



## Karunya University improves student learning experience with virtual desktops

University in India delivers virtual desktop infrastructure to attract the brightest and the best students, and to succeed in a competitive market

### INDUSTRY

Higher Education

### LOCATION

India

### KEY CHALLENGES

- Higher education in India becoming more competitive
- Students demand flexible access to data
- Large desktop infrastructure proves costly to manage
- End-users lacked same experience across all desktops
- Administration provided costly to the university

### SOLUTION

Karunya University deployed VMware Horizon 6 and the IT team began to use management tools including VMware Horizon View Manager, VMware Horizon View Composer and VMware Linked Clones.

### BUSINESS BENEFITS

- University can compete in challenging sector
- Students gain access to data they expect
- IT management is simplified with automation
- Rates of end-user satisfaction are high thanks to reliability
- University significantly reduces desktop infrastructure costs

### Customer Profile

Karunya University is a fully residential university located at Siruvani in southern India, close to the city of Coimbatore. It serves around 8,000 students and has a teaching faculty of more than 450, and around 250 members of staff. The university is best known for its engineering, management and science-based study programs and offers undergraduate courses as well as postgraduate and PhD level tuition. As part of its mission statement, the institution aims to drive research in areas around sustainable living.

### The Challenge

The higher education sector in India has expanded rapidly with the development of the country. Today, universities compete for the brightest and the best students. To ensure demand for study programs stays high, many institutions are investing in IT. They understand that students expect to find a level of technology found in modern office environments or homes where data access is fast, reliable, and available through from multiple devices.

When Karunya University assessed its own desktop infrastructure, it saw that work was needed to bring it up to the expectations of students. What is more, the university saw that desktop management was a drain on resources and overloaded the IT team with routine maintenance. The 15-strong team had to oversee around 3,000 desktops, running software as varied as AutoCAD, Visual Studio, SQL Server, ASP.NET and Microsoft Office, spread across multiple buildings in a 700-acre campus. Every

12 months, the team had to update and reinstall software on each of the desktops before the new semester began. A.J Jeys, Chief Technology Officer (CTO) at Karunya University says, "We were under a lot of pressure to maintain the desktop environment. It was physically challenging. Furthermore, we found it difficult to manage our software licensing because we had to rely on a manual system."

Because the desktops varied in age and processor type, students and teachers couldn't get a consistent experience across the infrastructure. Nor could they use their own personal devices to access data, and had to compete to gain access to the latest machines. Furthermore, the age of the machines added time to the management process because the team had to work with multiple desktop operating systems and configurations. With the older machines, in particular, increasing hard drive failures were due to the constant reformatting of disks.

"We were issuing around 20 helpdesk tickets a day and sometimes struggling to deliver the fast and responsive service that we aim for," says Mr Jeys. "We wanted to deliver a better desktop service to the university and bring down costs at the same time. Our high operational costs were due to the amount of manual labor needed to manage the infrastructure and there was a constant need for capital expenditure to replace desktop components or entire machines."

## VMWARE CASE STUDY

*“Karunya University can continue to develop and attract some of our country’s brightest students safe in the knowledge that we have a scalable and reliable VDI from VMware, to meet their needs.”*

A.J Jeys,  
Chief Technology Officer,  
Karunya University

### VMWARE FOOTPRINT

- VMware vSphere
- VMware Horizon 6
- VMware Horizon View Manager
- VMware Horizon View Composer
- VMware Linked Clones

### APPLICATIONS VIRTUALIZED

- AutoCAD
- Visual Studio
- SQL Server
- ASP.NET
- Microsoft Office

### PLATFORM

- IBM servers
- IBM storage
- Cisco networking

### PARTNER

Frontier Business Systems

### The Solution

The university planned to virtualize its desktop infrastructure. It approached VMware, whose VMware vSphere server virtualization technology was already in place, running on the main enterprise platform, which comprises IBM servers and storage, and Cisco switching. Mr Jeys says, “We had virtualized around 80 percent of our server infrastructure with VMware. The performance was good and we particularly liked the management simplicity of the VMware software. As well as approaching VMware, we also contacted Citrix because we wanted to find the best solution for the university.” Mr Jeys and colleagues then prepared a brief business case for each solution, comparing VMware and Citrix in terms of price and functionality. In addition, Mr Jeys spoke to IT colleagues operating in other institutions who had experience of both solutions. “We quickly came to the conclusion that VMware offered better value. Licensing was competitive and many users found it much easier to work with.”

Working with local VMware partner Frontier Business Systems, the IT team conducted a successful proof of concept (POC) of VMware Horizon 6 on a small number of machines in the IT laboratory. Team members asked students to participate and give their feedback on using the virtualized desktop environment. The results of the POC were positive and Mr Jeys secured funding from the university for 200 VMware Horizon 6 licenses and the same number of INP thin-client endpoint devices. The university soon followed this by releasing funds for 800 licenses and client machines. Mr Jeys expects the number of licenses and devices to be around 2,000 by the end of 2015.

### The Benefits

#### Virtualization helps university meet competition

By rolling out a VMware-based virtualized desktop infrastructure (VDI), the university is better placed to attract the best students in India’s competitive higher education sector. Students gain a much higher level of IT support, being able to access data more easily, when and where they need to. Everyone using the VDI gets the same fast and reliable access to whatever applications he or

she needs. Because software updates are automated, neither students nor teachers have to wait for software to be installed on university desktops. “In the case of teachers, they can focus on their lessons and no longer have to worry if their desktops can support whatever software they need for a particular lesson,” comments Mr Jeys.

#### Students gain access to data anytime and anywhere

With Horizon Client, the IT team also enables students to access the VDI using their own Windows, iOS or Android-based devices. It means the students don’t have to use the thin clients on campus to access the VDI but can log in and do course work from their own rooms using their own machines. “The students have gained a very flexible solution which gives them the freedom to work when and where they need to. Through VMware Horizon, we deliver a much more student-centric level of IT service.”

#### Automation simplifies IT management

Delivering such a high level of service is much easier for the IT team. They have automated many tasks through Horizon. For example, many of the 15 IT team members have been moved from desktop management to strategic tasks. In addition, those that remain will no longer face such intense work pressure. Just prior to the start of each semester, they will be able to update the VDI images in a couple of hours – when before it took at least a week to update all of the physical desktops. Such an increase in efficiency is a result of Horizon View Composer. The IT team uses the technology to manage pools of virtual desktops with common images. In addition, the team applies VMware Linked Clones technology to enhance image control and maximize storage space. With Linked Clones, administrators can make copies of master images and deploy them to individual machines quickly and easily.

#### Reliability and resiliency increase end-user satisfaction

Overall, the desktop infrastructure is significantly more reliable than in the past. Students and faculty members using the thin clients find the machines

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are performing well day after day. They don't lose time because of hardware failures nor feel the frustration from not being able to complete course work or prepare for lectures because a program isn't working properly. Indeed, the number of helpdesk tickets being raised has gone from an average of 20 a day to zero.

### **Significant cost reduction through virtualizing desktop infrastructure**

University stakeholders are particularly satisfied with the VDI. They have predicted a cost reduction of around 6.5 million rupees as a result of the VMware-based system. In terms of

operational expenditure, the annual figure has been cut by at least 35 percent. Furthermore, the university believes it will cut capital expenditure in half over the coming years, not least because the thin-clients have longer lifecycles than the previous PCs. In total, Mr Jeys predicts a drop in the total cost of ownership for the entire desktop infrastructure of 50 percent. “Karunya University can continue to develop and attract some of our country's brightest students safe in the knowledge that we have a scalable and reliable VDI from VMware, to meet their needs,” he says.

