

NIIT LTD

Project Pulse

NIIT has strategic partnership with various technology companies such as Cisco, Microsoft, Oracle, Adobe, etc. Under these partnerships, NIIT offers higher end state of art curriculum to working professionals and career aspirants in IT. NIIT offers the use of hardware and software resources to ensure participants have real time hands on experience. To provide hands on experience to all of its students, especially in networking courses, a networking infrastructure was required. However deploying identical infrastructure across all NIIT Education Centers was neither cost effective nor green, as it would result in underutilization of network infrastructure as well as create management over head. To address the situation NIIT decided to set up a Virtual Lab.

This virtual lab has been co-hosted at Reliance Communication Infrastructure's Data Center in Mumbai. NIIT students can remotely access the lab using Internet connection. One point worth mentioning here is that no virtualization was used in this lab. A complete test lab has been set up at Reliance data center and NIIT centers to access them remotely on time sharing basis. Also the lab has been built using Cisco gear and NIIT claims that the setup done under the project will be life time. However, it will undergo regular changes as and when Cisco updates the technologies.

While Virtual Lab has helped in reducing the number of deployments by having centralized infrastructure, it also contributes to Green IT by reducing the CO2 emission that would have got generated

Q What were the key challenges you faced in this project ?

Technically the challenge was to ensure automation of lab launch and lab scrubbing, ensuring Infrastructure scalability and to find know how to setup and manage Virtual Labs. In terms of business, we faced the following challenges:

- Change in deployment methodology from Localized to Centralized
- Time share mode VS All time availability
- Remote Infrastructure Management
- High degree of Automation

Q Please tell us about the benefits NIIT has drieved from this project ?

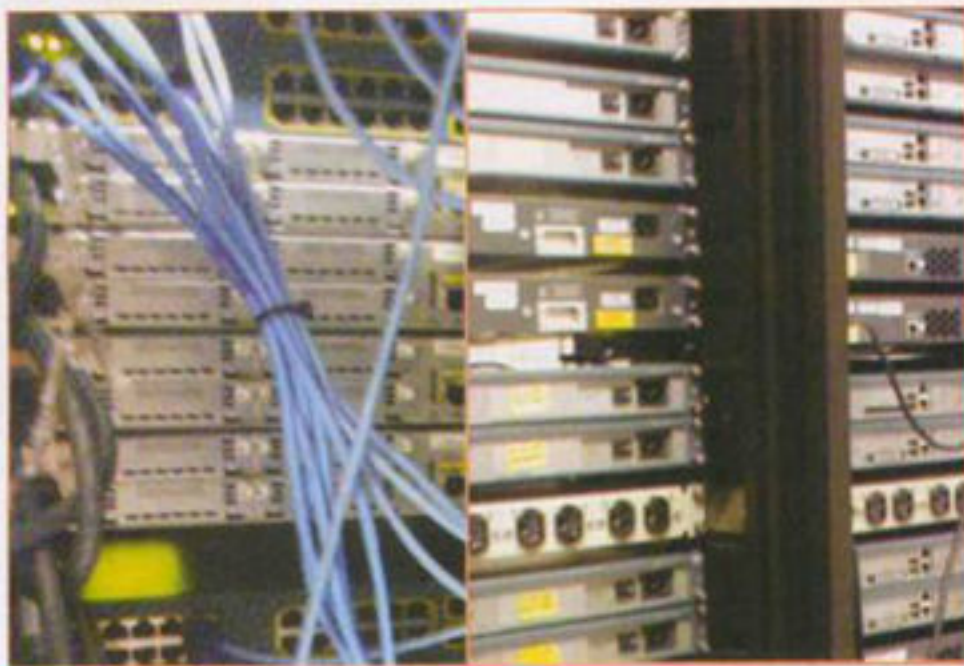
NIIT has maintained its endeavor to constantly innovate and leverage technology to help create world class services and experience for our customers.

We had rolled out a WAN 2 years back, connecting all our education centres and offices with a view to centralize services and consolidate with a view towards "Green IT" and reducing investments and carbon footprint. We setup a complete Virtual Lab Infrastructure for students learning Hi-End Networking Technology by centralizing all equipment and providing Real-Time access to the same through our connected education centres. This helped us save on investments, power consumption, reduce carbon footprint, while giving students a superior learning experience.



Pankaj Dikshit
General Manager

BEST IT IMPLEMENTATIONS OF THE YEAR 2009



due to the massive deployment at education centers. This was the precise reason why jury decided to put this project in Green IT category.

During the implementation, NIIT faced challenges like change in deployment and training methodology from localized to centralized. Other big challenge

COMPANY SCENARIO	
Before Deployment	
<input type="checkbox"/>	NIIT centres had small lab setups to provide hands on labs to students.
After Deployment	
<input type="checkbox"/>	A centralized virtual lab was setup, which can be remotely accessed by NIIT students and perform their hands on excersies.

was time sharing between various NIIT centers for the use of Virtual Lab. Also as soon as time for a hands on lab is up, routers and other infrastructure are automatically set to default settings with help of scripts created by NIIT.

Currently NIIT has completed Cisco CCNA Module setup i.e CCNA students are now using this Virtual Lab gear to practice their lab exercises as part of the CCNA training. NIIT claims that it has trained over 6000 students through this Virtual Lab.

Total cost of implementation of this project was Rs. 1.30 Crores and NIIT expects the returns of Rs 7.7 Crores over next 1.5 years. □

Power Cost	
Power for Distributed Setup	Power Consumption for Centralized Setup
720 KVA	36 KVA
Total Power Savings	41.4 Mn
CO2 Emission	
CO2 emission for Distributed Setup	CO2 emission for Centralised Setup
54360 Tonnes Per Annum	2718 Tonnes Per Annum

- Note:
1. Server emit Co2 @ 8 tonnes per annum
 2. Routers emit Co2 @ 20 tonnes per annum
 3. Ethernet switches emit Co2 @ 5 tonnes per annum