CISCO

Hyperconvergence fuels SportPesa Racing Point F1 Team's race to digital innovation

Formula 1™ is extremely fast paced; not just on the track but at every stage of the car's life from the design inception to the last race of the season. Every millisecond and every detail count in racing car construction – it's all about achieving the ultimate edge over the competition.

Summary

Name
SportPesa Racing Point
F1 Team

Industry
FIA Formula One
World Championship™,
Manufacturing

Location
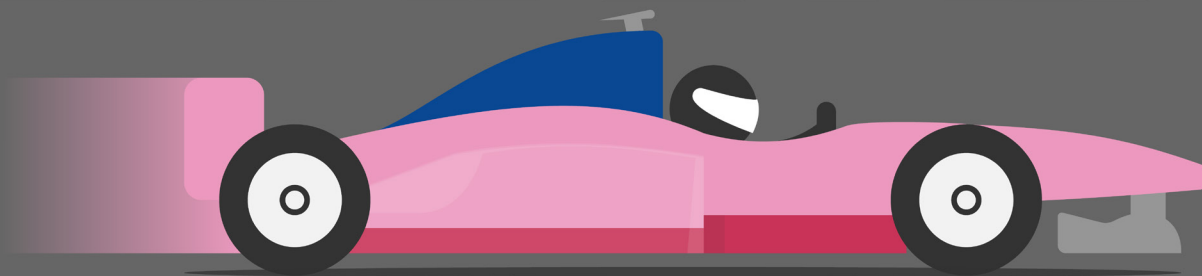Silverstone, Northamptonshire

Country
United Kingdom

Number of employees
400

SportPesa Racing | ebb³

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There's immense pressure on design and construction teams to continually improve a car's performance by making even the smallest of modifications:

- Create performance enhancing components

- Constantly refine and fine-tune

- Upgrade and replace parts

- Produce as many design iterations as possible

- Achieve aerodynamic enhancements

Tight regulations govern track and simulation testing – so it's often done during race practice. There's constant pressure to deliver race day enhancements as quick as possible. This means engineers need access to the right information, at the right time, in any location. Co-ordinating this globally via a UK manufacturing base can often be challenging. Races cannot be postponed if the car isn't ready, so the team with the right technology to allow them to effectively communicate, and make the right decisions, in the shortest time, wins.

Design to launch workflow

In the motor industry the design to launch workflow involves a mixture of data intensive applications and more time-consuming manual processes. Typically, car part modifications and improvements are created using Computer Aided Design (CAD). Designs are then added to a virtual model of a car and tested via a fluid dynamics supercomputer.

Once approved, a scale clay model is produced for testing in a wind tunnel. These workflow stages are implemented each time design changes are proposed, and this takes up valuable development time and engineer resource.

Racing Point currently use Dassault Systèmes Catia v5 for their projects which works well but in their relentless pursuit of optimum performance they decided to introduce the more sophisticated Dassault Systèmes 3D experience platform – Catia v6. Catia v6 allows:

- Parts design and analysis in a virtual environment

- Design data to be re-used

- Parts to be created using generative templates

When combined with Dassault Systèmes PLM Best Practices, Catia v6 moves the design process from pencil sketches to CAD directly and fast, this reduces development times and allows engineers to focus on innovation.

Phasing in Catia v6 without disrupting current operations would be no mean feat but running Catia v5 and v6 simultaneously was crucial in maintaining current project success. Racing Point's migration from Windows 7 to Windows 10 at the time added further complexity to the programme.

Complete virtual workspace

ebb3 provide a complete virtual workspace, accessible from any location, on any device without losing processing power; they're experts in GPU enabled workspace/VDI services.

ebb3 worked closely with Racing Point to understand their requirements and then design the optimum digital workspace solution to rollout Catia v6 virtual desktops with minimal disruption.

Cisco's HyperFlex All-flash hyperconverged platform was selected for its scalability and power. Independent lab-tests confirm that this next-generation HCI platform delivers three-times the performance of its competitors, which is essential when delivering mission-critical applications.

NVIDIA P40 Graphics Cards with NVIDIA Quadro Virtual Data Center Workstation (Quadro vDWS) 8.0 were used to enable 3D application delivery. And Citrix workspace technology provided the supporting infrastructure.

The specs

SportPesa Racing Point F1 Team specified Cisco HyperFlex hyperconverged infrastructure (HCI) with NVIDIA Quadro vDWS 8.0 hosting Citrix Digital Workspace virtual workstations for Dassault Catia 3D CAD design software.
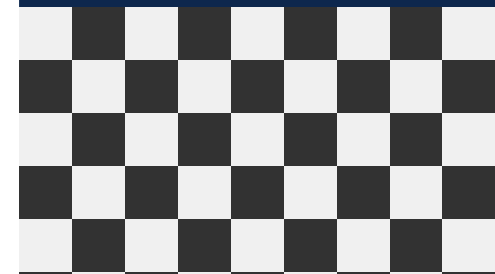
The solution comprises of:

- Cisco HyperFlex HX240c M5 All Flash Node (Version 3.5)

- Cisco UCS Fabric Interconnect 6332

- NVIDIA P40 Graphics Cards with Quadro vDWS 8.0

- VMware vSphere v6.7

- Citrix Virtual Apps and Desktops 7 1903

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Built on a completely new Windows 10 desktop infrastructure, the new virtual desktop allows Catia v5 and Catia v6 to be run side by side on existing workstation computers. The key benefits for Racing Point are:

Unified User Experience

- Engineers can access Catia v6 wherever they are, on any device

- 3D graphics enhance the user experience

Enables business competitiveness

- Scalability is built-in so the solution grows in line with Racing Point demands

- Performance and processing power increased to support user demands

Cost effective, secure and simple

- The system can easily expand to support future requirements without disruption to current operations

- Bought "as a service" the solution includes ongoing monitoring and support

Shared vision for the future

ebb3 and Cisco's strategic partnership is built on a foundation of IT expertise and trust. Together they have delivered significant value for Racing Point through increased productivity and improved user experience. Their shared vision is to create innovation, which builds the bridge from complexity to simplicity.

"We knew we needed a service provider with the expertise to bring together the right combination of new technologies which would pave the way for our digital transformation. It was crucial that our existing platform was uninterrupted during the rollout and through consultation with ebb3, we knew we were in safe hands."

– Bill Peters

Chief of IT, Racing Point.

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SportPesa Racing FORMULA ONE™ TEAM | **ebb³**

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UX Unified User Experience

Enables business competitiveness

Cost effective, secure and simple