IT Infrastructures & Facilities

IIIT-D has truly world class, campus-wide state of the art information technology tools that are designed to meet the computing and communication needs of the institute, which has a fast, reliable and rugged computer network of more than 4000 Nodes. The institute has more than 200 laptops issued to its faculty, staff and students. To provide printing and other facilities, the institute has more than 150 printers and scanners. In order to facilitate proper teaching aid, all classrooms here are equipped with projectors and audio systems. All the hostels, faculty blocks, administrative block, library, classrooms and residences, are connected through redundant 10 gigabit fiber backbone network. All the blocks are connected through layer 2 & 3 switches to provide 1Gbps connectivity at the user end. Every hostel room has a dedicated LAN connection to provide round the clock access to resources on the net. Wireless network with 300+ access points is also enabled in the faculty block, library, classrooms and hostel blocks.

Internet Access: Through a 10 Gbps Internet leased line from NKN with a backup connection of 1 Gbps running in failover mode. Internet connection range is provided through both Lan and Wi-Fi in all blocks inclusive of residences, academic, dinning, lecture block, R&D block, library and hostels.

Data Center: IIIT-D has a full-fledged data center of its own. It hosts 100 physical Servers, 100 VMs and 300 TB SAN + 2 x 100 TB SAN storage capacity. The data center is powered by redundant UPS backup to ensure maximum uptime. All servers are connected to Internet by public Ips

DGX Server : The DGX Server is a high-performance computing facility designed for deep learning and AI (artificial intelligence) research. Institute is equipped with **three** NVIDIA DGX servers, each of which boasts eight A100 40 GB NVIDIA GPUs. These powerful GPUs are specifically engineered to accelerate AI workloads, making them ideal for training and running large-scale machine learning models and data-intensive computations. With the DGX Servers at our disposal, we have the computational muscle needed to tackle complex AI research projects effectively

IP Telephony: Our entire Campus is equipped with IP telephony. It has 350 IP phones.

Cisco WebEx: We have Cisco Webex Meeting Center with VoIP and Video facility.

Video Conferencing: Polycom HDX7000 VC System is available with optional ISDN line & also connected with Internet. Skype, zoom & meet are managed through Logitech Group(Video Conferencing System),Logitech Connect

VPN: It can be used to access all IIIT-D IT resources from outside campus using any Internet connection.

UPS: We have 2 x 100KVA (Configured in N+1 in redundant mode) and UPS powering the critical IT infrastructure.

ERP: IIITD provides Academic ERP to students and faculty. For students, ERP provides the facility to register for courses, add-drop courses and view grades. For faculty, it provides the facility to view the courses they are offering, view list of students enrolled in the courses and enter grades. The ERP portal can be accessed at https://erp.iiitd.edu.in

Tape Library Backup Solution: The institute Data Centre has an LTO 6 Tape Backup solution deployed for taking onsite and offsite backup of critical data. It consists of a DELL Power Vault TL 2000 Tape Library and a Backup Server. Presently we have one Read-Write Tape Drive with 24 slots in our TL 2000 Tape Library. The Tape Library is directly connected to SAN and provides direct backup from SAN storage, besides allowing us to make any server disk to tape backup through the backup server.

Computers LABs: Five state of the art computer labs, meant for undergraduate teaching, house a total of 250 desktops. These desktops in the labs, which are situated in the Lecture Block (3rd floor), run on 100 KVA UPS supply that is available 24x7. All the desktops in the computer labs are connected with 10 Gbps Internet from NKN and also have a backup connection of 1 Gbps running in failover mode. Wireless network too has been enabled in parallel to serve these labs. All lab machines are dual-boot with Linux and Windows 64 bit operating systems. These systems are equipped with almost all general-purpose computing software. These labs are designed to be used by faculty for teaching and by students to carry out their project work. Besides, students may use these labs for Internet surfing, mailing and other related activities. The department offers domain-based authentication to provide secure access to all its online services. Computer Labs details are as pr below:

S.N.	LAB No.	System Number	System Configuration	Location
1	L-315	32	I7/16GB RAM/1 TB SSD/Dual Boot	Lecture Block 3rd

				Floor
2	L-316	32	I7/16GB RAM/1 TB SSD/Dual Boot	Lecture Block 3rd Floor
3	L-317	64	I5/8GB RAM/500 GBHDD /Dual Boot	Lecture Block 3rd Floor
4	L-320	64	I7/16GB RAM/500 GBHDD /Dual Boot	Lecture Block 3rd Floor
5	L-321	58	I7/16GB RAM/1 TB SSD/Dual Boot	Lecture Block 3rd Floor

