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| **SKILLS FRAMEWORK FOR INFOCOMM TECHNOLOGY SKILLS MAP – SYSOPS ENGINEER** | | | | | | |
| **Sector** | Infocomm Technology | | | | | |
| **Track** | Infrastructure | | | | | |
| **Sub-track** | Build and Maintain | | | | | |
| **Occupation** | Infrastructure Engineer | | | | | |
| **Job Role** | **SysOps Engineer** | | | | | |
| **Job Role Description** | The SysOps Engineer is responsible for the configuration, reliability and efficiency of systems. He/She optimises the capacity and performance of infrastructure, using knowledge of coding and scripting to automate the resolution of recurring issues and elimination of tasks, as well as enabling scalable and distributed systems. He also supports system installation and upgrades, performs continuous monitoring of infrastructure and ensures security and compliance in leveraging cloud platforms.  He possesses a high level of proficiency in scripting and programming languages. He is familiar with cloud platforms, scaling and management of infrastructure. He works well with a variety of internal and external stakeholders. He is able to work on an on-call and shift basis, with the ability to prioritise effectively and operate under pressure.  The SysOps Engineer enjoys hands-on problem-solving and is driven by investigating challenging, complex problems. He is a resourceful and self-directed individual who performs independently with minimal guidance. He is also an analytical thinker who demonstrates strong interpersonal skills in cross-team collaboration. | | | | | |
| **Critical Work Functions and Key Tasks** | **Critical Work Functions** | **Key Tasks** | | | | |
| **Develop infrastructure architecture and standards** | Develop processes and standards for system or application reliability in areas of availability, performance, latency, capacity, emergency response, capacity planning, change management, security and monitoring | | | | |
| Translate business needs into cloud architectural requirements | | | | |
| Design scalable, robust systems using cloud architecture | | | | |
| Create procedures and documentation for site reliability and incident management | | | | |
| **Configure and deploy infrastructure** | Build and run large-scale, massively distributed and fault-tolerant systems | | | | |
| Perform provisioning of cloud resources | | | | |
| Configure infrastructure environment for software development and prototyping | | | | |
| Conduct pre-deployment testing of systems to ensure reliability | | | | |
| Implement operational cost control mechanisms for cloud infrastructure | | | | |
| Identify and resolve deployment issues | | | | |
| **Monitor infrastructure and resolve issues** | Oversee configuration of operational systems to ensure alignment with technical and security requirements | | | | |
| Conduct measurement and monitoring of overall performance, system health, system availability, and latency | | | | |
| Provide proactive updates or alerts on infrastructure availability to relevant stakeholders | | | | |
| Address gaps in performance or availability based on identified metrics | | | | |
| Carry out testing and release procedures to ensure rigour of infrastructure and services | | | | |
| Resolve service operation issues and prevent recurrence using automation | | | | |
| Perform regular tuning of infrastructure and services | | | | |
| **Automate infrastructure operations and optimise performance** | Conduct capacity planning for cloud infrastructure and systems performance analysis | | | | |
| Identify opportunities to enhance operational workflows, systems and processes through automated deployment | | | | |
| Develop tools and scripts to automate deployments and optimise performance | | | | |
| Create an operating environment for monitoring, alerting, self-healing and automated recovery | | | | |
| **Embed scalability into infrastructure** | Devise strategies and roadmap for scaling of infrastructure operations | | | | |
| Design and write code for scalable systems | | | | |
| Scale systems through automation to manage recurring tasks | | | | |
| Propose suggestions to enhance infrastructure architecture | | | | |
| **Manage data, security and compliance** | Configure cloud platforms and applications in alignment with organisational cyber security policies | | | | |
| Implement identity and access management controls | | | | |
| Execute procedures to ensure data protection and encryption | | | | |
| Monitor compliance of data management and retention processes | | | | |
| **Skills and Competencies** | **Technical Skills and Competencies** | | | **Generic Skills and Competencies** | | |
| Agile Coaching | | Level 4 | Problem Solving | | Advanced |
| Application Development | | Level 4 | Service Orientation | | Intermediate |
| Applications Integration | | Level 4 | Resource Management | | Intermediate |
| Budgeting | | Level 3 | Teamwork | | Basic |
| Business Agility | | Level 4 | Sense Making | | Intermediate |
| Business Environment Analysis | | Level 3 |  | | |
| Business Innovation | | Level 4 |
| Business Needs Analysis | | Level 3 |
| Business Requirements Mapping | | Level 3 |
| Business Risk Management | | Level 3 |
| Change Management | | Level 3 |
| Cloud Computing | | Level 4 |
| Configuration Tracking | | Level 3 |
| Continuous Integration and Continuous Deployment | | Level 3 |
| Contract Management | | Level 3 |
| Cyber and Data Breach Incident Management | | Level 4 |
| Emerging Technology Synthesis | | Level 4 |
| Infrastructure Deployment | | Level 4 |
| Infrastructure Design | | Level 4 |
| Infrastructure Support | | Level 4 |
| Network Administration and Maintenance | | Level 3 |
| Network Configuration | | Level 3 |
| Network Security | | Level 4 |
| Performance Management | | Level 4 |
| Problem Management | | Level 3 |
| Process Improvement and Optimisation | | Level 3 |
| Procurement | | Level 3 |
| Quality Engineering | | Level 4 |
| Security Administration | | Level 3 |
| Software Configuration | | Level 3 |
| Solution Architecture | | Level 3 |
| Stakeholder Management | | Level 3 |
| Test Planning | | Level 3 |
| Vendor Management | | 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. | | | | | | |