



**KONGUNADU ARTS AND SCIENCE COLLEGE
(AUTONOMOUS)**

**Re-accredited by NAAC with A⁺ Grade - 4th cycle,
College of Excellence – UGC
29th Rank among Colleges in NIRF 2023
Coimbatore - 641 029, Tamil Nadu, India**



DEPARTMENT OF COMPUTER SCIENCE (Aided)

A hands on training on Upskilling Networking Skills for Lab Technicians

**Supported by
DBT STAR COLLEGE SCHEME**

REPORT

Name of the Event	A hands on training on Upskilling Networking Skills for Lab Technicians
Date	16-03-2024
Time	2.00 A.M
Resource Person With Designation	Mr. K. J. Bhagavathy, system Engineer, Precision Infomatic Pvt Ltd, Coimbatore
Venue of the Programme	LAB -VII
Objectives of the Programme	1.To Improve the Networking skills. 2.To learn about the tools to solve the Networking problems. 3. To specialize in a particular domain.
Outcome of the Programme	1.Equipped the Lab Technicians with knowledge and tools to troubleshoot and intricate networks. 2.Enhanced the ability to solve the complex network problems. 3.Provided opportunities for selecting specialisations in networking such as cloud network , wireless network, and cyber security.
Number of Beneficiaries	Total : 16

Report in detail :

The Training session on upskilling networking skill was started with the explanation of protocol.

A network protocol is a set of established rules that specify how to format, send and receive data so that computer network endpoints, including computers , servers , routers and virtual machines , can communicate despite differences in their underlying infrastructures , designs and standards. To successfully send and receive information , devices on both sides of a communication exchange must and follow protocol conventions. In networking ,support for protocols can be built into the software, hardware or both.

The following common protocols were well narrated.

1. TCP/IP (Transmission Control Protocol / Internet Protocol)
2. UDP/IP (User Datagram Protocol / Internet Protocol)
3. HTTP (HyperText Transfer Protocol)
4. FTP (File Transfer Protocol)

Further he explained how Linux is used in networking. The Linux has built up a strong set of networking capabilities , including networking tools for providing and managing routing, bridging ,DNS , DHCP, network Troubleshooting , virtual networking , and network monitoring , Package Management.

The Linux system distinguishes two types of network interfaces – the physical network interface and the virtual network Interface. A physical network Interface represents a network hardware device such as NIC (Network Interface Card), WNIC (Wireless Network Interface Card), or a Modem.

Linux is used in networking as Network OS for routers, switches, domain name system servers, home networking devices etc., The Technicians had a detailed discussion of the functionalities of active and passive servers. In Passive mode, the FTP server waits for the FTP client to send it a port and IP address will be the same as the FTP client making the request. The participants had hands on training on how network commands are used at the command prompt to get network information like the IP address of the system , MAC address , network route traversed by a packet, and the IP address of the server on which a website or URL is hosted.

The technicians experienced the ways of configuring the network interface in Linux. The participants interacted with the resource person by asking for clarification. The Importance of Linux OS was highlighted by discussing the special features of Linux.

The participants explored the following latest and leading networking technologies :

- ❖ Wi-Fi 6 and 6E
- ❖ Secure Access Service Edge (SASE)
- ❖ Multi – Cloud Networking (MCN)
- ❖ 5G Wireless Technology
- ❖ Intent- Based Networking (IBN)
- ❖ Network Functions Virtualization (NFV)
- ❖ Digital Twins



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For Lab Technicians**

Date:16/03/2024

Venue: LAB VII

