

Department of Computer Sc. & Applications.

A Report on :

“Study Tour to the Data Centre, National Informatic Centre, Shillong”.

Date: 25th March 2022.

Student Participants: 6Sem/BCA and 6/Sem BSc.(Computer Science)

Teachers: Shri. T S Warjri

Purpose Statement:

The Department of Computer Science and Applications, Shillong College organized a One Day Study Tour for the final Semester BCA and BSc (Comp. Sc) students to the Data Centre, NIC, Shillong on the 25th March 2022.

The Study Tour offered the students the real opportunity to witness the Data Centre and have a better understanding about how the data are stored and processed.

The students had a chance to interact with the System Administrator to understand its working environment.

About the Organization:

The Government of Meghalaya, as a part of its ongoing effort to improve efficiency and effectiveness through e-Governance, has started with the implementation of core infrastructure projects like CSC, SDC, SWAN and SSDG on a high priority basis.

Under National e-Governance Plan (NeGP) of the Government of India, State Data Centres (SDCs) were proposed to be established across 29 States & 6 UTs in the country along with Disaster Recovery (DR) in order to provide shared, reliable and secured infrastructure for hosting and managing the e-Governance applications of the State and its constituent departments. It would provide better operations and management control and thus minimize overall cost of data management, IT management, deployment, etc. SDCs help the State Government, State Line Ministries and Departments in providing Central Repository (database consolidation) of the State, provide Secure Data Storage, Online Delivery of Services, Citizen Information/Services Portal, State Intranet Portal, Disaster Recovery, Remote Management and Service Integration needed for G2G, G2C and G2B services. The various Mission Mode Projects (MMPs), both at the Central level, State level and also the integrated services of the NeGP are expected to use SDCs to deliver their services.

The Meghalaya State Data Centre (MSDC) was inaugurated and dedicated to the people of Meghalaya on the 17th of August 2011, by the Honorable Chief Minister of Meghalaya, Dr. Mukul Sangma in the presence of the IT Minister, Shri. A.L. Hek and Chief Secretary, Shri. W.M.S. Pariat. The 1800 square feet (approx) facility is located at NIC Building, 2nd Floor. The MSDC connected to the Meghalaya State Wide Area Network (MSWAN) provides access to the e-Governance applications and services to the Government employees through intranet and to the citizens through public internet or Common Service Centers (CSCs), etc. It is continuously monitored by surveillance mechanisms and administered by 24×7 operations and management staff.

Activities:

The visit to the National Informative Centre was productive and an opportunity to acquire knowledge regarding the field. The Students were given a tour around the institute where

we were shown the function and the reason as to why a data centre is important. They were escorted to different chambers, where our journey to learn began.

The staff of the organization were very skilled and had pure knowledge of the field they are working in. They were told that a data centre consist of the following components:-

- Server and Racks
- Network connectivity
- Security System
- Monitoring System
- Cooling System
- A data rack is an IT equipment organizer like servers, network switches and all other electronics for making efficient use of space, proper airflow and standardized resources. Picking up the right rack and configuration with respect to your needs will ensure smooth functioning of IT equipment's thus making them more reliable and efficient, also the organized resources will ensure to save on needless expenses.
- A conventional data center network comprises: servers that manage workloads and respond to client requests; switches that connect devices together; routers that perform packet forwarding functions; controllers that manage the workflow between network devices; gateways that serve as the junctions between data center networks and the broader Internet; and clients that act as consumers of the information in data packets.
- Data centers are entrusted to hold a substantial amount of important information in the buildings they operate in, and they stand to lose a lot if proper security systems are not put into place and maintained.
 - Overheating of data center equipment can result in reduced server performance or equipment damage due to hot exhaust air finding its way into an air inlet. Atmospheric stratification can require setting cooling equipment temperatures lower than recommended. Mixing the cooled air and exhausted air increases refrigeration costs.

The tour ended with a brief discussion on what students have learned on that day, in addition to some more information.

Conclusion:

The Program offered a valuable experience to the students in the Centre. This is useful for the students as it has enhanced our understanding of the advancement made in the field of Information Technology.

