

## **IT Infrastructure at COEP:**

Institute has provided well maintains IT infrastructure to students and faculties. Institute has Well equipped Data Center. Datacenter of COEP has

- High end Cisco core switches - Cisco Catalyst 6800 provides mobility, pervasive video, collaboration, and resiliency and the resulting challenges of scale, security, and management, making it the ideal switch for campus backbone deployments. Two Cisco 6807-XL switch is being used as a VSS(Virtual switching system) where total switching capacity is 11.4 Tbps.Core switch is responsible for transferring cross campus traffic without any processor- intensive operations.
- Cisco ASR1002 router with routing backplane to handle traffic upto 5 GBPS.
- The firewall which is being used is Cisco WS-SVC-ASA SM1.Total throughput is 20 Gbps and acting as a security device for unauthorized access.It's inbuilt on Cisco 6807-XL Chassis and placed in between Radware Linkproof 1000 and Core Chassis (6807-XL).All the proxy as well as non proxy users traffic go through the Cisco Firewall Module. (4)Proxy Server and Web gateway:McAfee is being used as a Proxy Server.It is directly connected to the Core Chassis (6807-XL) and responsible for url filtering, application control.All the non proxy traffic from the entire College and Hostel campus go through Macfee Server.As McAfee is synchronized with the LDAP Server, users authentication is managed by the McAfee server working synchronously with the LDAP where all the users credentials are stored in Database.
- Radware Link Load Balancer: Link terminated from ASR 1002 to Radware Link Load balancer,Link load Balancer used is Linkproof 1000/ASII/5\*Gb + 16\* FE/256 MB.All the three internet leased lines are being load balanced as per the requirement such as VSNL is used only for servers, BSNL used for users and NKN for Virtual Lab.
- Leased Lines: At COEP three different service providers have provided 1:1 dedicated Leased Line.  
I.BSNL-1Gbps 1:1 dedicated leased line  
II.Tata VSNL-70Mbps 1:1 dedicated leased line  
III.NKN-1 Gbps  
All these lease lines are being load balanced in load balancer as mentioned above.
- Wireless Service Module used is WS-SVC-WiSM2:Cisco WSM provide the visibility, scalability and reliability needed for highly secure enterprise – scale wireless network.All the Cisco AP(Access point) are being controlled by WS-SVC-WiSM2 and over 300 APs license WS SVC-WiSM2e is installed. Whole COEP campus and Hostel campus is wifi. To provide security and control over wifi usage Unibox is installed at Datacenter. With the help of unibox we are able to keep track on browsing of internet by students. Each student is registered in unibox .Per day 1 GB data is provided to each students.
- At datacenter more than 40 high end Rack servers and Blade Servers are available. On these servers all licensed softwares are installed like Catia,Pro-E, Ansys 15, Matlab, Hypermesh, AVL Cruise / Dessault Licence, Autocast, LsDyna, Abaqes, Star-CCM, ISM 6.Also college DNS server, MIS server,Website server,FTP server, Microsoft exchange server, Ldap server,Moodle Server,Digital Library Server,Kpoint server,Antivirus server,etc are installed at datacenter.All the servers have minimum 300GB HDD capacity and maximum 1500GB HDD Capacity and having RAM minimum 12GB and max 64 GB.
- Institute has more than 1972 high end personal computers with i5 and i7 processor and 4 GB RAM connected over the campus through LAN.
- The institute has gigabit LAN with fiber optics backbone having more the 2000 nodes connected onto it. All the computer laboratories are connected on LAN through internet and intranet. There are more than 193 manageable layer 2 and layer 3 network switches which handle internal data traffic. The computing facilities are available on different platforms such as windows and Linux.
- Institute has MIS for managing all the students and faculty related information.

- Internet: The institutes' network is linked to the internet via a set of dedicated leased line enabling 24 X 7 internet connectivity on the campus. The internet leased lines are availed from different service providers do that the provision of redundant ISP's is there in order to have seamless connectivity across college campus and hostel campus. All the Internet service providers from whom the Institute has procured internet bandwidth have installed fiber optics link from the campus to their hub. This ensures very high quality of bandwidth to the internet. The institute has 1.07Gbps dedicated 1:1 leased line and 1Gbps NKN lease line. This internet browsing center is open to all students throughout the college campus and hostel campus 24X7.
- Website: COEP's website is designed and developed by team of coep students from department of Computer Engineering and IT, we call them as webteam. The information on website is regularly updated .All the notices, events information, timetables, syllabus, faculty information, tenders, recruitments etc are uploaded on website on regular basis.
- Mail server and client: The Email facility is managed through Microsoft office 365 which provides us web based email client as well as outlook support . Each user gets 50 GB of mailbox storage. Each faculty ,staff and students is been given e-mail Id on coep.ac.in domain. We have created groups of faculties and staff based on department and for students based on department and year of admission. we are maintaining [email hierarchy at COEP](#) for students and faculty respectively. All Email forwarding is done through helpdesk of coep.
- Different institute wide technology implementations in the institute are as follows:
  1. Authenticated and secure Internet access having 1 GB Quota per day per user to LAN and WAN by McAfee web gateway.
  2. Microsoft campus agreement which allows downloading all Microsoft products for academic purpose free of cost.
  3. Whole campus is Wi-Fi connected.
  4. Learning Material Facility:
    - FTP server is there which is having all the useful software, video lectures and other study material which is available to students and faculty through intranet.
    - COEP faculty is using MOODLE to give assignments to students.
    - E-library facility makes it possible to access online journals
    - Different Webinars are arranged for effective teaching learning process.
    - E-Lectures are organized for students to have interaction with expert Faculty from abroad or in other part of country with the help of Video Conferencing .
  5. At COEP we do Live Streaming for various events like Regatta, mind spark etc on our college website [www.coep.org.in](http://www.coep.org.in) .
  6. COEP infrastructure is also use for conducting Online Examinations, Campus Placements, etc.
  7. Also to carry out F.Y B.Tech. Admissions and F.Y M.Tech. Admissions at coep .
  8. Internet facility is available to all users for educational as well as research purpose 24X7

**Committee members:**

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