races. NTT Communications provides the industry's most comprehensive SD-WAN service portfolio.

SD-WAN was proved as a concept at the 2017 Japan Grand Prix and has been in use ever since. It gives McLaren quick, reliable and – crucially – flexible management of traffic-flows over the WAN. This allows, for example, telemetry data and video data to take precedence at critical points.

Enterprise Cloud

NTT Communications Enterprise Cloud provides solid enterprise-grade hybrid- and private-cloud, used by McLaren to burst the computer power required for race simulations at critical points.

MORSE - McLaren's racing simulation engine - has been running on NTT Communications Enterprise Cloud since 2017. Simulating variables like track conditions, tire degradation and race incidents, and analyzing them to arrive at the optimal race strategy, is a big data task.



“ The raceday dashboard shows me all the critical infrastructure data in one place. ”

Joe Bawn
Trackside Infrastructure Engineer, McLaren

“ It’s a high bar to get a positive review on a service engagement from McLaren, but NTT Communications did, and not for the first time. ”

Paul Brimacombe
Enterprise Architecture Manager, McLaren



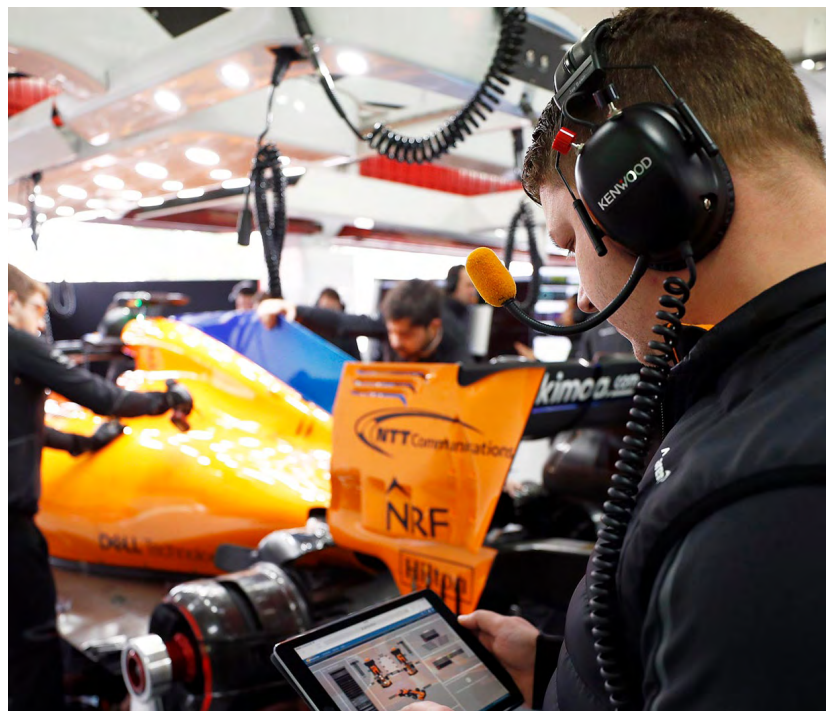
Using NTT Communications Enterprise Cloud means that McLaren can either complete its simulations 25% faster at time-critical points, or it can complete 25% more simulations, to model a wider range of scenarios.

Either way, faster and more simulations equates to a more complete race strategy.

Raceday dashboard - Cloud Management Platform

The raceday dashboard developed on NTT Communications Cloud Management Platform enables the technical teams to see the status of the complete IT infrastructure. It provides visual alerts and more detailed information as required, to help with proactive fault finding and avoidance.

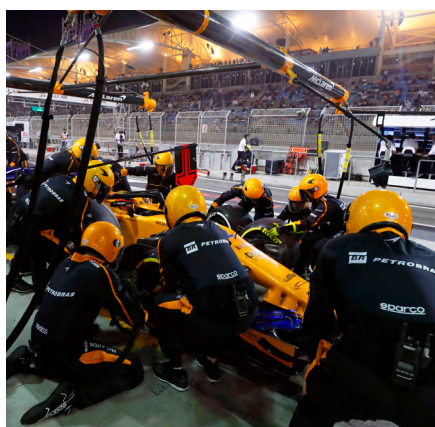
McLaren views the race car as a connected car, “the fastest IP device on the network”. They have been gathering data from this feat of engineering for 25 years at 100GB every race weekend and now have over 1 trillion data points to analyze.



Data is being gathered from new devices on the car which will take race management to a whole new level. Having this volume of data is one thing but finding the rich insights that allow the race car to go faster or, for example, to improve the output of a production line in the Applied Technologies business, is another thing altogether.

“SD-WAN enables us to prioritise performance, reliability and safety-critical information during peak loadings and dynamically transfer lower-priority data when capacity allows. It’s the immediacy of the process, and the richness of the data it feeds to our strategic visualisation tools, that empowers our engineers to make fast decisions that can change the outcome of races.”

Randeep Singh
Head of Strategy, McLaren



Benefits

Reinvigorating McLaren’s global IT infrastructure with SD-WAN, Enterprise Cloud and management overlay makes this a true technology partnership.

WAN and SD-WAN

- Proven to be a more reliable, stable network than previous solution.
- Service management reporting includes trend analysis to predict future usage.
- Network Functions Virtualization (NFV) services installed: IPSec tunnels, URL filtering and firewalls.
- SD-WAN provides flexible traffic management at critical times

Enterprise Cloud

- McLaren’s proprietary MORSE simulation engine bursts capacity to NTT Communications Enterprise Cloud allowing 25% more simulations for a more complete race strategy.
- Practical guidance for cloud implementation.
- Ongoing audit of legacy services is continually identifying further candidates for migration to more efficient cloud infrastructure.

Raceday dashboard - Cloud Management Platform

- Visibility of cloud estate including legacy services, AWS and Azure.
- Insight for potential cost reductions for under-used resources.
- Dashboard for monitoring critical infrastructure and proactive fault mitigation during racing.

Karen McElhatton, Chief Information Officer, McLaren says, “NTT Communications provides robust and reliable network solutions across the McLaren businesses including SD-WAN to track during this season. McLaren can securely connect to cloud services such as private Enterprise Cloud, which enables more collaborative working, greater visibility of trackside infrastructure and faster decision making within McLaren. The technology sets us up to win and really does power the work that we do.”

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