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5G LABS - Training

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Confidential

Introduction

- The Department of Telecommunications (DoT) has awarded the establishment of 100 5G Use Case Labs to educational institutions across the country, with the primary objective of nurturing skills and promoting active engagement with 5G technologies among students and start-up communities.

- These labs will facilitate the development, experimentation of 5G applications in various socioeconomic verticals.

- Signaltron is providing the 5G lab infrastructure for some of these labs. gNodeB provided in 5G lab Infrastructure is the Signaltron's Sahyadri series of RAN Equipment featuring highly integrated, compact and versatile NR Base Stations delivering high capacity to enable ubiquitous connectivity to all.

Operating the gNB

Registering of the UEs

Collection of Wireshark pcap logs and Traces.

Description of Messages in Wireshark.

RAN NMS.

Core working and NMS.

Whitelisting and black listing of Users(Need to check with Niral)

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Firewall - Functions and Configurations, Secure remote access, Reporting and Network visibility.

IoT Gateway – Architecture, Operation, VLAN, Security, APN settings, Connecting to 5G NW, AI/ML with IoT.

Indoor CPE – Wireless interfaces, 5G Network settings, Wifi-settings, Trouble shooting.

MEC – Usage, Application installation, Route traffic through MEC.

5G Camera – Operation.

5G Evaluation board – 5G Modem, APN settings, AT commands.

5G Usecases – Camera object detection code.

XR Headset – Contruction app installation, further usage.