4D-DC Introduces New Cloud Solution Based on Infortrend's Storage

Organization

4D-DC is a colocation, cloud and connectivity provider

Challenges

- Build a cloud platform that scales rapidly
- Maintain performance and resilience
- Support 200VMs and 4 million peak IOPS (the growth expected in the 1st year)

Solution

- Infortrend EonStor DS 3016 dual controller systems with 10Gb/s iSCSI hosts
- Automated storage tiering for the optimization the utilization of SSDs and HDDs

Expecting to Reach 200 VMs and 4 Million Peak IOPS within 12 Months with the New Hybrid Cloud Solution (4D Cloud 2.0)

"Infortrend provides us with storage that can cope with the rapidly changing demands of a fast growing UK-based cloud platform. Now, we can provide our customers with even better connectivity and cloud solutions," says David Barker, founder and technical director at 4D-DC.

4D-DC is an independent UK data centre and ISP with a successful cloud platform. It recently launched a new cloud service platform (4D Cloud 2.0), redesigned from the ground up after thoroughly reviewing its services in order to best match the requirements of its clients and their cloud requirements. The main differences with the new cloud platform are on the storage side, which is provided by Infortrend.

A 10Gb/s SAN Structure for 200 VMs and 4 Million Peak IOPS

4D Cloud 2.0 was built on a 10Gb/s iSCSI throughput SAN infrastructure, including Dell servers, Brocade switches and Infortrend EonStor DS RAID storages. The purpose of the redesign is to offer an ultimate cloud hosting solutions in terms of flexibility, security, speed and ease of use. With 1 million peak IOPS and 40 VMs initially, 4D-DC anticipates that the growth will be over 4 million peak IOPS and 200 VMs within the first year. To meet such huge demands, the main technical challenge is to expand easily and rapidly whenever the scalable demand is there, while maintaining performance and resilience – these demands are met by Infortrend EonStor DS storage solutions.

Automated Storage Tiering Ensures Performance and Resilience

Due to the nature of cloud services, 4D Cloud 2.0 has a wide range of clients and applications running with the VMs, applications such as SQL databases, telephone systems to video streaming. In this case, Infortrend storage has a very important mandate: to deliver a wide variety of solutions. The automated storage tiering provided by Infortrend EonStor DS, better utilizes the different type of hard drives (SSD, SAS , NL-SAS). This allows 4D Cloud 2.0 to satisfy clients that require high speed storage access, while being economic to others who just want to store data for backup purposes.

"Some of our clients are looking to store data long-term, but don't need constant or immediate access; others require high performance and want to run a database from an SSD. Our new storage solution enables us to use any number of drives, of different types in one unit and split them up, so we can offer one customer 5GB on SSD, 100GB on SAS HDD…" says Mr. Barker.

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Flexible. Scalable. Dependable.

4D Cloud 2.0



Infortrend Automated Storage Tiering

By enabling users to flexibly assign applications to four available tiers distinguished by different drive types and RAID levels, automated storage tiering provides an architecture that fully leverages the advantages of different storage media, including SSDs for high-performance data storage. With automated storage tiering, users can greatly optimize storage performance and increase ROI.

Easy/Simplicity of Storage Interface Combined with Services

It is definitely not an easy project to deploy. A huge and complex new cloud platform, with a joint effort between all 4D-DC's technical teams, technical operations team, networking and support teams and support from Infortrend. For 4D-DC, they may easily have gone to another storage provider that offered similar features. In the end, Infortrend came out on top not only because of raw hardware firepower but also because of ease and simplicity of management interface coupled with excellent pre / post sales support.

More about Infortrend EonStor DS 3016

High availability dual controller 3U 16-bay storage designed for powerful yet simple enterprise service in SAN applications. It has the following benefits:

1. Up to 1.3M IOPS and 5,500 Mbps throughput
2. Up to an extra 316 drives via Infortrend expansion enclosures
3. Easy upgradable host interface module - 8Gb/s or 16Gb/s Fibre Channel, 1Gb/s or 10Gb/s iSCSI, or 6Gb/s or 12Gb/s SAS based on your needs and budget
4. Hybrid hosts for diverse environments on one system, e.g. Fibre Channel/SAS and onboard iSCSI
5. Rich data services – storage tiering, SSD cache, thin provisioning, remote replication…



EonStor DS 3016

About 4D-DC

4D-DC is a colocation, cloud and connectivity provider. One of the key things that makes it different is that 4D-DC actually owns and runs their flagship Tier 3 data centre in Surrey. Visit http://www.4d-dc.com/

About 4D Cloud 2.0

4D Cloud Hosting combines the expertise of 4D-DC as a data centre operator with the latest in cloud technology. It's a virtual rack which they call 'Data Centre as a Service' (DCaaS). Scale your IT infrastructure in line with your needs, upgrade or downgrade on the fly with this highly resilient platform. For more information, please visit http://www.4d-dc.com/cloud/cloud-hosting/

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