

# Platform™

The Power of Sharing

"The Platform partnership goes from strength to strength year on year."

Steve Nevey  
Business Development Manager  
Red Bull Technology

## Red Bull Technology races forward with HPC

### Customer

Red Bull Technology

### Industry

Industrial Manufacturing

### Challenges

- Expensive IT infrastructure was not performing at full capacity
- Red Bull Technology wanted to maximise the significant investment they had made.

### Solution

Platform LSF  
Platform EGO  
Platform LSF License Scheduler

### Business Results

- 20%+ increase in performance and throughput
- Reporting tools keep senior executives updated on progress
- Ability to optimize license scheduling means priority jobs can always run without needing to over-provision licenses

## Reaching for pole position

The Red Bull Racing Formula One team was created in 2004 when Red Bull bought the Jaguar Racing team and achieved its first podium in Monaco in 2006. During 2006 there was investment in new staff and new equipment, while a key appointment was made, in the form of renowned designer Adrian Newey. Wind tunnels and other simulation tools were developed and, as the team worked hard on the RB3, the first car to be designed by the new technical team, the team's foundations were firmly established. The investments paid off and Red Bull Racing ended the 2007 season by finishing fifth in the Constructors' Championship, ahead of teams with far greater experience.

High Performance Computing (HPC) technology was a good addition to the team's vehicle design toolset. While Red Bull Technology had made hefty investments in a high quality IT infrastructure, without HPC management software, the compute resources was operating below its full potential. The team realized that by building a grid using the best dynamic resource management software available, they would be able to do significantly more simulations in less time than before.

Even with many hundreds of cores available, the demands of the CFD department were pretty well insatiable. Simulation is what drives improvements in design and the demands it was making on processing power was overwhelming.

### Innovative, powerful Platform technology helps make cars go faster

"Our team is always looking for innovation partnerships with companies who can bring to us contemporary and exciting new technologies that ultimately help us to make the car go faster," says Steve Nevey, Business Development Manager, Red Bull Technology. "Our HPC system is being used for various types of simulation, primarily for aerodynamic simulation with CFD or computational fluid dynamics.





*"One of Platform's strengths is its support team which you don't necessarily get with those from other companies. We can turn to Platform for help when something doesn't work and they are very responsive, no matter the time of the day."*

Nathan Sykes  
CFD Team Leader  
Red Bull Technology

We'd known about Platform LSF, but it wasn't until our HPC cluster started to really expand that it became obvious that we needed a tool like this." Red Bull Technology began its discussions with Platform in 2006 and the relationship has blossomed since then.

"It's an expensive investment that we've made," says Nevey, referring to the team's cluster, "and we need to fully optimize that investment. Platform LSF enables us to schedule some of the big analysis computation so that our engineers don't have to wait around for an analysis to finish before starting another. They can also run analyses in parallel with each other."

Platform's solution intelligently schedules workload and dynamically allocates resources to ensure work is done according to business priorities and policies, and that the compute resources are utilized as fully as possible. "The Platform LSF environment has allowed us to increase the number of virtual engineering simulations needed to build the fastest and most aerodynamically efficient car possible. Its robust and scalable solution enables us to leverage fully our growing investments in engineering IT infrastructure. Platform LSF helps us optimize designs that maximize the downforce and reduce the drag the cars create on the track. With Platform's technology behind us, we are confident that we can continue our rise up the rankings over the next few seasons," adds Nevey.

### Keeping executives in the loop

Platform LSF includes a versatile reporting tool that allows the design team to easily justify its activities and budgets. The company's senior leadership can easily check on progress and make informed decisions about how to allocate resource in the future. "The great thing about Platform LSF is that it provides a reporting tool, a very easy to use reporting tool which is available to our senior executives so that they too can check on progress and the efficiency of the HPC system," says Nevey.

Like many of Platform's customers, Red Bull Technology views the relationship with Platform as a partnership. "The Platform partnership just goes from strength to strength year on year and our plans for the future are to continue to develop our IT infrastructure to hopefully take full advantage of all of the compute resource that we have within the building," adds Nevey. "One of the things that Platform LSF allows us to do is to incorporate some of the desktop machines, all still powerful machines which are being used for computer-aided design at the moment, but to incorporate them into the virtual cluster when they're not being used, when our engineers have gone for the night."

### Symbiotic relationship benefits both sides

"Platform came to us as a true innovation partner, not a supplier of technology, but a partner who was able to understand our problems and provide appropriate solutions to us, and work with us to continuously improve the performance of our system," says Nevey. Of course this benefits Platform too, as the company can use the knowledge and best practices developed with Red Bull Technology to continue to evolve its products in a way that benefits all customers.

Christian Horner, Team Principle of Red Bull Racing, underscores the importance of such a tight relationship. "We rely heavily on innovation partnerships and partnerships such as with Platform Computing are extremely important to us. We are at the cutting edge of technology and how we manage our data, how we manage our processing, how we apply our resources to all design applications, simulation applications are integral to our business. So our Innovation Partnerships are extremely important to us."

# Platform™

Platform Computing provides software that dynamically connects IT resources to workload demand according to business policies. Over 2,000 of the world's largest organizations rely on our solutions to improve IT productivity and reduce data center costs. Platform has strategic relationships with Dell™, HP, IBM®, Intel®, Microsoft®, Red Hat®, and SAS®. Building on 16 years of market leadership, Platform continues to help data centers be more efficient, responsive and dynamic. Visit [www.platform.com](http://www.platform.com)

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