centralized CPU/GPU computing facility

S.No	Servers	Configurations
1	HPC master	Intel(R) Xeon(R) CPU E5-2670 v2 @ 2.50GHz, 20 core 96 GB RAM
2	compute-0-0 Compute node	Intel(R) Xeon(R) CPU E5-2670 v2 @ 2.50GHz, 20 core 96 GB RAM
3	Compute-0-1 Compute node	Intel(R) Xeon(R) CPU E5-2670 v2 @ 2.50GHz, 20 core 96 GB RAM
4	Compute-0-2 Compute node	Intel(R) Xeon(R) CPU E5-2650 v3 @ 2.30GHz, 20 core, 40T, 96 GB RAM
5	Compute-0-3 Compute node	Intel(R) Xeon(R) CPU E5-2650 v3 @ 2.30GHz, 20 core 64 GB RAM
6	Compute-0-4 Compute node	Intel(R) Xeon(R) CPU E5-2670 v2 @ 2.50GHz, 20 core 96 GB RAM
7	Compute-0-5 Compute node	Intel(R) Xeon(R) Gold 5220 CPU @ 2.20GHz, 36 core, 72 T, 128 Gb RAM
8	Compute-0-6 Compute node	Intel(R) Xeon(R) Gold 5220 CPU @ 2.20GHz, 36 core, 72 T, 128 Gb RAM
9	V100 server	Intel(R) Xeon(R) Silver 4114 CPU @ 2.20GHz, 20 core, 40 T , 96 GB RAM and 2 x V100 32 GB RAM
10	V100 Server2	Intel(R) Xeon(R) Silver 4210 CPU @ 2.20GHz, 20 core, 40 T , 96 GB RAM and 2x V100 32 GB RAM
11	A100-1	AMD EPYC 7452 32-Core Processor, 64 core,

		128T , 256 GB RAM and 2x A100 40 GB RAM
12	A100-2	AMD EPYC 7452 32-Core Processor, 64 core, 128T , 256 GB RAM and 2x A100 40 GB RAM
13	A100 Server	Intel(R) Xeon(R) Gold 6338 CPU @ 2.00GHz, 64 core, 128 T, 256 GB RAM, 2 X A100 80 Gb
14	10 x workstations each one configuration: Intel(R) Core(TM) i7-6700 CPU @ 3.40GHz, 4 core 8T, 16 GB RAM, Nvidia GTX 1080 8 Gb card	
15	**300 TB SAN Storage capacity**	
16	CSE department Server A100	4X HGX A100 Server 40 Gb cards, AMD EPYC 7763 64-Core Processo, 128 core, 512 GB RAM
17	CSE department Server V100 Server	Intel(R) Xeon(R) Silver 4210 CPU @ 2.20GHz, 40 T, 128Gb RAM, 1 x 32 GB V100
18	CSE department V100-2 Server	Intel(R) Xeon(R) Silver 4210 CPU @ 2.20GHz, 40 T, 128Gb RAM, 1 x 32 GB V100
19	CSE department Nvidia 2080	Intel(R) Xeon(R) Silver 4216 CPU @ 2.10GHz, 32 cores 64 T, 256Gb RAM, 5 x Nvidia Gefore RTX 2080 Ti 11 GB
20	DGX CAI	AMD EPYC 7742 128-Core Processor, 256 T, 1 TB RAM, and 8 A100-SXM4 40 GB GPU cards, 14 Tb storage
21	DGX CoEHe	AMD EPYC 7742 128-Core Processor, 256 T, 1 TB RAM, and 8 A100-SXM4 40 GB GPU cards, 14 Tb storage
22	DGX CoEHe	AMD EPYC 7742 128-Core Processor, 256 T, 1 TB RAM, and 8 A100-SXM4 40 GB GPU cards, 14 Tb storage
23	CB department Server	Intel® Xeon® Gold 6338 Processor 64-Core, 128 T, 1 TB RAM Vmserves
24	CB department GPU Server	Intel® Xeon® Gold 6346 Processor 36-Core, 72T, 512 GB RAM A100 80 GB nvidia card
25	CB department 100 TB SAN storage for these two servers	
26	CB department SMP server	Intel(R) Xeon(R) Gold 5120 CPU @ 2.20GHz 56 cores and 112 T, 512 GB RAM
27	CB department XeonPhi	64 core, 256T Intel(R) Xeon Phi(TM) CPU 7230 @1.30GHz, 96 GB RAM

28	CB department XeonPhi2	64 core, 256T Intel(R) Xeon Phi(TM) CPU 7230 @1.30GHz, 96 GB RAM
29	CB department 100 TB SAN Storage capacity	
30	CAI server P100	20 core, 40 T, Intel processor with P100 16 Gb card
31	CAI server V100	20 core, 40 T, Intel(R) Xeon(R) Silver 4114 CPU @ 2.20GHz with V100 16 Gb card
32	Quantum technologies center server	AMD EPYC 7282 16-Core, 32T Processor, 32 Gb RAM, 44 TB storage
33	Quantum technologies center server	AMD EPYC 7713 128-Core Processor 256 T Processor, 512 Gb RAM
34	Quantum technologies center server	AMD EPYC 7713 128-Core Processor 256 T Processor, 512 Gb RAM
35	ECE Department server	2X Intel(R) Xeon(R) Gold 6226R CPU @ 2.90GHz128 GB RAM, 3 TB, OS RHEL
36	ECE Department server	2X 18 core Intel(R) Xeon(R) Gold 6354 CPU @ 3.00GHz, 512 GB RAM,11TB hard disk, os Ubuntu 20.04.5 LTS
37	ECE Department server	2X 18 core Intel(R) Xeon(R) Gold 6354 CPU @ 3.00GHz, 512 GB RAM,11TB hard disk, os Ubuntu 20.04.5 LTS
38	Approx 50 project workstations for computing installed in data center	
39	Approx 60 project servers for computing installed in data center	