LAN Edge Course

Course Duration: 16 Hrs. **Course Code: LAN-EDGE-101**

Course Overview

The **LAN Edge** course is designed for network professionals who manage and optimize Local Area Network (LAN) edge devices and infrastructure. This course focuses on the design, configuration, and troubleshooting of LAN edge components, including switches, routers, wireless access points, and network security devices. Participants will learn best practices for implementing scalable, high-performance, and secure LAN edge networks suitable for enterprise and campus environments.

What You'll Learn?

By completing this course, you will be able to:

- Understand LAN edge architecture and design principles
- Configure and manage LAN switches, routers, and wireless devices
- Implement VLANs, spanning-tree protocols, and routing at the LAN edge
- Optimize network performance and reliability
- Deploy security measures at the edge, including NAC and segmentation
- Troubleshoot LAN edge connectivity and performance issues
- Prepare for advanced networking and enterprise certifications

Target Audience

This course is ideal for:

- Network Engineers and Administrators
- IT Infrastructure Professionals
- Campus and Enterprise Network Designers
- SOC and Network Operations Teams
- Professionals responsible for LAN edge design, implementation, and maintenance

Pre-Requisites

Participants should have:

- Basic understanding of networking fundamentals (TCP/IP, LAN/WAN)
- Familiarity with network devices such as switches and routers
- Experience with network protocols (VLANs, STP, routing) is recommended

Course Content

Module 1: LAN Edge Architecture

- Overview of LAN edge components
- Edge vs core vs distribution layers
- Design principles for scalability and reliability

Module 2: Switching and VLANs

- Layer 2 switching concepts
- VLAN configuration and management
- Spanning Tree Protocol (STP) and redundancy

Module 3: Routing at the Edge

- Layer 3 routing principles
- Static and dynamic routing in LAN edge networks
- Inter-VLAN routing and routing optimization

Module 4: Wireless and Access Connectivity

- Wireless LAN deployment at the edge
- Access point configuration and management
- Client connectivity and performance optimization

Module 5: Security and Network Segmentation

- Network Access Control (NAC) implementation
- Segmentation and isolation techniques
- Threat prevention at the LAN edge

Module 6: Monitoring, Troubleshooting, and Best Practices

- LAN edge monitoring and analytics
- Troubleshooting connectivity and performance issues
- Operational best practices for edge networks

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