

Role Description

Senior Network Engineer

Cluster	Education
Agency	NSW Education Standards Authority
Division/Branch/Unit	Information and Communications Technology
Location	117 Clarence St Sydney
Classification/Grade/Band	Clerk Grade 9/10
Role Number	R2035
ANZSCO Code	263111
PCAT Code	31226192
Date of Approval	July 2024
Agency Website	educationstandards.nsw.edu.au

Agency overview

The NSW Education Standards Authority (NESA) works with the NSW community to drive improvements in student achievement.

We are an independent statutory authority reporting to an independent Board and the NSW Minister for Education and Early Childhood Learning.

Making sure all children and young people in NSW leave school ready to take advantage of life's opportunities, as well as to rise to its inevitable challenges, is at the heart of what we do.

We achieve this by supporting all school sectors (public, catholic and independent) to deliver the best possible outcomes for students through:

- high-quality syllabuses.
- assessment, including managing the HSC and NAPLAN.
- teaching standards, such as the accreditation of teachers to work in NSW schools.
- school environments, including setting and monitoring school standards.

To find out more about the important work we do for NSW visit our [website](#).

Primary purpose of the role

The Senior Network Engineer is responsible for providing high-level network engineering support for a diverse range of data and communications network infrastructure, including Core network, Data Centre, Campus, and remote site connectivity. This role requires experience in providing technical and analytical services to projects, some project management, and input into specifications and budgetary planning.

Key accountabilities

- Design and implement network infrastructure solutions (Private and Public Cloud) that adhere to current architecture standards in order to support the systems and services used by the organisation.
- Undertake design and development of significant information technology projects. Research and development of network technologies to enhance existing services.

- Consult on technical IT aspects for ICT (Information and Communication Technology) clients and represent ICT on non-technical matters.
- Investigate, evaluate, and report on new equipment, systems, processes, and standards.
- Lead and/or supervise project teams, as well as participate in incident and problem management.
- Determine the extent to which solutions perform “as required” within the current environment including monitoring the performance of network systems and services in relation to their contribution to business performance, their security and sustainability to ensure that current and future solutions meet anticipated demand.
- Adopt and promote sound cyber security practices within infrastructure in compliance with NSW Cyber Security Policy, procedures, and standards.
- Ensure that installations are completed on time, cost and quality to minimise operational and project risk and to ensure costs are contained.
- Apply infrastructure management tools to automate provisioning, testing, deployment and monitoring of infrastructure components to ensure optimal performance.
- Ensure testing of hardware and software components, defect resolution, recording of results and handover of implemented solutions are conducted as per organisational standards, reducing the risk and adverse impact of change.
- Ensure configuration management records are updated and end-user technology is fully documented. to meet current and future infrastructure engineering requirements

Key challenges

- Managing relationships with vendors to ensure private and Public Cloud services are maintained and remain compliant to the standards.
- Managing conflicting and/or concurrent hardware upgrades, refresh projects and programs given potentially competing demands

Key relationships

Who	Why
Internal	
Manager	<ul style="list-style-type: none"> • Escalate issues, keep informed, advise and receive instructions. • Identify emerging issues and risks and recommend solutions. • Participate in meetings and discussions to share information and provide input and feedback
Direct reports	<ul style="list-style-type: none"> • Work collaboratively to contribute to achieving business outcomes. • Participate in meetings to obtain the work group perspective and share information
Clients and customers	<ul style="list-style-type: none"> • Resolve and provide customer focused solutions to issues. • Articulate the needs and requirements of the service and collaborate with to negotiate solutions, provide expert advice and regular updates

Role dimensions

Decision making

This role has autonomy and makes decisions that are under their direct control as directed by their manager. It refers to managers' decisions that require significant change to program outcomes or timeframes or are likely to escalate or require submission to a higher level of management. This role is fully accountable for the delivery of work assignments on time and to expectations in terms of quality, deliverables and outcomes. This role submits reports, business cases and other forms of written advice with minimal input from the manager.

Reporting line

Manager, Infrastructure

Direct reports

The role has no direct reports.

Budget/Expenditure

As per the delegations

Essential requirements

- Tertiary qualifications in information technology and/or industry experience in related field.
- Extensive experience in Private and Public Cloud (Azure and/or AWS) network Infrastructure.
- Extensive experience in solution design and implementation of Wireless, Campus and SDWAN networking technologies in addition to AWS Direct Connect, Azure ExpressRoute connectivity within multi-cloud environment.
- High level skills in analysis, design, development, operation, and maintenance of contemporary network and communications infrastructure. Specific knowledge in more than one area will be highly regarded: Network architecture and solutions, network security, server farm networking, Internet links and BGP, disaster recovery planning, MPLS, Wireless LAN technologies, or other relevant technologies.
- Exceptional problem solving, analytical and organisational skills including the ability to recommend improvements/alternatives.
- Strong consulting, negotiation skills and ability to work within diverse teams and key stakeholders both internal and external to the organisation.





Capabilities for the role


The NSW Public Sector Capability Framework applies to all NSW public sector employees. The Capability Framework is available at www.psc.nsw.gov.au/capabilityframework

This role also utilises an occupation specific capability set which contains information from the Skills Framework for the Information Age (SFIA). The capability set is available at www.psc.nsw.gov.au/capabilityframework/ICT

Capability summary

Below is the full list of capabilities and the level required for this role. The capabilities in bold are the focus capabilities for this role. Refer to the next section for further information about the focus capabilities.

