



# Workshop on Campus Network Design and its Operation (WCNDIO)

## Background

Modern, well-designed campus networks are a crucial foundation for supporting teaching, learning, and research by providing faculty, students, and staff with policy-based access to information and technological resources on the campus and further afield. Networking connections vary, based on several factors, including user requirements, budgets and bandwidth. The network design confirms what is required to create the physical network, and brings together the passive (cabling) and active parts (routers and switches) to create the overall blueprint. Many NRENs now have very advanced networks that provide many challenges to those engineers who must maintain and develop them. This project aims to train newly appointed network engineers and technicians from different universities in campus network design, operation and management. This will help them play a vital role in improving the network design and implementation in their affiliated campus.

## Objectives

- 1. Collaboration with TEIN partner countries:** The training covers the following 9 partner countries: Afghanistan (AF), Bangladesh (BD), Bhutan (BT), Cambodia (KH), Nepal (NP), Pakistan (PK), Philippines (PH), Sri Lanka (LK) and Thailand (TH)
- 2. Campus Network Survey:** under the NRENs in Asi@Connect partner countries to identify the current status of campus networks.
- 3. Arrange an international blended workshop titled “Workshop on Campus Network Design and its Operation” emphasizing the following issues:**
  - a. Train the newly appointed network engineers (Technicians/ Assistant Network engineers/ Network Engineers/IT Engineers/Faculty) of the campus network of NREN and/or NREN institutions from Bangladesh.
  - b. Encourage and support female engineers and other IT professionals to attend.
  - c. Provide needs-based training.
  - d. Provide the latest best practice for campus network design and operation.
  - e. Strengthen the network operation and management capacity of NREN engineers.
  - f. Establish a strong collaborative group among NREN engineers.

## ACTIVITIES

### · Activity-1

**Survey of active Campus Networks in 9 Asi@Connect member countries [Completed]:** To train network engineers and technicians it is first required to find out which design approaches and which skills should be improved that will help to build the capacity and increase their level of sustainability. A Campus Network Survey to identify the present status of partners' networks, users, network persons, and services issues was successfully conducted. About 148 universities/ institutes from the 9 partner countries participated in this program.



### · Activity-2

**International Blended Workshops (completed):** To further train engineers and technicians of individual institutes, a 5-day international blended workshop titled “Workshop on Campus Network Design and its Operation (WCNDIO)” was successfully arranged by the Department of Computer Science and Information Technology (CSIT) in collaboration with ICT team of the Patuakhali University of Science and Technology (PSTU) at BDS Conference Hall, Barisal Sadar on September 01~05, 2022.



WCNDIO | Opening Session

A total of 42 (36 males and 6 females) network engineers and technicians from different universities in Bangladesh got hands-on training. There were an additional 36 (29 males and 7 females) network engineers and technicians from various institutions of 9 Asi@Connect partner countries who participated virtually.



WCNDIO | Site Visit Tour



WCNDIO | Social Dinner

This workshop consisted of three sessions. The first covered The hands-on sessions included networking devices and tools, campus networking best practices, cabling, IP addressing and sub-netting, routing and switching, server administration, network testing, monitoring, management and troubleshooting. By participating in this workshop, the participants have received training on campus network design, operation, and management, which will play a vital role in improving the network design and implementation in their affiliated campus.



WCNDIO | Hands-on Session

This project has helped to improve the integrity of the existing networks and their operations. As their technical

capacity has improved, participants have gained the skills and confidence to design and maintain higher-performing networks. This event helped build a strong community for operational support, including all types of network staff from affiliated institutes.

## ASI@CONNECT SUPPORT

Asi@Connect supported the full financing of the project plus associated logistics.

## BENEFITS TO TEIN COMMUNITY

- Technical knowledge exchange among the TEIN networking community.
- Promote the NREN member organizations' network personnel to deploy the campus network and ensure uninterrupted internet services in their domestic campus networks.
- Mitigation of gender issues and female empowerment.
- Dissemination of knowledge through blended workshops among TEIN beneficiary countries.
- Reduction of the digital divide within the NRENs networking community.
- Utilization of the TEIN network will be significantly enhanced during the execution of the implementation.

### For more information

Asi@Connect : [www.tein.asia](http://www.tein.asia)

#### Disclaimer

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