Storage helps digital artists shine

Digital artists at Important Looking Pirates in Sweden gain fast and reliable access to files with enterprise storage solution

Business need

ILP wanted its digital artists to have fast, reliable access to files to continue delivering high-quality content for its many clients in movies, TV, commercials and gaming.

Solution

The company deployed a Dell Fluid File System solution, comprising a Compellent FS8600 NAS four-node cluster, Dell Compellent Storage Center storage and Dell Networking. Support is provided by Dell CoPilot

Benefits

- Easier business expansion with high uptimes from resilient architecture
- Investment protection with linear expansion
- Greater artist productivity, retrieving files consistently fast
- More effective IT spend decoupling capacity and performance expansion
- Maximum storage availability with CoPilot support network helping maintain reliability

Solutions at a glance

- Storage
- Client Solutions
- Networking

"We can keep pace with the growing demands of VFX and other digital content because of the scalability for the Dell Compellent FS8600."

Niklas Jacobson, ILP CEO

Aspiring artists today are as likely to sit behind a computer screen, as they are an easel. Indeed, the number of digital artists is growing fast and their work frequently appears in movies, TV series, commercials and video games.

Stockholm-based Important Looking Pirates (ILP) has attracted a team of highly talented digital artists, whose work can be seen in the Oscar-nominated Norwegian feature film Kon-Tiki as well as other acclaimed work.

All of the digital artists at ILP would agree that reliable IT is crucial for them to focus on delivering their best work. They work on Dell Precision workstations, which process directly on the company's server render farm using applications such as Maya, Houdini, Nuke, Adobe After Effects and the in-house developed solution Tempest. Of all its IT equipment, data storage is one of ILP's biggest investments. The technology has to be 100 per cent reliable. Even a relatively short period of downtime could jeopardise the tight schedules for delivering digital animation and visual effects (VFX) for customers. ILP CEO Niklas Jacobson says: "If our storage fails, our service fails. We can't afford for our artists to be waiting for the system to access files, or read or write data."

Designs on highly scalable storage
With so much depending on storage, the company was quick to take action when the existing platform began to approach the end of its lifecycle. ILP saw it as an opportunity to enhance both performance and capacity. Jacobson explains: "We wanted the solution to be highly scalable, enabling us to add either performance or capacity as we needed it. We also

wanted the backing of a major IT solution provider, whose support services could provide 24x7 protection against downtime."

A better option comes into focus at a lower cost
ILP started looking for a replacement storage platform and initially leaned towards an EMC Isilon solution. But on the advice of Dell Partner Nitma, a long-standing IT solution provider to ILP, the company evaluated the Dell Compellent FS8600 NAS powered by Intel Xeon processors with Dell Fluid File System (FluidFS). The solution was significantly more cost-effective than the Isilon solution.

> "You can be writing and reading terabytes of data a day. With the Dell Compellent storage, we can handle these kinds of workloads without any reliability issues."
>
> *Niklas Jacobson, ILP CEO*

Products & Services

Services
Dell Deployment Services

Dell Support Services — Dell CoPilot support

Hardware
Dell Compellent FS8600 networked attached storage (NAS) appliance

Dell Compellent SC8000 controllers with SC200/220 enclosures

Dell Networking S4810 switches

Software
Dell Fluid File System

It enabled ILP to add two extra FS8600 NAS appliances to the infrastructure with 200TB of storage – increasing overall performance and redundancy – and still maintained a competitive price in comparison to other storage vendors such as Isilon. Comments Jacobson: "After the first meeting with the Dell Storage team, we were very excited about possible opportunities. We went on to complete an on-site test of the system and were extremely impressed with the performance and support we received from Dell. We came away thinking that the Dell Compellent FS8600 was a great solution. It not only offered excellent scalability and support, but a really interesting roadmap and pricing."

The company told Dell the storage needed to deliver fast access to files, which varied dramatically in size, from just a few bytes up to 2 gigabytes (GB). Jacobson adds: "We told Dell that when a heavy simulation job hits our render farm we can easily have 50 nodes wanting to load 50 different 2GB files at the same time. We need this to be done without any lag in storage performance, so the digital artists can get on with their work uninterrupted."

