DATA CENTERS IN BOXES- FROM ZERO TO HUMMING IN WEEKS

How a university cut down on data center acquisition costs and time to completion by adopting a modular design.

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It was a beautiful spring morning in the campus of Stratovoss University. But John Smith, the university's director of academic technologies, was in no mood to appreciate the view.

The cause of Smith's worry was an email lying in his inbox. Written by his data center manager, the mail essentially said that the facility was bursting at its seams and needed an immediate expansion.

"Stratovoss University has a number of ongoing research projects in fields like artificial intelligence, particle physics, nanotechnology, climate modeling and fluid mechanics that are very data intensive," Smith says. "All these projects would be impossible to run without our data center. It is our USP."

> **Our data center is our USP and research would be impossible without it. We could not afford a new data center, and we could not afford not to have one-** *John Smith, Director of Academic Technologies, Stratovoss University*

A cramped situation

According to Smith the university's data center was built in 2002 and more racks were added in 2005 and 2009 to cope with the increasing load. Solutions like virtualization were also implemented to squeeze the maximum possible juice out of the physical infrastructure. But as the email indicated even that was not enough.

"We had two obvious options- build a new data facility or use third party service providers," he continued. But the first option was unfeasible because of insufficient funds and time whereas the second option would violate data ownership and security policies.

"We could not afford a new data center but we could not afford not to have one either."

Smith and his team needed to act, and quickly. A number of data intensive research projects were due to start in a few months and unless they came up with a solution Stratovoss could lose out on grants worth millions of dollars.

For a university which had built a solid reputation on cutting edge research that would be a disaster.

The Lego data center

After evaluating multiple solutions Smith and his team settled on modular data centers. Modular data centers?

"A modular data center is the Lego equivalent of the traditional data center design," he replies. "They are based on a build what you need, when you need principle. For us modular data centers fit the bill perfectly."

The modular data center that Smith is talking about looks like a shipping container from the outside because it is, well, a shipping container. Step inside and you will see a framework of steel grids on which the actual servers can be installed. This prefab unit,

> **If you want a data center up and running in 6 weeks instead of 24-36 months your best bet is a modular data center- John Smith**

designed by Paclet Inc., comes with all the support systems that are needed to run a brick and mortar data center- water cooling and air conditioning, fire detection and suppression, UPS and backup power.

Why a modular data center over a brick and a mortar one?

"If you want a data center up and running in 6 weeks instead of 24-36 months your best bet is a modular data center," Smith says, explaining the logic behind his choice. But speed to market is not the only reason.

"We might have gone with traditional data centers if we were sure of our needs 15 years from now," he continues. "But because of the nature of the work done here we can't forecast our requirements accurately enough for that kind of time frame. We didn't want the face the situation of investing millions

of dollars in a data center only to find that it has become obsolete in a couple of years."

Flexibility and cost savings, guaranteed

Now that the modular data center in the university campus has been functioning for almost 3 months Smith feels that he took the right decision.

"Paclet's design is hassle proof and no retraining is needed to operate the facility," he lists some important benefits. "The rack design is compatible with equipment from different vendors- a must have feature as we run servers from several OEMs. We can also install the facility wherever we want, and even move it around the campus. "

> **Paclet's design is hassle proof and no re-training is needed to operate the system… we have a fully functioning data center in 6 weeks and have cut capital and maintenance costs by a huge margin -** *John Smith*

"But the most important benefit is that we have cut capital and maintenance costs by a huge margin," adds Smith. "I can't give out exact numbers but I can definitely say that if you want to do more with less when it comes to data centers a modular design needs to be considered seriously."

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