



“We were looking for a single virtualized solution with common, simple management. Fujitsu was one of the best industry players that could offer this in a complete, customized and hyper-converged solution.”

Dr. Santhosh Kumar G
Head, Department of Computer Sciences
Cochin University of Science and Technology



CUSAT has deployed a hyper-converged FUJITSU Integrated System PRIMEFLEX for VMware vSAN to provide high-performance, scalable and cost-effective computing.

At a glance

Country: India
Industry: Education
Founded: 1971
Website: cusat.ac.in

Challenge

CUSAT's individual academic departments had been building their own IT platforms, however, the University wanted to centralize all of its computing requirements on a single, flexible computing platform. It needed to find the right technology partner to meet its complex needs.

Solution

The University has deployed FUJITSU Integrated System PRIMEFLEX for VMware vSAN, an integrated system for deploying a hyper-converged IT that includes compute, storage, networking and virtualization resources.

Benefit

- Improved compute performance increases productivity
- Simple scalability ensures the solution can grow to meet rising demand
- Individual departments no longer need to invest in their own costly IT infrastructure
- New virtual machines can be provisioned quickly
- Reliable hardware guarantees optimal availability

Customer

Established in 1971, Cochin University of Science and Technology (CUSAT) is a government-owned science and technology university in Kochi, Kerala, India. It awards degrees in engineering and science subjects and has 29 Departments of study and research offering Graduate and Post Graduate programs, across a wide spectrum of disciplines in frontier areas of Engineering, Science, Technology, Humanities, Law and Management. There are nearly 5,000 undergraduates, over 2,000 post-graduates and over 1,000 PhD students supported by 250 faculty members.

Products and Services

- FUJITSU Integrated System PRIMEFLEX for VMware vSAN
- FUJITSU Server PRIMERGY RX2540

Building a new flexible IT infrastructure

In the past, CUSAT's different academic departments had tried to build and host their own compute platforms, however, this proved to be inefficient and costly. The University wanted to centralize its computing resources and make them flexible enough to meet the varied needs of faculty and students across its three campuses.

"Different departments have different requirements: some need lots of compute power, some need storage; others might need to crunch huge data sets or run processor-intensive multi-media applications," explains Dr. Santhosh Kumar G, Head, Department of Computer Sciences, CUSAT. "That means I can't simply buy a box off the shelf to support all these demands; instead, I wanted to build a facility with the flexibility and scalability to address everyone's needs."

CUSAT consulted with local partner and IT infrastructure specialist, StarOne IT Solutions. Together, they evaluated four leading hardware vendors and, based on a series of performance and energy consumption benchmarks, selected Fujitsu.

"We were looking for a single virtualized solution with common, simple management. Fujitsu was the only one that could offer this in a complete, customized and hyper-converged solution," adds Kumar. "It also had the best local technical support, which we knew would be crucial to the success of this ambitious project."

Introducing a hyper-converged computing platform

The FUJITSU Integrated System PRIMEFLEX for VMware vSAN is an integrated system for hyper-converged IT, delivering a next-generation virtualization platform that includes compute, storage, networking and virtualization resources. VMware vSAN is the software-defined storage technology, which delivers enterprise-ready, high-performance shared storage for VMware vSphere virtual machines.

At CUSAT, it is built on three Fujitsu PRIMERGY RX2540 standard x86 rack server systems, each with 1TB of primary memory and around 20 virtual machines. Fujitsu PRIMERGY rack servers provide high virtualization performance, while at the same time delivering the best in terms of server density, low energy consumption, heat optimization and lower overall operational costs.

"We spent one month planning and designing the new hyper-converged platform and then a further two weeks installing it, with the assistance of both Fujitsu and StarOne IT Solutions," continues Kumar. "It was a relatively seamless deployment that came in on budget."

The new Fujitsu hyper-converged solution provides a high-performing platform for up to 25 concurrent users, with the ability to scale as demand rises. Potentially, CUSAT could granularly scale-up or scale-out this compute and storage environment to a maximum of 64 hosts.

"We now have the power to run demanding applications, such as molecular modelling for the Applied Chemistry department or deep learning pipelines for the Computer Science department," says Kumar. "Although we can only support a relatively small number of concurrent users initially, the scalability provided by Fujitsu makes it easy to add nodes as and when we need them."

Efficient, cost-effective and resilient

CUSAT now enjoys a robust, high-performing compute platform that all departments can tap into. This means individual departments no longer need to invest in their own costly infrastructure. At the same time, the increase in performance means applications run more smoothly and tasks can be completed more quickly, making students and faculty more productive.

"I was able to meet my compute, storage and networking needs in one easy to manage, flexible Fujitsu solution that any department can access at any time. I can also easily provision new virtual machines at the touch of a button," comments Kumar. "We haven't benchmarked the performance yet but the initial feedback from users is positive – there is a significant uplift in terms of compute power."

The Fujitsu solution is also proving reliable with no technical glitches reported. In the event of any issues, StarOne IT Solutions is on hand to provide round-the-clock support and guarantee optimal uptime. Having such a resilient, scalable and high-performing platform is crucial to attracting new students and researchers.

"Everyone is delighted with the new Fujitsu hyper-converged solution, which provides a scalable, versatile and cost-effective platform that positions CUSAT as a leader in education and makes us a more attractive destination for students and professors alike," concludes Kumar. "Fujitsu has demonstrated that it understands our needs and has the technology and expertise to deliver the ideal hybrid computing solution."

FUJITSU

Contact a representative at: marketing-india@ts.fujitsu.com

IN COLLABORATION WITH