NSW Public Sector Capability Framework		
Capability Group	Capability Name	Level
 Personal Attributes	Display Resilience and Courage	Intermediate
	Act with Integrity	Adept
	Manage Self	Adept
	Value Diversity	Intermediate
 Relationships	Communicate Effectively	Adept
	Commit to Customer Service	Adept
	Work Collaboratively	Adept
	Influence and negotiate	Intermediate
 Results	Deliver Results	Adept
	Plan and prioritise	Adept
	Think and Solve Problems	Advanced
	Demonstrate Accountability	Intermediate
 Business Enablers	Finance	Intermediate
	Technology	Adept
	Procurement and Contract Management	Intermediate
	Project Management	Adept

Occupation / profession specific capabilities		
Capability Set	Category, Sub-category and Skill	Level and Code
	Development and Implementation - Installation and Integration Systems Installation/Decommissioning	Level 4 – HSIN
	Strategy and Architecture - Technical Strategy and Planning Solution Architecture	Level 5 – ARCH
	Delivery & Operation – Service Operation IT Infrastructure	Level 4 - ITOP
	Delivery & Operation - Service Operation System Software	Level 4 – SYSP

Focus capabilities.

The focus capabilities for the role are the capabilities in which occupants must demonstrate immediate competence. The behavioural indicators provide examples of the types of behaviours that would be expected at that level and should be reviewed in conjunction with the role's key accountabilities.

NSW Public Sector Capability Framework

Group and Capability	Level	Behavioural Indicators
Personal Attributes Manage Self	Adept	<ul style="list-style-type: none"> Look for and take advantage of opportunities to learn new skills and develop strengths. Show commitment to achieving challenging goals. Examine and reflect on own performance. Seek and respond positively to constructive feedback and guidance. Demonstrate a high level of personal motivation
Relationships Work Collaboratively	Adept	<ul style="list-style-type: none"> Encourage a culture of recognising the value of collaboration. Build co-operation and overcome barriers to information sharing and communication across teams/units. Share lessons learned across teams/units. Identify opportunities to work collaboratively with other teams/units to solve issues and develop better processes and approaches to work
Relationships Commit to Customer Service	Adept	<ul style="list-style-type: none"> Take responsibility for delivering high quality customer-focused services. Understand customer perspectives and ensure responsiveness to their needs. Identify customer service needs and implement solutions. Find opportunities to co-operate with internal and external parties to improve outcomes for customers. Maintain relationships with key customers in area of expertise. Connect and collaborate with relevant stakeholders within the community
Results Think and Solve Problems	Advanced	<ul style="list-style-type: none"> Undertake objective, critical analysis to draw accurate conclusions that recognise and manage contextual issues. Work through issues, weigh up alternatives and identify the most effective solutions. Take account of the wider business context when considering options to resolve issues. Explore a range of possibilities and creative alternatives to contribute to systems, processes and business improvements. Implement systems and processes that underpin high quality research and analysis
Business Enablers Technology	Adept	<ul style="list-style-type: none"> Demonstrate a sound understanding of technology relevant to the work unit and identify and select the most appropriate technology for assigned tasks. Identify opportunities to use a broad range of communications technologies to deliver effective messages. Understand, act on and monitor compliance with information and communications security and use policies. Identify ways to leverage the value of technology to achieve team/unit outcomes, using the existing technology of the business Support compliance with the records, information and knowledge management requirements of the organisation

Occupation specific capability set (Skills Framework for the Information Age – SFIA)

Category and Sub-Category	Level and Code	Level Descriptions
Development and Implementation Installation and Integration	Level 4 - HSIN	<p>SYSTEMS INSTALLATION /DECOMMISSIONING - Undertakes routine installations and de-installations of items of hardware and/or software. Takes action to ensure targets are met within established safety and quality procedures, including, where appropriate, handover to the client. Conducts tests of hardware and/or software using supplied test procedures and diagnostic tools. Corrects malfunctions, calling on other experienced colleagues and external resources if required. Documents details of all hardware/software items that have been installed and removed so that configuration management records can be updated. Develops installation procedures and standards, and schedules installation work.</p> <p>Provides specialist guidance and advice to less experienced colleagues to ensure best use is made of available assets, and to maintain or improve the installation service.</p>
Strategy & Architecture Technical Strategy & Planning	Level 5 – ARCH	<p>SOLUTION ARCHITECTURE - Leads the development of solution architectures in specific business, infrastructure or functional areas. Ensures that appropriate tools and methods are available, understood and employed in architecture development. Within a change program, leads the preparation of technical plans and, in liaison with business assurance and project staff, ensures that appropriate technical resources are made available. Provides advice on technical aspects of solution development and integration (including requests for changes, deviations from specifications, etc.) and ensures that relevant technical strategies, policies, standards and practices (including security) are applied correctly.</p>
Delivery & Operation Service Operation	Level 4 - ITOP	<p>IT INFRASTRUCTURE - Provides technical expertise to enable the correct application of operational procedures. Uses infrastructure management tools to determine load and performance statistics.</p> <p>Contributes to the planning and implementation of maintenance and installation work, including building and configuration of infrastructure components in virtualised environments. Implements agreed infrastructure changes and maintenance routines.</p> <p>Configures tools to automate the provisioning, testing and deployment of new and changed infrastructure. Identifies operational problems and contributes to their resolution, checking that they are managed in accordance with agreed standards and procedures. Provides reports and proposals for improvement to specialists, users and managers.</p>

Delivery & Operation

Level 4 - SYSP

Service Operation

SYSTEMS SOFTWARE - Reviews system software updates and identifies those that merit action. Tailor system software to maximise hardware functionality. Installs and tests new versions of system software. Investigates and coordinates the resolution of potential and actual service problems. Prepares and maintains operational documentation for system software. Advise on the correct and effective use of system software.
