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| **SKILLS FRAMEWORK FOR INFOCOMM TECHNOLOGY SKILLS MAP – SENIOR SECURITY ENGINEER/SECURITY ENGINEER** | | | | | | |
| **Sector** | Infocomm Technology | | | | | |
| **Track** | Cyber Security | | | | | |
| **Sub-track** | Security Design and Engineering | | | | | |
| **Occupation** | ICT Security Specialist | | | | | |
| **Job Role** | **Senior Security Engineer/Security Engineer** | | | | | |
| **Job Role Description** | The Senior Security Engineer/Security Engineer designs, develops and implements secure system architectures. He/She embeds security principles into the design of system architectures to mitigate the risks posed by new technologies and business practices. He designs artefacts, spanning design, development and implementation, into enterprise systems that describe security principles and how they relate to the overall enterprise system architecture. He performs routine activities related to the periodic review and audit activities of infrastructure security systems and maintains documentation of security standards and procedures.   He is well versed with cyber security standards, protocols and frameworks, and works in compliance with the Cyber Security Act 2018. He is knowledgeable of various application and hardware technologies and services.   The Senior Security Engineer/Security Engineer is structured and systematic in his approach to designing and implementing secure system architectures. He is articulate and works well with his team and other stakeholders. | | | | | |
| **Critical Work Functions, Key Tasks and Performance Expectations** | **Critical Work Functions** | **Key Tasks** | | | **Performance Expectations** | |
| **Develop architecture requirements and maintain oversight** | Design security controls and systems in alignment with security guidelines | | | In accordance with:     * Cyber Security Act 2018, Cyber Security Agency of Singapore | |
| Assist in the testing and evaluation of new security technologies and controls | | |
| Recommend security products, services and procedures to enhance system architecture designs | | |
| Document the design, operation, use, and expected outputs of new systems | | |
| Conduct research on modern security software architectures and network architecture design best practices | | |
| **Implement security systems** | Implement new enterprise security architecture, technologies and enhancements | | |
| Identify techniques to scale up and automate security infrastructure and processes | | |
| Resolve issues that arise in implementation of new security systems | | |
| Monitor security systems for strengths and weaknesses and propose improvements to address weaknesses | | |
| **Manage security systems** | Oversee the maintenance of security systems, platforms and associated software | | |
| Develop and implement custom disaster recovery drills and simulation tests on existing systems | | |
| Assist in the resolution of identified problems and incidents | | |
| **Skills and Competencies** | **Technical Skills and Competencies** | | | **Generic Skills and Competencies** | | |
| Business Needs Analysis | | Level 3 | Communication | | Intermediate |
| Cyber and Data Breach Incident Management | | Level 3 | Computational Thinking | | Intermediate |
| Cyber Risk Management | | Level 4 | Problem Solving | | Intermediate |
| Emerging Technology Synthesis | | Level 3 | Sense Making | | Intermediate |
| Infrastructure Design | | Level 3 | Teamwork | | Intermediate |
| Network Security | | Level 4 |  | | |
| Security Administration | | Level 3 |
| Security Architecture | | Level 3 |
| Security Governance | | Level 4 |
| Security Programme Management | | Level 3 |
| Strategy Implementation | | Level 4 |
| Strategy Planning | | Level 4 |
| **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. | | | | | | |