

# NICHE CLOUD DATA CENTER



Inaugurated by Janab. Dr. A. P. Majeed Khan,  
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Education

## NOORUL ISLAM CENTRE FOR HIGHER EDUCATION

(Deemed to be University u/s 3 of the UGC Act 1956)

Accredited by NAAC with 'A' Grade

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Noorul Islam Centre for Higher Education (NICHE) is a pioneering institution in south India has deployed the State-of-the-art of Advanced Cloud Computing Infrastructure which is the key focus of future Computing technologies. NICHE cloud computing data centre was established on 01-02-2018. NICHE has made a remarkable step to deliver the world of technology to young engineers by breaking the barriers and bringing the cutting-edge technology. NICHE is the one among the university from south India that hosted a live private cloud infrastructure with 24x7 remote accesses. The entire design and development are managed by a dedicated team of NICHE. Advanced computing laboratory is established with a focus on high performance computing research for engineering and scientific applications. Now a days, it is required to process huge volumes of data in a lightning speed that are emerged from surveillance systems, social media applications, scientific simulations such as analyzing weather data etc.,



Cloud Computing Infrastructure is equipped with nine production servers. Each dedicated server is equipped with 1 TB storage and separate expandable NAS is also deployed with 48 TB storage. The servers are allotted for demanding tasks including media streaming for Online classes, data center for research activities, conducting exams online, Online education portal, library access for the student community, academic and administrative purpose. The client machines exist across the NICHE campus are also connected with the cloud hub through OFC at Gigabyte Per Second (GBPS) speed.

All of the department's client systems are connected to the cloud center via high-performance routers. The client systems are upgraded by a cloud server and utilize software as SaaS technology. It allows students to connect to and use cloud-based applications over the Internet. SaaS apps are typically accessed by students using a thin client, e.g. via a web browser. NICHE has over 2000 I3, I5, Core2 Dual, Quad Core, Hex core Pentium D (Lenova, HP, Dell and Acer) computers arranged in 12 separate labs for MBA, MCA, ME/M.Tech and BE/B.Tech students and a three Computing Centre with well-equipped IBM and HP High End Servers. NICHE computer labs are well equipped with latest Hardware & Software technology. All labs in the Institute are on structured LAN and secured with Firewall security system.



It is the hub of the Campus wide Network backbone and distributes the internet connectivity throughout the Campus via fibre optical connectivity including Ladies Hostel, enabling 24 X 7 internet access. A Wi-Fi connection is also set-up in the College by utilizing this facility for the over-all development of staff and student community. Main Internet Lab remains open for 2 hours after institute timings for the excess of computers and internet for students.

Students and researchers can use the cloud facility anywhere, anytime to process their scientific simulations through massive storage and compute capacity. Students receive training in virtualization tools, data center management tools, big data analytics, and machine learning methods. In addition, students have the privilege of accessing software deployed in the data centre and can also conduct laboratory experiments off campus. University researchers are allowed to conduct laboratory research in various computer fields. Complex computing applications such as big data analytics, artificial intelligence, and machine learning applications can be efficiently handled using a cloud computing setup.

Remote lab sessions can be performed using the facilities available and additionally, security is ensured by using an advanced host intrusion detection system with portability. Cloud setup configured with OpenNebula, OpenStack, VMware, Hadoop, Microsoft Imagine License and MongoDB. Young engineers are trained with tools like OpenNebula, OpenStack, Hadoop and VMware in addition to their usual courses.

The Internet of the Future Will Be Bigger, Faster, Safer, and More Private. With technological advances, the future is set to be highly competitive and agility is the need of the hour. With cloud computing, institutions can save money on storage, servers and management services, as these services can be moved to the cloud with minimum cost

