

Wi-Fi Technology From Theory to Practice

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COURSE DESCRIPTION:

This one-day course provides a practical understanding of modern Wi-Fi technologies, from wireless fundamentals to enterprise network design and troubleshooting. Participants will learn how Wi-Fi has evolved from Wi-Fi 5 to Wi-Fi 8, understand spectrum and regulatory considerations, and gain practical knowledge for designing, deploying and maintaining high-performance wireless networks in homes, businesses and large enterprises

WHO SHOULD ATTEND:

ICT engineers, technicians, radio amateurs, academics, telecommunication regulators, and people with basic knowledge of telecommunication technologies.

COURSE OBJECTIVES:

- To understand the principle of Wi-Fi technology, key features of each Wi-Fi generation from Wi-Fi 6 to Wi-Fi 8 and regulation around unlicensed use.
- To master the operation of consumer Wi-Fi and troubleshooting
- To understand enterprise Wi-Fi network deployment, key considerations and troubleshooting in enterprise network.
- To understand how Wi-Fi complements with mobile, satellite and cable technologies to provide connectivity.

SOME COURSE BENEFITS:

- Be able to plan and design a Wi-Fi network for residential, business or a large enterprise
- Be able to troubleshoot common issues in Wi-Fi network such as interference, blind coverage, poor throughput etc.
- Be able to plan IT roadmap for organisations

FORMAT:

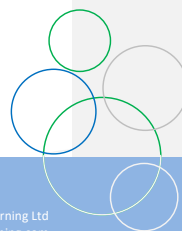
1-day, interactive classroom based or live online via Zoom

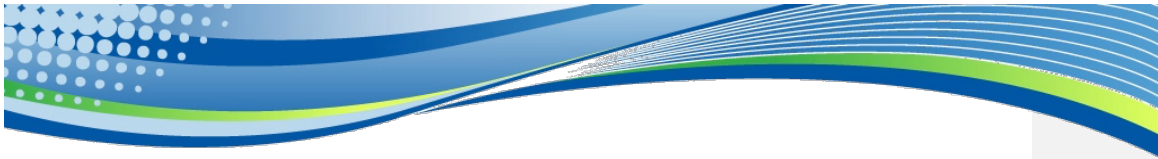
Maximum attendees 12 per course



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CONTENT:

Morning

- The basics of wireless communication (simplifying the language)
- Wi-Fi technology principle and its evolution
- Spectrum, Wi-Fi channels and regulations
- From Wi-Fi 5 to Wi-Fi 8, key features and enhancement in each generation of Wi-Fi
 - MU-MIMO
 - BSS-Colouring
 - OFDMA
 - Automated Frequency Coordination
 - Pre-amble Puncturing
 - Multiple Link Operation
 - Seamless Roaming
 - Multiple-AP Coordination

Afternoon

- Wi-Fi network design and troubleshooting
 - Consumer Wi-Fi network
 - Mesh Wi-Fi network
 - Enterprise network design consideration
 - Common Wi-Fi issues and troubleshooting
 - Wi-Fi technology opportunity and limitation for enterprise
- Wi-Fi Security
- The complementary of Wi-Fi, cellular, satellite and fibre for connectivity
 - Wi-Fi offload to cellular
 - Operator's Passpoint Wi-Fi
 - Wi-Fi Calling
 - Open Roaming Wi-Fi

Assessment (Optional for in-house courses)

- Instructor led interactive quizzes
- Multiple choice written test

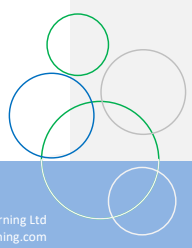
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