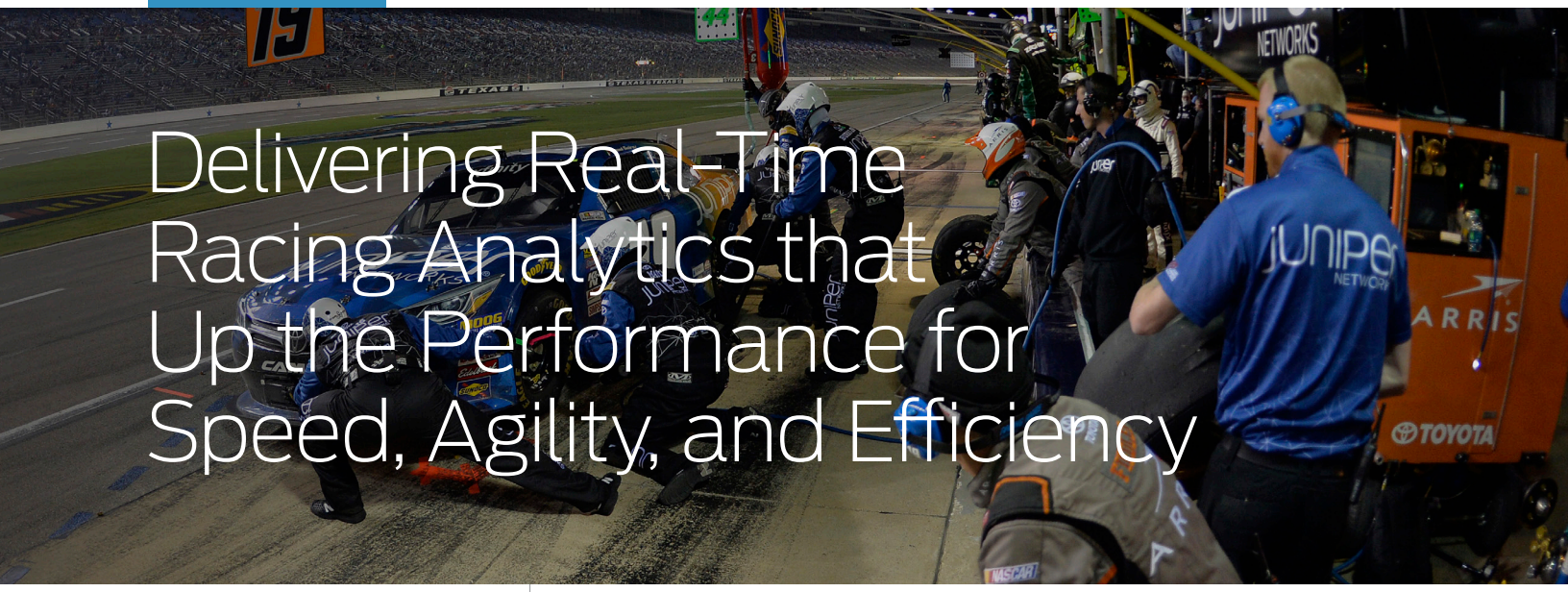


Delivering Real-Time Racing Analytics that Up the Performance for Speed, Agility, and Efficiency

Summary

Company:
Joe Gibbs Racing

End Customer Vertical:
Professional Sports

Business Challenges:

- Providing drivers, pit crews, and headquarters with the precise real-time data needed to win NASCAR races
- Combining super high-tech racing, big data, and high-performance network elements to create competitive advantage

Technology Solution:

- MetaFabric™ architecture
- QFX5100 Switch
- EX3300 Ethernet Switch
- EX4300 Ethernet Switch with Virtual Chassis technology
- Junos Space Network Management Platform

Business Results:

- From analyzing car performance data, to providing feedback to crew chiefs, to ensuring a reliable connection to the driver, the new network has consistently delivered high performance and invaluable insights.
- It is flexible, easy to use, and fast, making Juniper and Joe Gibbs Racing a winning combination.

