SKILLS FRAMEWORK FOR INFOCOMM TECHNOLOGY
SKILLS MAP – ASSOCIATE NETWORK ENGINEER

Sector	Infocomm Technology
Track	Infrastructure
Sub-track	Build and Maintain
Occupation	Infrastructure Engineer
Job Role	**Associate Network Engineer**
Job Role Description	The Associate Network Engineer is responsible for supporting the deployment and operations of network infrastructure. He/She assists with the installation, monitoring, troubleshooting and testing of network systems and solutions. He monitors and configures network components to ensure security, and resolves network incidents. He also ensures that network activities are documented appropriately and in compliance with the required procedures and standards. He is familiar with core networking technologies and trends, network standards and network routing protocols. He may be required to work on a rotational on-call or shift basis. The Associate Network Engineer is a motivated team player and is driven by results. He also possesses analytical skills and works well in a fast-paced environment.

Critical Work Functions and Key Tasks	**Critical Work Functions**	**Key Tasks**
	Configure and administer networks	Update network diagrams and documentation for design and planning of network communication systems
		Determine impact of network requirements on existing architecture, work processes and systems
		Draft technical documents for processes, technology and devices
		Assist in determining infrastructure systems specifications, input/output (I/O) processes and working parameters for hardware and/or software compatibility
		Configure, test, automate, integrate, model and analyse the Software Defined Network (SDN) infrastructure within the IT ecosystem
		Provide suggestions on the direction for Local Area Network (LAN) and/or Wide Area Network (WAN), internet, wireless and remote access services
		Participate in technical design reviews of applicable solutions
	Optimise network utilisation and performance	Consolidate network data based on key parameters or metrics
		Assist in the development of capacity planning models, load-balance and/or redundancy solutions
		Administer tuning of networks for optimisation
		Review facility bandwidth requirements and system inter-dependencies
		Document network activities in accordance with organisational policies
		Monitor network activity and log technical issues
		Maintain awareness of emerging software and/or hardware solutions
	Support network operations	Conduct regular maintenance, patches and upgrades to the network
		Prepare technical specifications and documents to procure network equipment
		Perform routine backups and administer disaster recovery protocols
		Assist in the development of disaster recovery plans
	Manage network security	Monitor indicators of compromise or breach in network security
		Track and document network security incidents
		Configure network security across software and/or hardware components

		Coordinate and configure network access and controls
	Resolve network incidents	Classify and prioritise network incidents for troubleshooting
		Document network incidents and resolution methods
		Troubleshoot, diagnose and resolve network issues

	Technical Skills and Competencies		**Generic Skills and Competencies**	
Skills and Competencies	Business Environment Analysis	Level 2	Problem Solving	Basic
	Business Needs Analysis	Level 2	Communication	Basic
	Cyber and Data Breach Incident Management	Level 3	Computational Thinking	Basic
	Emerging Technology Synthesis	Level 3	Sense Making	Basic
	IT Asset Management	Level 2	Teamwork	Intermediate
	Network Administration and Maintenance	Level 1, Level 2		
	Network Configuration	Level 2		
	Problem Management	Level 3		
	Process Improvement and Optimisation	Level 3		
	Procurement	Level 2		
	Project Management	Level 3		
	Service Level Management	Level 3		
	Stakeholder Management	Level 2		
	Test Planning	Level 2		
	Vendor Management	Level 3		
Programme Listing	For a list of Training Programmes available for the ICT sector, please visit: www.skillsfuture.sg/skills-framework/ict			

The information contained in this document serves as a guide.