National Institute of Electronics and Information Technology राष्ट्रीय इलेक्ट्रॉनिकी एवं सूचना प्रौद्योगिकी संस्थान

# Certificate Course in Network Administration and Linux System Administration

# **Objective of the Course:**

To enrich the participants in the area of network and communication system to implement LAN network and network management with protocol connectivity, network access policy, address translation, VLAN functionality, Wi-fi infrastructure etc. To train the participants to acquire knowledge in Linux System Administration across a wide range of environments and deployment scenarios. The participants will be able to work on Linux operating systems, configure, implement, and deploy systems and take care of security issues, besides managing system backups, monitoring system performance and adding and removing users.

# Learning Outcomes:

The participants will be able carry out the duties of Linux System administrator: configuring, installing, upgrading, and maintaining Linux systems, providing operational support, managing systems for monitoring system performance and availability. Also the course will provide the knowledge of computer networking and troubleshooting to the participants

# Course Syllabus:

#### Unit 1: Network Administration (32 Hrs)

#### DAY WISE TRAINING PROGRAM

Day	Topics Name	Theory (Hrs)	Practical (Hrs)
1	Introduction to Network, types, Data Communication, Network Media, Introduction to OFC	4	-
2	ISO/OSI Layers, Data Link layers Protocols, TCP/IP, Networking H/w & S/w , Routing & IP Address	3	1
3	Types of Switches & Installation with Configuration, VLAN, VTP, STP & DTP Configuration	1	3
4	MAC Binding & Port Security on Cisco device, Firewall Device Installation Configuration.	1	3
5	Router Installation & Configuration, Advance Routing Static & Dynamic Routing, Wi-fi infrastructure (Wireless Network, Types of Protocol,etc.), RIP-V.2, crimping, Network tools and troubleshooting: SNMP,Network monitor, log access, IP scanner etc.	1	3
6	Advance Routing EIGRP & OSPF Configuration on CISCO Packet Tracer, MPLS overview	1	3
7	FTP, SMTP, , Telnet & SSH Configuration, Standard ACL & Extended ACL Configuration	1	3
8	DNS,VOIP,SIP ,NAT & PAT Concept & Configuration, HTTP, Load Balancing Protocol (GLBP) & Frame Relay Concept,	1	3

#### Unit 2: Linux System Administration (28 Hrs)

DAY WISE TRAINING PROGRAM					
Day	Topics Name	Theory (Hrs)	Practical (Hrs)		
1	Get started with Linux, Install Linux, Access the command line, Get help in Linux	1	3		
2	Manage files from the command line, basic to advanced command, Create, view, and edit text files	1	3		
3	Create simple shell scripts, use essential tools (input-output redirection, grep and regular expressions, Archive, compress, unpack, and uncompress, linking, etc.)	1	3		
4	Maintain basic storage, Manage logical volumes	1	3		
5	Manage local users and groups, Control access to files, Control the boot process	1	3		
6	Monitor and manage Linux processes, Control services and daemons, Configure and secure SSH, Manage networking	1	3		
7	Archive and transfer files, Install and update software, Schedule future tasks, Tune system performance, Manage security (SELinux security, etc.)	1	3		

# Eligibility: 10+2

Duration (in hours): 60 Hrs (10 am – 2 pm, Monday and Wednesday)

# Course Start Date: 17th April 2024, Last Date for Admission: 15th April 2024

# **CONTACT US**

Course Coordinator: Dr. Kalyan Baital, Scientist-D Asst. Course Coordinator: Mr. Ambuz Ankesh, Scientist-C Phone No. : 033-2414-6054/6081 Address: Unit-I :

> NIELIT – Jadavpur University Campus, Kolkata – 700032 यादवपुर विश्वविद्यालय परिसर, कोलकाता 700032

Course Fee: INR 15000/-+

GST

Unit-II :

Block - BF267, Sector - I, Salt Lake, Kolkata - 700064 साल्ट लेक कैंपस, बीएफ-267, सेक्टर-I, साल्ट लेक, कोलकाता - 700064



ADMISSION OPEN

LIMITED SEATS

रा.इ.सू.प्रौ.सं