CASE STUDY

Portalliance Engineering

Portalliance Engineering strengthens its high-density computing services by adding Qumulo file data storage to its DevOps chain

Portalliance

Challenges

- Make storage more reliable
- Increase performance
- Integrate storage management into the DevOps chain

Benefits

- High performance, reliable and scalable storage
- Storage management by software integrated into the DevOps chain
- Proactive and efficient support
- New development perspectives and implementation of new services

With its unique expertise in high-performance computing, Portalliance Engineering relies on Qumulo to support its growth and diversification strategy.

Portalliance Engineering, a Toulouse, France-based company founded in 2006, specializes in the modelling and digital simulation of structural calculations. The company is primarily focused on the space and aeronautics sectors, with a strong expertise in building strength simulations. This unique know-how relies on intensive computing supported by a cluster of 80 HPC (High Performance Computing) servers.

"On average, we go ten times faster than a company that does standard computing," says Vincent Julié, Chief Innovation Officer of Portalliance Engineering.

Part of the Airbus group since its 2018 acquisition by the aeronautical subcontractor Stelia, the company employs 70 people. The Portalliance Engineering division has an annual revenue of 3.2 million euros. Over the past two years, the group has diversified by making its computing power available to new industries. This has led to a switch from its existing storage infrastructure to the Qumulo® File Data Platform.

New diversification strategy supported by reliable file data management and storage

“Our ambition is not to compete with the large public cloud providers," says Julié. “We are targeting customers who need constant power to perform intensive computing projects on a regular basis. It was when the company embarked on this diversification strategy that we were confronted with storage issues.”

About two years ago, Portalliance Engineering signed its first two customers for this offering, both in the plant genomics field. "These customers’ needs, both in terms of computing power and storage, are enormous. In two years, we have gone from a few terabytes of data files to a hundred terabytes,” says Julié.

Built from heterogeneous low-cost network attached storage (NAS) solutions, the company's storage array had limitations, particularly in terms of performance. To compensate, Portalliance Engineering deployed direct attached storage (DAS) solutions. However, this caused the data to be inaccessible to other servers. These recurring transfers were also not without risk, particularly in terms of errors and data loss.

“Storage was our weak point," says Julié. “It was a shame to have succeeded in developing a unique HPC engineering offering only to be blocked by file storage challenges,” says Julié. “So we decided to replace this heterogeneous legacy solution with something new. After a thorough comparison, we chose Qumulo File Data Platform.”

> “Scaling up with Qumulo is made easier by the fact that the software solution is hardware-agnostic.”
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> **Vincent Julié, Chief Innovation Officer of Portalliance Engineering**

Qumulo

"Qumulo's API is so rich that on closer inspection it has sparked ideas for us. We have been looking at new topics."

Vincent Julié, Chief Innovation Officer of Portalliance Engineering

Enables processing of complex calculations without interruption

Qumulo's ability to handle both large and small files was a key factor in Portalliance Engineering's choice.

"Some NAS solutions perform well on large files, others on small ones, but Qumulo is good on both. That was the first factor that really counted for us because it meant we could perform computing directly from the storage array. No more jumping back and forth between the array and the servers, with all the risks of losing information that this entails," says Julié.

The API offered by Qumulo also played an important role in Portalliance Engineering's decision. Portalliance Engineering has developed a DevOps approach which results in the automated deployment of client infrastructures through code. However, this well-oiled chain stopped at storage before the company made the switch to Qumulo. Instead, customers previously had to call the Portalliance Engineering system administrator every time things got to this stage and ask the admin to create a volume dedicated to the calculation they were trying to perform.

"The Qumulo API is very rich and well documented. It allows us to go further in our DevOps approach and make our customers even more autonomous in launching new calculations. They will be able to control the array to create, duplicate, back up or delete volumes by simply launching the execution of scripts. This is streamlined by the fact that the array includes standard functions and artificial intelligence algorithms for enabling data to be partitioned and secured according to predefined rights," adds Julié.

"Qumulo's support is incredible with staff who are available, competent and proactive...We haven't found that commitment anywhere else, and it's invaluable."

Vincent Julié, Chief Innovation Officer of Portalliance Engineering

Qumulo

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