An image of collaboration at its best
When it came to deployment, ILP collaborated with Dell Deployment Services. They installed a single rack comprising four Dell Compellent FS8600 NAS appliances as well as the Dell Compellent SC8000 storage array and SC220 arrays and two Dell Networking S4810 10/40 Gigabit Ethernet (GbE) top-of-rack switches. The switches play a key role in the hardware stack, giving the solution a 10 Gigabit Ethernet (GbE) front-end. They ensure low-latency interconnects and provide 16 ports for the FS8600 NAS appliances and four ports for 10GbE uplinks. After installation was completed, Dell and ILP spent time testing and fine-tuning the system until they achieved the right throughput results. "Dell stayed focused on our objectives and provided the support and expertise to help us meet our goals. By including Dell Networking S4810 switches, we gained the low-latency and non-blocking performance to maximise our NAS solution," comments Jacobson.

A success story that continues to run
The hard work paid off as ILP gained the highly scalable storage solution it requires to drive success. "We're a growing company with ambitions to expand in all areas," says Jacobson. "Look around and you'll see a team of talented design artists who've worked all over the world and have the skills to deliver amazing content for customers. The great thing now is that we can give them the IT support they need to deliver their best work. We can go home at night and rest easy knowing our artists will be able to pick up where they left off the day before – with the same reliable access to their files using the Dell Compellent solution. From a management perspective, it means the production process runs more smoothly."

He adds: "This is an exciting time in the development of ILP, and we're looking forward to expanding the business through our use of Dell technology."

A compelling picture – with reliable fast access to data
The simultaneous read/write performance on Dell Compellent testifies to Jacobson's predictions for a bright future. The solution delivers two Gigabytes per second (GB/s) simultaneous read/write performance. Jacobson describes what workloads on the storage can be like when the artists work on large-scale projects. "You can be writing and reading terabytes of data a day. With the Dell Compellent storage, we can handle these kinds of workloads without any reliability issues."

Storage scalability tailored to specific requirements

With developments in VFX technology, particularly around 3D content and the introduction of 4K high-definition television, workloads are growing. But with the scalability of the Dell Compellent solution, Jacobson is confident that ILP can easily handle the changes without artists noticing any loss of performance. "We can keep pace with the growing demands of VFX and other digital content because of the scalability of the Dell Compellent FS8600. The flexibility of the technology also means we can scale storage capacity or performance as we require and maintain load balancing," he says.

The storage, with its scale-out architecture, can support a single namespace of up to 2 petabytes today. Jacobson says that it's this kind of capacity that means the storage will be a long-term investment. "We believe the FS8600 will support us in the long term. We don't factor having to rip-and-replace this solution," he says.

A one-stop shop for storage

Besides the storage's scalability, ILP expects the value of its investment to increase over time. The FS8600 works with the Dell Compellent Storage Center platform, which enables both block and file-level storage. Automated tiering keeps frequently-accessed data on the fastest drives and moves less-used information to the slower, capacity−optimised drives.

What's more, with thin provisioning, IT teams can provide storage on demand, instead of having to rigidly pre-allocate space for consumption by various workgroups. In the case of ILP, this functionality represents an exciting opportunity for the future. "Our business applications run in a separate virtualized storage environment, but looking ahead we could migrate this environment to the Dell Compellent solution too," says Jacobson.

Proactive support and commitment

When Jacobson discusses the future of the company's storage, he speaks with confidence. "I think the roadmap is very interesting for the Dell Compellent FS8600 and Fluid File System. Dell is continuously developing its portfolio to meet companies' business requirements, while staying focused on support."

He adds: "From tweaking the system to get more performance, or replacing a storage disk, Dell CoPilot has come through for us. I like its proactivity, helping us maximise performance and responding quickly if an issue occurs. Throughout this project, we have been impressed by the cohesive support network of Dell. The dedication of its personnel has been excellent."

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