NASCAR racing is synonymous with bleeding edge tech in tires, fuel, fire suits, and carbon-fiber hoods, among many, many other racing elements. But NASCAR and IT? Big data and analytics? You better believe it. For Joe Gibbs Racing, super high-tech is a critical part of the strategy and directly connected to team success.

Winning requires not only a fine-tuned performance for speed, agility, and efficiency, but also the analytics and automated reflexes to execute with on-demand precision. For instance, track turns in the race circuit reward the most technically skilled drivers. At the Phoenix International Raceway in Arizona, for example, how hard you brake in Turn 1, maneuver the tight bend in the Dogleg down the backstretch, or avoid the front stretch wall as you exit Turn 4, are all critical elements to winning the race.

Business Challenges

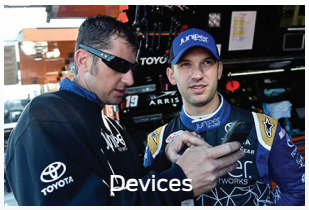
Not surprisingly, making the right decisions coming into the turn is not shouldered by the driver alone. Rather, it is at these moments that the driver relies on the guidance received from the pit crews and their data analysts back at HQ, to make split second decisions while on the track. Data about car performance, track conditions, and the status of the competition, for example, is critical to the outcome, and is collected, analyzed, and transmitted back. In order to do this, and to successfully arm the driver with the insights needed to determine the next few moves, a fast, agile, and efficient network is also required. "Our network is critical for research and development, data analytics, and staying connected throughout the racing season. It is a vital component to developing the competitive advantage we seek in racing," says Jim Foley, chief technology officer at Joe Gibbs Racing.

Technology Solution

Racing teams increasingly leverage technology to accelerate vehicle R&D, boost back-office performance, and communicate reliably among drivers, pit crew, and staff. Given that Joe Gibbs Racing manages nearly everything race-related in-house, including virtual wind tunnel testing, automated machining, and 3D part printing, as well as sponsor logo printing, it requires a highly available network to support the multiple facets of its operations. The JGR team turned to Juniper Networks through its Elite partner Structured Communication Systems, Inc., to build a highly resilient, reliable, and secure network consisting of Juniper Networks® MetaFabric™ architecture, the QFX5100 switch, EX3300 Ethernet Switch, EX4300 Ethernet Switch with Virtual Chassis technology, and Junos® Space Network Management Platform. The new network provides connectivity at the racetrack as well as at corporate headquarters for support.

Winning with Juniper Networks

Delivering real-time racing analytics that up the performance for speed, agility and efficiency



Proud Technology Partner of Joe Gibbs Racing and the #19 Toyota Camry Driven by Mexico City's Daniel Suàrez

25 years of Excellence
- More than 230 wins
- 4 XFINITY Championships
4 Sprint Cup Championships

Network Differentiation Driving Success In a Unique and Unforgiving Environment

A typical NASCAR season runs from February through November. There are 39 Sprint Cup and 33 XFINITY races during the season; essentially every weekend for 2-3 days during that time frame. The components of the extended JGR network include: the headquarters in Huntersville, NC, engineers at the shop; engineers' devices at the track; the "data-center-on-wheels" transporters (aka "Haulers") used to move the cars from circuit to circuit; the track-side Pit Box; and the car, in and of itself. A team of people travel to and from each race tasked with network setup, onsite operations, and take down.

No easy task.

"Our network is critical for research and development, data analytics, and staying connected throughout the racing season. It is a vital component to developing the competitive advantage we seek in racing."

Jim Foley, Chief Technology Officer at Joe Gibbs Racing

Next Steps

Joe Gibbs Racing considers super high-tech as a critical part of its strategy and directly connected to its ongoing success. As Juniper technology races ahead of the competition, Joe Gibbs Racing will continue to partner with Juniper to do the same.

For More Information

To find out more about Juniper Networks products and solutions, please visit www.juniper.net.

About Juniper Networks

Juniper Networks is in the business of network innovation. From devices to data centers, from consumers to cloud providers, Juniper Networks delivers the software, silicon and systems that transform the experience and economics of networking. The company serves customers and partners worldwide. Additional information can be found at www.juniper.net.

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