

5G and ORAN Training: Architecting Open Radio Networks

UK Training

PARTNER



5G and ORAN Training: Architecting Open Radio Networks

Introduction

The telecommunications industry is undergoing a major transformation driven by the rapid adoption of 5G networks and the rise of Open Radio Access Networks ORAN. These innovations are redefining how modern networks are designed, deployed, and managed—enabling greater flexibility, scalability, and innovation across digital ecosystems.

This course provides a comprehensive and practical approach to understanding both 5G architecture and ORAN technologies, combining essential theoretical knowledge with hands-on application. Rather than focusing solely on concepts, the program emphasizes real-world implementation—empowering participants to translate technical knowledge into effective, actionable solutions.

Over five intensive days, participants will explore the full lifecycle of ORAN networks, including architecture, interfaces, deployment strategies, performance optimization, and future trends. By the end of the course, they will have the confidence and expertise to contribute effectively to next-generation network projects.

Course Objectives

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

- Understand the architecture and key components of 5G networks
- Master ORAN principles, interfaces, and reference models
- Design and deploy ORAN-based network solutions
- Develop and implement xApps and rApps for performance enhancement
- Apply Artificial Intelligence AI and Machine Learning ML in network optimization
- Monitor, analyze, and improve network performance

Course Outlines

Day 1: Introduction to 5G & ORAN

- Overview of 5G architecture and its evolution
- Transition from traditional Radio Access Networks RAN to Open RAN
- Introduction to the ORAN ecosystem and industry landscape
- Benefits and strategic importance of ORAN technologies

Day 2: ORAN Architecture & Interfaces

- Detailed exploration of ORAN reference architecture
- Key components: O-RU, O-DU, O-CU
- Open fronthaul interfaces and communication protocols
- Role of the RAN Intelligent Controller RIC

Day 3: ORAN Deployment & Integration

- Virtualization and cloud-native network principles
- Network slicing in ORAN environments
- Integration with 5G core networks



- Security considerations and deployment strategies

Day 4: Implementation & Optimization

- Development and deployment of xApps and rApps
- Applying AI and ML for intelligent network optimization
- Performance monitoring and analytics
- Troubleshooting and resolving network issues

Day 5: Advanced Topics & Future Trends

- ORAN testing and certification processes
- Emerging use cases and real-world applications
- Introduction to 6G technologies and future trends
- Capstone project: ORAN network design and presentation

Why Attend this Course: Wins & Losses!

- Gain a strong, practical understanding of 5G and ORAN technologies
- Develop hands-on skills in designing and deploying modern radio networks
- Learn how to optimize network performance using AI and automation
- Build expertise in xApps and rApps development
- Strengthen both technical and strategic capabilities aligned with industry needs

Conclusion

This course offers a forward-looking and practical pathway to mastering 5G and ORAN technologies, going beyond theory to focus on real-world application and hands-on experience.

By the end of the program, participants will not only understand how modern radio networks operate but will also be able to design, implement, and optimize them effectively. This positions them to play a vital role in shaping the future of telecommunications and contributing to successful digital transformation initiatives within their organizations.



Blackbird Training Cities

EUROPE



Malaga (Spain)



Sarajevo (BiH)



Cascais (Portugal)



Glasgow (Scotland)



Edinburgh (UK)



Oslo (Norway)



Annecy (France)



Bordeaux (France)



Copenhagen (Denmark)



Birmingham (UK)



Lyon (France)



Moscow (Russia)



Stockholm (Sweden)
(Netherlands)



Podgorica (Montenegro)



Batumi (Georgia)



Salzburg (Austria)



Florence (Italy)



Rotterdam



Bruges (Belgium)



London (UK)



Istanbul (Turkey)



Amsterdam (Netherlands)



Düsseldorf (Germany)



Paris (France)



Athens (Greece)



Barcelona (Spain)



Munich (Germany)



Geneva (Switzerland)



Prague (Czech)



Vienna (Austria)



Rome (Italy)
(Switzerland)



Brussels (Belgium)



Madrid (Spain)



Berlin (Germany)



Lisbon (Portugal)



Zurich



Manchester (UK)



Milan (Italy)

UK Training
PARTNER



Blackbird Training Cities

USA & CANADA



Los Angeles (USA)



Orlando, Florida (USA)



Online



Phoenix, Arizona (USA)



Houston, Texas (USA)



Boston, MA (USA)



Washington (USA)



Miami, Florida (USA)



New York City (USA)



Seattle, Washington (USA)



Washington DC (USA)



In House



Jersey, New Jersey (USA)



Toronto (Canada)

ASIA



Baku (Azerbaijan)
(Thailand)



Malé (Maldives)



Doha (Qatar)



Manila (Philippines)



Bali (Indonesia)



Bangkok



Beijing (China)



Singapore (Singapore)



Sydney (Australia)



Tokyo (Japan)



Jeddah (KSA)



Riyadh (KSA)



Melbourne (Australia)



Phuket (Thailand)



Shanghai (China)



Abu Dhabi (UAE)



Dammam (KSA)



Dubai (UAE)



Kuala Lumpur (Malaysia)
(Indonesia)



Kuwait City (Kuwait)



Seoul (South Korea)



Pulau Ujong (Singapore)



Irbid (Jordan)



Jakarta



Amman (Jordan)



Blackbird Training Cities

AFRICA



Kigali (Rwanda)



Cape Town (South Africa)



Accra (Ghana)



Lagos (Nigeria)



Marrakesh (Morocco)



Nairobi (Kenya)



Zanzibar (Tanzania)



Tangier (Morocco)



Cairo (Egypt)



Sharm El-Sheikh (Egypt)



Casablanca (Morocco)



Tunis (Tunisia)



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

