



# Advanced Network Administration

Course Code: TGS-2024045997

90% SkillsFuture Funding

### **Course Description**

- This comprehensive course in Advanced Network Administration is designed for individuals seeking to deepen their expertise in the field of network management. With a focus on equipping learners with state-of-the-art skills in network design, configuration, security, and troubleshooting, this course offers an unparalleled opportunity to master complex network environments.
- Through hands-on training and theoretical learning, learners will not only enhance their capability to manage and optimise network infrastructures but also ensure their preparedness to address and mitigate security vulnerabilities.
- This course is ideal for IT professionals, system administrators, network engineers, and anyone interested in building a career in network administration and management.

## **Course Objectives:**

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

- Configure and administer network devices within advanced network topologies and architectures, including the implementation of Virtual LANs (VLANs), Quality of Service (QoS), and techniques for optimising network performance.
- Apply advanced wireless communication concepts and leverage practical experience in setting up sophisticated network configurations to make informed decisions for optimising network administration.
- Analyse and configure routing protocols such as OSPF and BGPm ensuring efficient data routing within complex network infrastructures.
- Apply advanced switching concepts and technologies, including Virtual LANs (VLANs) and Spanning Tree Protocols (STP, RSTP, MSTP).
- Optimise network performance and reliability by employing dynamic routing and route redistribution, and address complex network management through the practical application of routing and switching protocols.
- Apply network security principles and techniques for firewall configuration, intrusion detection, and VPN implementation, ensuring the protection of network assets.
- Acquire advanced troubleshooting skills, including utilising network monitoring tools to identify and resolve complex network issues, thereby maintaining network reliability.
- Apply access control measures effectively, securing network connections and ensuring data confidentiality and integrity within complex network infrastructure.
- Develop the capacity to design complex network configurations and proficiently implement them while considering real-world network situations and adhering to optimisation best practices.
- Perform network security by configuring firewalls and VPNs to safeguard network assets and sensitive data and acquiring proficiency in utilising Network Automation tools.
- Apply advanced troubleshooting techniques to resolve complex network issues, ensuring the uninterrupted operation of network infrastructures and prompt issue resolution.

## **Course Outline**



**Learning Unit 1:** 

Advanced Network Configuration and Administration



**Learning Unit 2:**Routing and Switching



**Learning Unit 3:** 

**Network Security and Advanced Troubleshooting** 



**Learning Unit 4:** 

**Advanced Network Methodology** 



#### **Written Assessments**

Candidates are to answer all questions and receive a minimum grade of 50% and above (out of 100%) to demonstrate competencies in Learning Units (LU) 1 to 4.



#### **Practical Assessments**

Candidates are to design, implement, and manage a complex network infrastructure and receive a minimum grade of 50% and above (out of 100%) to demonstrate competencies in Learning Units (LU) 1 to 4.

# **Course Fees & Funding**



#### PROGRAMME FEE AFTER ELIGIBLE SSG SUBSIDIES:

From S\$215.90

(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 and above	S\$1,700.00	90% SkillsFuture Funding	S\$215.90
Singaporean Citizens, PRs or LTVP+ Holders 21 years old and above		<b>70%</b> SkillsFuture Funding	S\$555.90
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\$1,700.00	90% SkillsFuture Funding	S\$215.90 
Non-SME Singaporean Citizens, PRs or LTVP+ Holders ≥ 21 years old		70% SkillsFuture Funding	S\$555.90 
Non-SME Singaporean Citizens ≥ 40 years old		90% SkillsFuture Funding	S\$215.90







#### Location:

8 Jurong Town Hall Road #27-01 The JTC Summit Singapore 609434