



# Develop Local Network and System Engineering Expertise in Research & Education Institutes of Bhutan

## BACKGROUND

To address the capacity development needs for Research & Education institutes and challenges faced by DrukREN members, the Department of Information & Technology (DITT), Ministry of Information & Communication (MoIC) proposed this project “**Develop Local Network and System Engineering Expertise in Research & Education Institutes of Bhutan**”. This project was successfully implemented by DITT/ MoIC in collaboration with the Office of Vice Chancellor (OVC), Royal University of Bhutan (RUB). The project had two components namely, DrukREN Technical Workshop & Direct Engineering Assistance (DEA) for colleges. The primary objective of the workshop was to help DrukREN members harness the high-speed national network and services such as eduoam and distance learning education facilities. The workshop was targeted for network engineers and IT Managers from universities/research organisations all over Bhutan. DrukREN members were also provided with best international practices on local network design and principles to harness the high speed DrukREN services.

## OBJECTIVES

- **Capacity Development of Local Network Engineers, System Administrators and IT Managers**

The Paro technical workshop provided 30 participants with hands-on lab sessions to design

& build a resilient campus network. They were also given sessions on network monitoring and management of the campus network. As DrukREN will be connecting 100+ schools & hospitals, the participants from MoE & MoH will be able to assist the DrukREN team during the implementation. Additionally, they will also be in the position to troubleshoot their campus network in future to harness the full benefits of DrukREN.



- **Increase number of Research & Education Institutes connected to DrukREN and TEIN.**

The technical workshop upskilled technical skills of the participants which can enable the participants to join DrukREN in future. Eventually, this will increase the number of DrukREN members resulting in growth of traffic volume over the TEIN link for Bhutan.

- **Increase in Penetration of Internet**

DITT is in the process of expanding the DrukREN Point of Presence and connecting 100+ R&E institutes (including schools) across the country. The participants from MoE can provide technical

assistance while connecting both the urban and rural schools. The campus networks of the school will be connected to the DrukREN and the high-speed internet services coverage will expand at affordable rates.

- **Improve the quality of distance education and health services in Bhutan**

Most R&E institutes are not able to make effective use of DrukREN due to campus network issues. This workshop provided training on network management issues and taught techniques that are helpful in addressing common problems.

DrukREN is connected to a global research & education network via the National Knowledge Network (NKN) of India. Currently research institutes in Bhutan have limited collaboration with any other institutes in Asia Pacific Region and other R&E institutes around the world. With the completion of DrukREN expansion project, 100 + R&E institutes including schools have started to use the opportunity to collaborate with TEIN network members and the wider global R&E community.



## CHALLENGES AND OVERCOMING CHALLENGES

Initially, the technical workshop was planned from 23rd-28th March 2020 but unfortunately, we had to cancel the event due to global transmission of COVID-19 & consequent social restrictions put in place by RGOB. The government declared a nationwide lockdown on 11th August 2020 for an indefinite time. Further lockdowns were put in place, but we were able to extend our contract via our colleagues at Asi@Connect, which was very much appreciated.

## IMPACTS

- Benefited DrukREN members with capacity development training.
  - Provided direct engineering assistance for 6 colleges and benefited in harnessing DrukREN upstream connectivity.
  - Smooth implementation of DrukREN connectivity to 100+ schools and agencies including colleges and schools.
- Increase in Zoom cloud services with additional licences.

### For more information

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

#### Disclaimer

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