



@ASK Training
Attitude | Skills | Knowledge



(24 HRS)

NETWORK FUNDAMENTALS AND TROUBLESHOOTING



Course **Synopsis**

This course provides participants with a solid foundation in computer networking principles and practical network administration. Participants will explore essential network components, data transmission, routing, IP addressing, network classifications, topologies, protocols, and the real-world application of the **OSI and TCP/IP models**. The course also develops hands-on competence in designing, configuring, and managing small-scale networks while diagnosing and resolving common connectivity issues. Through the use of network simulation software, participants will design and test virtual network environments, evaluate different topologies, and strengthen troubleshooting skills in a safe, controlled setting, preparing them for entry-level networking tasks and responsibilities in varied workplace settings.

Course Code: TGS-2026064613

Prerequisites

Language:

- Attained at least WPLN Level 5 OR
- Obtained Grade C6 for GCE O-Level English OR
- Other equivalent qualifications

Academic:

- Obtained at least a pass or C6 at GCE O-Level in at least 3 subjects OR
- Candidates with other qualifications will be considered on a case-by-case basis OR
- Mature candidates (≥ 30 years old) with 8 years of relevant working experience

Total Training Hours:

- 24-hours, including a 2-hour assessment
- Written Assessment
- Practical Assessment

Learning Units



Learning Unit 1

Introduction to Computer Networks



Learning Unit 2

Network Types, Topologies, Protocols, Methodologies



Learning Unit 3

Setup and Configure Small-scale Network, and Troubleshoot Connectivity Issues



Learning Unit 4

Network Simulation Software and Design

Course Objectives

By the end of this course, learners 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.



Programme Fee

S\$981.00

(inclusive of
9% GST)

PROGRAMME FEE AFTER ELIGIBLE SSG SUBSIDIES:

From **S\$114.30**

(inclusive of 9% GST) after 90% SSG Subsidies

 Self-Sponsored	Course Fee before Subsidy and GST	Eligible Funding	Nett Fees Payable incl. 9% GST
Singapore Citizens ≥ 40 years old	S\$900.00	90% SkillsFuture Funding	S\$114.30
Singapore Citizens, PRs or LTVP+ Holders ≥ 21 years old		70% SkillsFuture Funding	S\$294.30

SkillsFuture Credits can be used on top of existing subsidies

 Company-Sponsored	Course Fee before Subsidy and GST	Eligible Funding	Nett Fees Payable incl. 9% GST
Small-to-Medium Enterprise (SME) Singaporean Citizens, PRs or LTVP+ Holders ≥ 21 years old	S\$900.00	90% SkillsFuture Funding	S\$114.30
Non-SME Singaporean Citizens, PRs or LTVP+ Holders ≥ 21 years old		70% SkillsFuture Funding	S\$294.30
Non-SME Singaporean Citizens ≥ 40 years old		90% SkillsFuture Funding	S\$114.30

Singapore Citizens 21 years old and above who meet special criteria* may be eligible for Additional Course Fee Funding Support (AFS) of 95% Subsidy. AFS is only eligible for SkillsFuture Career Transition Programme applicants.

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