@ASK Training
Attitude | Skills | Knowledge

Network Fundamentals and Troubleshooting

Learn to Tackle and Troubleshoot Network Challenges with Confidence

Course Description

The **Network Fundamentals and Troubleshooting course** aims to equip participants with the foundational knowledge of networks, ensuring they can confidently differentiate among diverse network types and topologies. More than just theory, trainees will be guided through hands-on sessions on network design and configuration, ensuring they can transform theoretical concepts into actionable skills.

Furthermore, a significant focus will be placed on troubleshooting, allowing learners to pinpoint and mitigate network-related challenges effectively. By the end of this course, trainees will be able to apply their knowledge in practical settings, paving the way for a thriving career in network management and troubleshooting.

@ASK Training is a Private Education Institution (PEI) accredited by the Ministry of Education (MOE) and also a Continuing Education and Training Centre (CETC) accredited by SkillsFuture Singapore (SSG), offering a diverse range of courses from Infocomm Technology (ICT) to Digital Marketing, with up to **90% funding and job placement programmes.**

Who Should Attend?

This course is suitable for network administrators, IT support specialists, system analysts, IT professionals, aspiring network managers, IT enthusiasts, and small business owners, offering essential knowledge and practical skills in network fundamentals and troubleshooting.

Course Duration: **3 Days**, 9.00 AM - 6.00 PM

Course Fee: **From $114.30** (inclusive of 9% GST) after 90% SkillsFuture Funding

Mode of Delivery: Face-to-Face Classroom

Course Objectives

Upon completion of this course, trainees should be able to:

- Acquire a comprehensive grasp of computer network essentials, including the functionalities of crucial components, understanding of data transmission mechanisms, routing processes, and the critical role of IP addressing in network communication.
- Possess a holistic understanding of diverse network classifications, their corresponding topologies, the significance of prevalent protocols in data transmission, and the practical implications of frameworks like the OSI and TCP/IP Models in real-world scenarios.
- Demonstrate proficiency in designing, configuring, and managing a small-scale network topology, leveraging IP addressing and routing knowledge, and effectively diagnosing and resolving prevalent connectivity challenges.
- Demonstrate proficiency in leveraging network simulation software for learning and testing purposes, incorporating practical tool experience, designing and simulating diverse topologies, and employing simulations for effective troubleshooting and virtual network assessments.

Course Outline

Basics of Computer Networks and Network Components, Routing, IP Addressing

- Introduction to Computer Networks
- Network Components and their Functions
- Data Transmission and Networking Devices
- Routing Fundamentals
- IP Addressing and Subnetting

Network Types, Topologies, Protocols, Methodologies

- Types of Networks: LAN, WAN, MAN, and their Characteristics
- Network Topologies: Bus, Star, Ring, Mesh, and Hybrid
- Common Network Protocols: TCP/IP, UDP, HTTP, SMTP, etc.
- Network Methodologies: OSI Model, TCP/IP Model
- Real-World Applications of Network Types and Topologies

Setting up a Small-scale Network, Configuring Network Devices, and Troubleshooting Connectivity Issues

- Designing a Small-scale Network Topology
- Configuring Routers, Switches, and Network Devices
- Establishing Connectivity through IP Addressing and Routing Protocols
- Network Troubleshooting Techniques

Sandbox Software: Network Simulation Software

- Introduction to Network Simulation Software
- Using Simulation Software for Network Design
- Simulating Network Topologies and Configurations
- Troubleshooting Virtual Networks

Minimum Entry Requirements

- 1 GCE 'O' level or equivalent; **OR**
- NITEC/Higher NITEC; **OR**
- Mature candidates (≥ 30 years old with 8 years' work experience in an ICT-related field); **OR**
- Candidates with other qualifications will be considered on a case-by-case basis

Course Fee / Funding Information

S$900
(exclusive of 9% GST)

Course Fee After Eligible SSG Subsidies:
From S$114.30
(inclusive of 9% GST) after 90% SSG Subsidies

Self-Sponsored	Eligible Funding	Nett Fees Payable (Incl. 9% GST)
Singaporean Citizens ≥ 40 years old	90% SkillsFuture Funding	S$114.30 (after SSG 90% Funding)
Singaporean Citizens, PRs or LTVP+ Holders ≥ 21 years old	70% SkillsFuture Funding	S$294.30 (after SSG 70% Funding)

SkillsFuture Credits can be used on top of existing subsidies

Company-Sponsored	Eligible Funding	Nett Fees Payable (Incl. 9% GST)
Small-to-Medium Enterprise (SME) Singaporean Citizens, PRs or LTVP+ Holders ≥ 21 years old	90% SkillsFuture Funding	S$114.30 (after SSG 90% Funding)
Non-SME Singaporean Citizens, PRs or LTVP+ Holders ≥ 21 years old	70% SkillsFuture Funding	S$294.30 (after SSG 70% Funding)
Non-SME Singapore Citizens 40 years old & above	90% SkillsFuture Funding	S$114.30 (after SSG 90% Funding)

A SkillsFuture Statement of Attainment (SOA) and Certification of Completion by @ASK Training will be awarded to candidates who have demonstrated competency in the Network Fundamentals and Troubleshooting Assessment and achieved at least 75% attendance.

Network Fundamentals and Troubleshooting Course
Course Code: TGS-2023038590

Visit our website: **https://asktraining.com.sg/it-courses/network-fundamentals-and-troubleshooting-it-course/**

Call
6484 6723

Whatsapp
9430 3852

Email
information@asktraining.com.sg

Location:
10 Anson Road
#06-11 International Plaza
Singapore 079903