



DS Virgin Racing on track to win with HPE

Delivers business-critical services trackside at global races and at headquarters

Objective

Implement and maintain advanced analytics infrastructure to optimize Formula E electric race car performance

Approach

Leverage HPE Pointnext to drive IT efficiency and implementation, testing, and operations in major cities worldwide

IT Matters

- Capture race car performance data trackside to enable real-time analytics
- Support dual IT environments to enable continuous analysis

Business Matters

- Leverage real-time analytics to improve electric race car performance
- Ensure continuous reliability for business-critical IT infrastructure



DS Virgin Racing competes in Formula E electric car racing, and capturing and analyzing real-time race information is key to optimal performance. By turning to HPE, DS Virgin Racing is able to successfully compete in the Formula E championship while continuously improving Electric Vehicle (EV) technology, and these improvements will ultimately trickle down for usage in future electric road cars.

DS Virgin Racing is aggressively competing in the Fédération Internationale de automobile (FIA) Formula E electric-powered car races. Formula E is the world's first global electric vehicle racing championship, and it enables the fast-tracking of the development of electric vehicle technology. It serves as a showcase for electric vehicles to a mass global audience, and it aligns with the Hewlett Packard Enterprise (HPE) values of partnership, innovation, and a winning spirit.

“Winning races is our goal, and everything we do is guided by efficiency. HPE has knowledge and experience with the demanding conditions of building and maintaining infrastructure to compete in major sporting events. HPE serves as an important part of our team and provides skills and expertise that support our ongoing operations.”

— Sylvain Filippi, CTO of DS Virgin Racing

All Formula E events begin with two practice sessions in the morning, an opening 45-minute session followed by a further 30-minute session. Drivers each have two cars at their disposal with 200 kW of power available. The cars are outfitted with sensors that capture Internet of Things (IoT) data to reveal how the car and engine perform for qualifying, and 170 kW of electricity for the race. DS Virgin Racing needed IoT big data analytics at its UK headquarters to analyze and improve race car performance, as well as support for the capability to collect the data, transmit it to headquarters, and enable analytics to provide swift feedback to the driver and racing team.

DS Virgin Racing relies on HPE Foundation Care and HPE Proactive Care to augment internal staff. “HPE has the knowledge and previous sports event IT expertise we needed,” says Sylvain Filippi, CTO of DS Virgin Racing. “We did not have the internal resources necessary, and HPE provides the technical knowledge and expertise to manage the systems that power our analytics.”

Developing, deploying, and supporting analytics infrastructure

HPE, the Official IT Partner of DS Virgin Racing, designed a complete solution of hardware, software, and services. DS Virgin Racing relies on the HPE Moonshot energy-efficient, integrated server system, HPE Aruba Wireless Networking solutions, and HPE 3Par StoreServ 7400 storage infrastructure. In addition, DS Virgin Racing uses Vertica Advanced Analytics software to take advantage of advanced SQL database analytics. Implementing, managing, and operating this analytic infrastructure is a daunting challenge, and DS Virgin Racing turned to HPE to support this business-critical infrastructure.

Ensuring the reliability of business-critical systems

Managing a complex IT environment in multiple locations is critical to the goals of the operation. Since the race travels to major worldwide cities, DS Virgin Racing needed a business-critical support experience in each race location. With HPE Foundation Care, DS Virgin Racing has access to HPE experts via phone, web, or both. DS Virgin Racing receives problem diagnosis and support, replacement parts and materials, and access to firmware and software updates. HPE Foundation Care provides DS Virgin Racing with one place to call for support for both the headquarters facilities and the constantly changing racing locations.

HPE Proactive Care provides a personalized and proactive hands-on approach for maintaining an agile, healthy, and reliable infrastructure. It allows DS Virgin Racing to connect its HPE hardware platforms to HPE to benefit from proactive analysis and faster troubleshooting, and if DS Virgin Racing calls in for a support issue a technical solution specialist takes ownership of the issue and manages the call until the issue is resolved. HPE provides DS Virgin Racing with tailored proactive reporting with consultations and advice that help DS Virgin Racing manage firmware revisions and any configuration changes while ensuring system stability

and reliability. HPE also provides global call management so DS Virgin Racing can call, if needed, for local parts and additional local support resources. According to Filippi, "Our support relationship with HPE allows us to trust HPE to keep our business-critical infrastructure operational so our team can concentrate on winning races."

Implementing global support for race-day operations

The infrastructure at DS Virgin Racing headquarters is constantly being optimized to support high-speed analytics. HPE Proactive Care help DS Virgin Racing prevent problems and stay up-to-date. Products connected to HPE leverage 24x7 monitoring, pre-failure alerts, rapid diagnosis, and automatic call logging with parts dispatch for hardware support. HPE proactively scans the connected devices, provides a healthcheck on them, and delivers tailored recommendations to optimize performance.

"We need powerful and reliable hardware and software, but we also need strong professional services support so we can benefit from advanced analytics," states Filippi. "That's why we selected HPE as our partner of choice to meet our unique support requirements." On race day, telemetry information is captured from DS Virgin Racing's cars, and online feeds provide

Customer at a glance

HPE Pointnext services

- HPE Foundation Care
- HPE Proactive Care

Hardware

- HPE Moonshot System
- HPE 3PAR StoreServ 7400
- Aruba Wireless Networking Switches

Software

- HPE Vertica

Financial Services

- HPE Technology Refresh
- HPE Asset Recovery

headquarters personnel with information to review race performance. “We learn a great deal from each race, and we’ve already built the foundation for our analytics,” Filippi says. “Our long-term relationship with HPE allows us to scale our analytics to continuously learn more about optimizing race cars and the abilities needed to enable the next generation of electric cars. We’ll be soon ingesting and analyzing video from onboard cameras and race feeds.”

The extracted data will be stored in Vertica for search and analysis. “We’ll be able to manage petabytes of data at massive scale using blazingly fast analytics,” Filippi states. “This will give us the ability to manage large volumes of data in seconds, not weeks.”

He adds, “HPE helps us improve our race efficiency and run sophisticated simulation programs so we can analyze and improve our results. Everything we do is guided by efficiency, whether that’s managing our analytics infrastructure, winning the race, or designing next year’s cars. HPE technical services manages our analytics infrastructure so we can focus on winning races and continuously improving our cars.”

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