

TERABYTES

DIGITAL CAMPUS AND INFORMATION TECHNOLOGY SERVICES

Online Course Evaluation

DIGITS, with the help of its staff and outsourced team, designed and implemented an Online Course Evaluation Platform for obtaining feedback on courses and instructors corresponding to the August-December 2016 and January-April 2017 semesters through various reports and trend analysis.

Online Course Registration

An online course registration module has been developed and has been tested during August 2016 and January 2017 in several Departments. The plan is to roll out this module across all departments by January 2018.

Automated PhD Thesis Processing

An automated online Ph.D. thesis processing system is set to be rolled out through the Scholar One platform of Clarivate Analytics (formerly Thomson Reuters). This is currently undergoing testing and customisation and is expected to be deployed in the next few weeks.

DIGITS (Digital Campus and IT Services) Office is a unit set up by the Institute to conceive, plan, and create a best-in-class information technology (IT) and networking system, and implement agile IT and networking services for operational excellence in the Institute. The DIGITS office has the mandate of consolidating and coordinating all digital campus activities and services for better execution of the following earlier initiatives in IISc: OPERA (Operational Excellence for Research Advancement); CCIT (Committee on Computerisation and Information Technology); TINA (Telecom, Internet, and Network Access); VISE (Video Security Equipment for IISc); MMCR (Multimedia Class Rooms Initiative); Video archives and streaming; IISc webpage maintenance and enhancement; Campus infrastructure data acquisition and analytics; Provide an interface between vendors and IISc administrative units.

Request: *Fast and effective deployment of IT applications invariably involves adjusting our processes to suit the workflow programmed in the IT application. While configuration and customisation are possible, we need to strike a lovely balance between degree of customisation and retention of legacy workflows. The DIGITS team sincerely urges the understanding and cooperation of all users in the interest of timely implementation and deployment of new IT applications and the ERP system.*

Feedback : *DIGITS solicits candid feedback on these initiatives. For any questions, you may please send email to office@digits.iisc.ac.in. For specific questions regarding Active Directory implementation and email migration, please contact support.digits@iisc.ac.in. For suggestions on the website, send email to feedback@apc.iisc.ernet.in*

Vehicle Information System (VIS)

An application for online vehicle registration, allocation of vehicle parking allocation and authentication has been developed, tested and rolled out in June, 2017.

Website

The Institute website has metamorphosed into a more contemporary platform with constant updating of content. It will migrate to the cloud in August 2017. The mirror site with load balancing and WAF (Web Application Firewall) is now under testing and will, shortly, go live.

Video Security Equipment (VISE)

Phase I of VISE, deployed in 2015, covers 26 locations. The RFP for Phase II of VISE covering 40 additional locations is ready and an open tender is expected to be released by the end of August 2017.

Equipment for Next-Gen Network Infrastructure

A detailed plan has been drawn up for procuring equipment for a modern networked campus.

The equipment is being procured through NICS, a subsidiary of NIC and a Govt. of India company.

Active Directory Implementation and Centralised Email Services

Implementation of Office 365 and Active Directory implementation is currently in progress and has been completed for a few departments including DIGITS, IPTel, ESE, ECE, CSA, MBU, CNS, and Chemical Engineering. Efforts are on to complete AD implementation for all departments by August 31, 2017. The above departments also have moved to centralised cloud-based email services (this activity involves migrating user mailboxes to the Microsoft Azure cloud). The email migration is set to be completed by September 30, 2017. Active Directory implementation and cloud-based email creation for all the new students who joined in the last week of July 2017 have been completed. *A detailed FAQ is being circulated soon to clarify any issues that the users may face in the initial stages of using the new Desktop environment and new email system.*

Enterprise Resource Planning (ERP) Evaluation

In preparation for selecting a high performance ERP (Enterprise Resource Planning) system to be implemented in the Institute, the DIGITS team commissioned the services of an ERP evaluation team from Infosys to help with the selection of an ERP platform. Through an RFP and competitive techno-commercial bidding process, an ERP platform along with the sub-products is set to be finalised. Following this, an implementation partner for the selected ERP platform will be identified through a competitive bidding process. An IISc team visited IIT-Bombay and IIT-Roorkee to gain a first-hand account of the ongoing ERP implementations there. It is expected that a full-scale ERP implementation will commence from January 1, 2018.

Unified Database Architecture

Currently, the existing IT applications invoke as many as 12 different databases leading to unproductive data redundancy and causing inconsistency of data across databases. A team from Integra Micro Systems is working on integrating all data in the campus to be organised into a single unified logical architecture. This ongoing exercise will have significant value for data migration phase of ERP implementation.

