

Advanced Network Troubleshooting with Wireshark and NetFlow

Amman (Jordan)

20 - 24 September 2026

UK Training

PARTNER



Advanced Network Troubleshooting with Wireshark and NetFlow

Code: IT32 From: 20 - 24 September 2026 City: Amman (Jordan) Fees: 4900 Pound

Introduction

Modern organizations rely heavily on digital networks as the backbone of their operations. As these networks become more complex and interconnected, troubleshooting and maintaining optimal performance have become mission-critical tasks.

Tools like Wireshark and NetFlow have emerged as indispensable for diagnosing issues, analyzing data traffic, and identifying bottlenecks within enterprise networks.

This course provides participants with advanced knowledge and hands-on skills in network diagnostics using professional-grade tools. It focuses on deep packet inspection, flow analysis, and advanced techniques for identifying the root causes of performance degradation and connectivity problems.

Course Objectives

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

- Understand advanced concepts of network troubleshooting and diagnostics.
- Use Wireshark to capture, filter, and analyze network traffic.
- Apply NetFlow for traffic flow monitoring and performance evaluation.
- Identify and resolve latency, congestion, and packet loss issues.
- Correlate packet-level data with flow-level analytics.
- Create detailed performance and troubleshooting reports.
- Implement best practices for proactive network monitoring.
- Strengthen operational reliability through effective troubleshooting strategies.

Course Outlines

Day 1: Advanced Principles of Network Troubleshooting

- Overview of network troubleshooting methodologies.
- Common causes of network failures and connectivity issues.
- The structured approach to root-cause analysis.
- Overview of essential diagnostic tools and their use cases.
- Understanding how configuration and architecture affect performance.
- Practical exercise: identifying connectivity issues using traffic analysis.

Day 2: Deep Packet Analysis with Wireshark

- Introduction to Wireshark's interface and key functionalities.
- Techniques for capturing, filtering, and saving network packets.
- Understanding communication protocols and packet structures.



- Detecting errors, retransmissions, and delays within sessions.
- Case studies of real-world troubleshooting scenarios using Wireshark.
- Practical lab: analyzing live packet captures for issue identification.

Day 3: Network Flow Analysis with NetFlow

- Introduction to NetFlow concepts and data flow architecture.
- Collecting and analyzing flow data for network visibility.
- Identifying top talkers, bandwidth hogs, and congestion points.
- Comparing flow-based vs. packet-based monitoring techniques.
- Using NetFlow data to measure performance and detect anomalies.
- Hands-on lab: analyzing multi-flow data and building performance insights.

Day 4: Combining Wireshark and NetFlow for Comprehensive Analysis

- Integrating packet-level and flow-level data for full visibility.
- Correlating traffic patterns to pinpoint root causes of network issues.
- Advanced session correlation across multiple systems.
- Performance optimization through data-driven analysis.
- Identifying abnormal activities and potential security incidents.
- Workshop: combined analysis using both Wireshark and NetFlow tools.

Day 5: Applied Troubleshooting and Reporting

- Developing a structured troubleshooting workflow.
- Creating detailed technical and management-level reports.
- Measuring pre- and post-resolution performance metrics.
- Implementing proactive monitoring for early issue detection.
- Review of key learnings and best practices.
- Final assessment: simulated troubleshooting project.

Why Attend this Course: Wins & Losses!

- Master advanced techniques for identifying and resolving network issues.
- Gain hands-on experience using Wireshark and NetFlow for real analysis.
- Understand both packet-level and flow-level monitoring for better insight.
- Improve network uptime and reduce mean time to resolution MTTR.
- Enhance service quality and infrastructure stability.
- Strengthen your ability to produce actionable analytical reports.
- Build proactive monitoring systems for ongoing optimization.
- Boost your technical competence and troubleshooting efficiency.

Conclusion

Advanced Network Troubleshooting with Wireshark and NetFlow is a vital skill set for professionals aiming to maintain robust and high-performing network environments.





By combining packet-level and flow-level analysis, this course enables participants to uncover hidden issues, enhance operational visibility, and implement data-driven optimization strategies.

Through practical labs and structured methodologies, participants will gain the expertise to handle complex troubleshooting scenarios with confidence – ensuring network reliability, performance, and efficiency.

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

