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| **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 | | | | |
| **Skills and Competencies** | **Technical Skills and Competencies** | | | **Generic 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 | | | | | |
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| The information contained in this document serves as a guide. | | | | | | |