

➤ **Organisation Profile:**

Walchand College of Engineering is situated midway between Sangli and Miraj cities at Vishrambag, Sangli. The WCE campus is located on about 90 acres of land on southern side of Sangli – Miraj road.

In 1947, the college made a modest beginning as New Engineering College, with a single program leading to B.E. (Civil) degree. In the year 1955, the College was renamed as Walchand College of Engineering.

Walchand College of Engineering became autonomous in 2007. The college revamped its academic structure and contents, in consultation with few US and IIT academic experts. Accordingly, nomenclature of B.E and M.E programs has been changed to B Tech and M Tech programs. After completion of the first term of six years, the College has now received extension of autonomous status for the second term of six years till 2019-20. It participated in the World Bank funded, Government of India scheme, namely, Technical Education Quality Improvement Program (TEQIP) in Phase I from 2005-2009, wherein it stood all-India 2nd out of 127 participating institutions in terms of program impact performance. The college is presently participating in Phase II of TEQIP with outstanding performance.

➤ **Customer Pain Areas/Challenges**

College conducts PG programs & Full-time doctoral program with intake of 390 students at UG level & 106 at PG level. To cover the syllabus & labs, computer department faced below challenges

- a) Lack of High performance Server, Storage, Network
- b) Each student needed the machine with different OS & Application for testing & learning.
- c) After testing one set of OS & application, same student needed another different set with OS & Application.
- d) So complete lifecycle of student request took lot of time to get served by the LAB admin.
- e) Management of Hardware like CPU, RAM, HDD & Network is quite difficult by traditional approach of assigning one or multiple physical machine per student.
- f) Limitation for adding & reducing the resources in physical H/W & cost involved in it.
- g) Trouble shooting, Management & S/W installation is big time consuming task.
- h) Student & staff spend lot of hour in just installation & configuration of physical machine for small testing.
- i) After the testing whatever the data created by the student it's an another pain to manage & get copied.

➤ **Solution Offered:**

Vintech Presales Team engaged with Walchand lab Department, understand the pain areas & provide the below solution.

- a) Instead of traditional approach & its limitation, Vintech suggested customer to go with HP MOE Cloud solution with VMware virtualization platform.
- b) Virtualization technology address the issue of Managing the H/W resources such CPU, RAM, Network & Storage.

- c) Customer can easily provide & reduce the resources from Virtualized environment.
- d) Also gives the High Availability to the H/W failure such as host failure, CPU failure, disk failure etc.
- e) All the data is on centralized storage with Dual controller & disk redundancy.
- f) Power redundancy & Network redundancy brings the maximum uptime for the offered solution.
- g) The Most important part was that HP cloud solution reduces the Life cycle of Student Infrastructure request & its provisioning.
- h) HP Cloud self-services web portal which is available 24*7, helps student to raise the infrastructure request from anywhere inside the campus.
- i) Cloud workflow passes the request to approver team & approver team can approve the request on mail or on portal from anywhere in the campus.
- j) Once the request gets approved, Virtual machine with the required resources get deployed with the OS & Application template.
- k) Deployment time after approval of the request is maximum 12 to 15 minutes which was earlier maximum 3 to 7 days Job.
- l) Student can increase the resource on the fly & it is ready for their testing.
- m) Also these asset is available for particular lease period which is easy to increase & if it is expired then automatically free up the resources.
- n) Automation helped the college staff to provide the Infrastructure on demand from anywhere to everywhere access without manual effort with a few minutes response.

➤ Competition Scenario: Because of strong pre sales effort , customer was completely sold on the idea and there was not much of a competition involved.

➤ Benefits:

- 1) Automation helped the college staff to provide the Infrastructure on demand from anywhere to everywhere access
- 2) No manual intervention for deployment & serves the IAAS request in few minutes
- 3) Solution available for 24*7 with redundancy.
- 4) Service request will get fulfilled within 12 to 15 minutes, earlier it was taking 3 to 7 Days.
- 5) Easy scale up/down & on the fly resource addition & removal is possible which is a another 2 to 3 days job as per the H/W availability.
- 6) Overprovision & resource sharing increases the effective utilisation of H/W & ultimately cost.

➤ Implementation:

- 1) For the effective utilization of Datacenter with ease of Management we implemented the HP c7000 blade chassis & with two BL460C blades.
- 2) Each Blade is having 2 * 12 core processor with 128 GB of Ram.
- 3) For the Centralized storage we implemented HP MSA P2000 with FC connectivity.
- 4) ON top of blade we deployed VMware ENT hypervisor with vCenter STD edition.
- 5) HP MOE S/W was deployed inside the VM which resides on the Blade hypervisor called CSM server.
- 6) CSM help for monitoring of H/W & Automate the IAAS request.
- 7) 2 portals were deployed on CSM, one is organization portal for cloud Management & another is Self-service portal for student to raise the request & manage it.