

Switch Configuration and VLANs

Paris (France)

5 - 9 April 2027

UK Training

PARTNER



Switch Configuration and VLANs

Code: IT32 From: 5 - 9 April 2027 City: Paris (France) Fees: 5900 Pound

Introduction

Effective switch configuration and network segmentation are vital for achieving high performance, scalability, and security in enterprise networks.

This training program equips IT professionals, network engineers, and administrators with the practical knowledge and technical skills required to design, configure, and manage network switches and VLANs effectively.

Through hands-on exercises and real-world case studies, participants will learn how to build structured, efficient, and secure network infrastructures that enhance communication and ensure business continuity.

The course combines theoretical understanding with applied practice, enabling participants to directly implement learned techniques within their organizational environments.

Course Objectives

By the end of this course, participants will be able to:

- Understand local area network LAN architecture and switching fundamentals.
- Configure switches, assign IP addresses, and manage interface connectivity.
- Design and implement VLANs, trunk links, and inter-VLAN routing.
- Apply port security, redundancy, and loop prevention protocols.
- Monitor network traffic and troubleshoot segmentation and connectivity issues.
- Conduct hands-on labs on switch configuration, VLAN setup, and network optimization.

Course Outlines

Day 1: Switch Fundamentals and Network Architecture

- Overview of LAN design and switch hierarchy access, distribution, and core layers.
- Understanding network topologies: star, mesh, and hybrid.
- Basics of Ethernet and data forwarding concepts.
- The role of MAC addresses and collision domains in switching.
- Introduction to VLANs: purpose, structure, and benefits of segmentation.
- Practical lab: exploring switch interfaces and initial setup.

Day 2: Basic Switch Configuration

- Configuring switch interfaces and assigning IP addresses.
- Setting VLAN memberships and defining port modes.
- Understanding VLAN trunking and tagging methods.
- Configuring access and trunk ports for inter-switch communication.



- Lab exercise: configuring basic VLAN assignments and connectivity.
- Troubleshooting connectivity and port configuration issues.

Day 3: VLANs and Advanced Configuration

- Designing VLAN segmentation for security and performance.
- Implementing inter-VLAN routing using Layer 3 switches.
- Configuring redundancy and high availability protocols STP, RSTP.
- Preventing network loops and optimizing topology performance.
- Lab exercise: create multiple VLANs and enable inter-VLAN communication.
- Reviewing performance metrics and analyzing network flow.

Day 4: Switch Security and Optimization

- Implementing port security and MAC address filtering.
- Applying Quality of Service QoS for traffic prioritization.
- Identifying and resolving VLAN and connectivity issues.
- Monitoring switch operations using network management tools.
- Lab exercise: apply security measures and test network stability.
- Troubleshooting real-world configuration and access problems.

Day 5: Integrated Switch Management and Practical Labs

- Best practices for scalable and resilient network design.
- Implementing network optimization, redundancy, and monitoring strategies.
- Comprehensive lab: build and configure a secure, multi-VLAN network.
- Testing and validating network segmentation and performance.
- Review and discussion of best practices in enterprise switch management.
- Final assessment and Q&A session.

Why Attend This Course? Wins & Losses!

- Master essential skills in switch configuration and VLAN management.
- Gain hands-on experience through practical labs and real-world simulations.
- Strengthen your professional credibility in enterprise network administration.
- Enhance network performance and operational reliability.
- Improve overall network security with advanced segmentation techniques.
- Increase your organization's network scalability and stability.
- Develop troubleshooting and analytical skills for complex environments.
- Build a strong foundation for advanced networking certifications.

Conclusion

The Switch Configuration and VLANs course equips IT professionals with the tools and practical knowledge to design, implement, and manage secure, efficient, and scalable networks. Combining structured theory with extensive hands-on training, the program empowers participants to enhance performance, strengthen security, and resolve real-world network challenges with confidence.

This course serves as a cornerstone for professionals aiming to build a strong foundation in network management

PARTNER





and advance their expertise in modern infrastructure operations.

Head Office: +44 7480 775 526
Email: Sales@blackbird-training.com
Website: www.blackbird-training.com

UK Training
PARTNER



Blackbird Training Clients



MANNAI Trading
Company WLL,
Qatar



Alumina Corporation
Guinea



Booking.com
Netherlands



Oxfam GB International
Organization,
Yemen



Capital Markets
Authority,
Kuwait



Waltersmith Petroman Oil Limited
Nigeria



Qatar National Bank
(QNB),
Qatar



Qatar Foundation,
Qatar



AFRICAN UNION ADVISORY
BOARD ON CORRUPTION,
Tanzania



KFAS
Kuwait



Reserve Bank of
Malawi,
Malawi



Central Bank of Nigeria
Nigeria



Ministry of Interior
Kingdom of Saudi Arabia
KSA



Mabruk Oil Company
Libya



Saudi Electricity
Company,
KSA



BADAN PENGELOLA
KEUANGAN Haji,
Indonesia



NATO
Italy



ENI CORPORATE
UNIVERSITY,
Italy



Gulf Bank
Kuwait



المؤسسة العامة للتأمينات الاجتماعية
General Organization for
Social Insurance
KSA



Defence Space Administration
Nigeria



National Industries
Group (Holding),
Kuwait



Hamad Medical
Corporation,
Qatar



USAID
Pakistan



STC Solutions,
KSA



North Oil company,



EKO Electricity



Oman Broadband



UNITED NATIONS
UN.



هيئة تنظيم الكهرباء - عمان
AUTHORITY FOR ELECTRICITY REGULATION, OMAN
Authority for

UK Training
PARTNER



Blackbird Training Categories

Management & Admin

Entertainment & Leisure
Professional Skills
Finance, Accounting, Budgeting
Media & Public Relations
Project Management
Human Resources
Audit & Quality Assurance
Marketing, Sales, Customer Service
Secretary & Admin
Supply Chain & Logistics
Management & Leadership
Agile and Elevation

Technical Courses

Artificial Intelligence (AI)
Sustainability, ESG & Corporate Responsibility
Advanced Courses
Hospital Management
Public Sector
Special Workshops
Oil & Gas Engineering
Telecom Engineering
IT & IT Engineering
Health & Safety
Law and Contract Management
Customs & Safety
Aviation
C-Suite Training