Recruitment

Amit Kumar Chakraborty (with 20+ years IT experience in BHEL and IBM) joined in January 2017 as IT Consultant, to further strengthen the DIGITS team. He is closely working with Ganesh Gopalakrishnan, Chief Information Technologist. Recruitment of personnel for manager and programmer positions is being pursued actively for expansion of DIGITS team. Finding talented human resources with the right experience continues to be a challenge.

Building

DIGITS has been allotted the building space which has been vacated by the F & A Section. Renovation work is in progress and it is expected that DIGITS will move into the new building by November 2017.

Cellular Coverage

AirTel operations (from four roof top towers) have stabilised and improved cellular coverage. BSNL has also set up roof top towers and will start radiating soon. Reliance Jio and Vodafone are also expected to set up their infrastructure soon.

Maintenance of the Current IT and Networking Operations

Since it would take another two years for a fully operational implementation of an ERP system at the Institute, there is a need to strengthen and maintain the current IT and network services. DIGITS has commissioned the services of a team from an IT services company Integra Micro Systems since September 2016 for this purpose. This team is helping DIGITS to run the existing operations in a more reliable and robust way, and in implementing additional applications. Knowledge acquisition and take-over of Purchase, Hostel Management and CSSP applications are complete and are in progress for Admission and Academics applications.

Software Quality Processes

DIGITS team is implementing the Quality Assurance processes (like Metrics based monitoring of defects, multiple levels of review and testing) and best practices for delivery of the application software and resource productivity improvement.

Frequently Asked Questions

Note: A more detailed version of this FAQ is being broadcast via email

1. What is Active Directory? What does it facilitate and what are the utilities available?

Active Directory (AD) is a directory service that is widely used for enabling user authentication in domain networks. The AD repository will facilitate a single sign-on service for campus system users and will serve as a core component in authenticating a campus user for various network and web application services such as IAMS, EIMS, QMS, email, and all other future services. The centralised, campus-wide, cloud-based email service ([userid@iisc.ac.in](mailto:user@iisc.ac.in)) uses the AD repository for user authentication. As soon as DIGITS gets information from any Department about all its users, and creates user accounts for all the users in the Department, each user will get an email to the personal address and IISc email address (if available), with detailed instructions on how to access **Office 365** suite.

2. What is O365?

O365 (Office 365) is a collaboration software suite from Microsoft that includes Microsoft Office software, email system and other commonly used Microsoft tools. It is a cloud based service with licenses to install all the available software on your desktop or laptop; once installed, the software can be used in offline mode. The O365 suite includes **Word, Excel, PowerPoint, Outlook, OneNote, Yammer, Publisher, Skype for Business, Access, Classroom, Sway, Delve, SharePoint, Microsoft Teams, Planner, OneDrive, and many more.** Each O365 user would get 50 GB of email storage on Azure Cloud and up to 1 TB storage on OneDrive.

3. Is the information provided kept confidential?

DIGITS would like to assure complete confidentiality of the information provided by the Department/Centre. The departments are requested to email the information only to tina@dese.iisc.ernet.in and nowhere else.

4. What is involved in Email migration?

Once the user accounts are created using AD, email accounts of all valid users in the Department will be migrated to Microsoft Exchange on Azure cloud. The email migration will take one or two days for each department/centre. This will be a campus-wide single domain email system which will have email addresses of the form ([userid@iisc.ac.in](mailto:user@iisc.ac.in)).

5. Are the users mandated to use only outlook email system?

The user's account is on a Microsoft Exchange server on the Azure cloud. This is the "back end" where user mailboxes are stored. However, the user can access the email account using a browser, or any one of several supported email clients. Microsoft Outlook is one such email client, but it is by no means mandatory to use Microsoft Outlook to access email. Web browsers can be used to read and write emails. One can continue to use open source email clients, for example, Thunderbird, squirrel mail, round cube, pine, etc.

6. Can I keep using my old email server and email ID even after migration?

Once the hard switch happens, the department email server will **not** be able to send or receive any emails. However, old emails prior to the switch will remain accessible to users on the old server. Old emails that exist in the old server will also get copied to the new O365 account. DIGITS is planning to support the **old email ID for at least one year**, if not more, for redirecting mails sent to the old email ID to the new one.

7. Where are the emails stored?

The emails are stored on the Microsoft Azure cloud. The data center is in India and has automatic back up at three different locations in India with auto-failover feature. It is much more reliable and easy to access than what we have right now on campus.

8. How can I still keep a backup of my emails?

The system provides standard secure email interfaces, for example IMAPS, POPS, end users can use them for taking backup. DIGITS does not have any plans to keep system level backup on premise, i.e., on campus.