# Network Specialist

## Summary statement

Ensures the alignment of the network, including telecommunication and/or computer infrastructure to meet the organization’s communication needs.

## Mission

Manages and operates a networked information system, solving problems and faults to ensure defined service levels. Monitors and improves network performances.

| Accountable | Responsible | Contributor |
|---|---|---|
|  | Network Solution Documentation<br>Network Solution in Operation<br>Network Solution Specification | Solved Incident |

## Main task/s

- Ensure that communication performance, recovery, and security needs meet agreed service agreement standards
- Contribute to define network design policies, philosophies and criteria.
- Investigate, diagnose and solve network problems
- Use network management system tools to determine network load and model performance statistics.
- Maintain awareness of relevant legislation affecting network security

## KPI area

Level of Network Services Quality

## B - Build

**B.1. Application Development**
Interprets the application design to develop a suitable application in accordance with customer needs. Adapts existing solutions by e.g. porting an application to another operating system. Codes, debugs, tests and documents and communicates product development stages. Selects appropriate technical options for development such as reusing, improving or reconfiguration of

existing components. Optimises efficiency, cost and quality. Validates results with user representatives, integrates and commissions the overall solution.

**Proficiency Levels**

Proficiency Level 1 - Acts under guidance to develop, test and document applications.

Proficiency Level 2 - Systematically develops and validates applications.

Proficiency Level 3 - Acts creatively to develop applications and to select appropriate technical options. Accounts for others development activities. Optimizes application development, maintenance and performance by employing design patterns and by reusing proved solutions.

**Knowledge Examples**

K1 appropriate software programs/ modules

K2 hardware components, tools and hardware architectures

K3 functional and technical designing

K4 state of the art technologies

K5 programming languages

K6 power consumption models of software and/or hardware

K7 DBMS

K8 operating systems and software platforms

K9 integrated development environment (IDE)

K10 rapid application development (RAD)

K11 IPR issues

K12 modelling technology and languages

K13 interface definition languages (IDL)

K14 security

**Skills Examples**

S1 explain and communicate the design/development to the customer

S2 perform and evaluate test results against product specifications

S3 apply appropriate software and/or hardware architectures

S4 develop user interfaces, business software components and embedded software components

S5 manage and guarantee high levels of cohesion and quality

S6 use data models

S7 perform and evaluate test in the customer or target environment

S8 cooperate with development team and with application designers

## B.2. Component Integration

Integrates hardware, software or sub system components into an existing or a new system. Complies with established processes and procedures such as, configuration management and package maintenance. Takes into account the compatibility of existing and new modules to ensure system integrity, system interoperability and information security. Verifies and tests system capacity and performance and documentation of successful integration.

**Proficiency Levels**

Proficiency Level 2 - Acts systematically to identify compatibility of software and hardware specifications. Documents all activities during installation and records deviations and remedial activities.

Proficiency Level 3 - Accounts for own and others actions in the integration process. Complies with appropriate standards and change control procedures to maintain integrity of the overall system functionality and reliability.

Proficiency Level 4 - Exploits wide ranging specialist knowledge to create a process for the entire integration cycle, including the establishment of internal standards of practice. Provides leadership to marshal and assign resources for programmes of integration.

**Knowledge Examples**

K1 old, existing and new hardware components/ software programs/ modules

K2 the impact that system integration has on existing system/ organisation

K3 interfacing techniques between modules, systems and components

K4 integration testing techniques

K5 development tools (e.g. development environment, management, source code access/revision control)

K6 best practice design techniques

**Skills Examples**

S1 measure system performance before, during and after system integration

S2 document and record activities, problems and related repair activities

S3 match customers' needs with existing products

S4 verify that integrated systems capabilities and efficiency match specifications

S5 secure/ back-up data to ensure integrity during system integration

## B.4. Solution Deployment

Following predefined general standards of practice carries out planned necessary interventions to implement solution, including installing, upgrading or decommissioning. Configures hardware, software or network to ensure interoperability of system components and debugs any resultant faults or incompatibilities. Engages additional specialist resources if required, such as third party network providers. Formally hands over fully operational solution to user and completes documentation recording all relevant information, including equipment addressees, configuration and performance data.

**Proficiency Levels**

Proficiency Level 1 - Removes or installs components under guidance and in accordance with detailed instructions.

Proficiency Level 2 - Acts systematically to build or deconstruct system elements. Identifies failing components and establishes root cause failures. Provides support to less experienced colleagues.

Proficiency Level 3 - Accounts for own and others actions for solution provision and initiates comprehensive communication with stakeholders. Exploits specialist knowledge to influence solution construction providing advice and guidance.

**Knowledge Examples**

K1 performance analysis techniques

K2 techniques related to problem management (operation, performance, compatibility)

K3 software packaging and distribution methods and techniques

K4 the impacts of deployment on the current architecture

K5 the technologies and standards to be used during the deployment

K6 web, cloud and mobile technologies and environmental requirements

**Skills Examples**

S1 organise deployment workflow and product roll-out activities

S2 organise and plan beta-test activities, testing solution in its final operational environment

S3 configure components at any level to guarantee correct overall interoperability

S4 identify and engage expertise needed to solve interoperability problems

S5 organise and control initial support service provision including user training during system start-up

S6 organise population of data bases and manage data migration

S7 collaborate to modify 3rd party code; support and maintain modified software

# C - Run

## C.4. Problem Management

Identifies and resolves the root cause of incidents. Takes a proactive approach to avoidance or identification of root cause of ICT problems. Deploys a knowledge system based on recurrence of common errors. Resolves or escalates incidents. Optimises system or component performance.

**Proficiency Levels**

Proficiency Level 2 - Identifies and classifies incident types and service interruptions. Records incidents cataloguing them by symptom and resolution.

Proficiency Level 3 - Exploits specialist knowledge and in-depth understanding of the ICT infrastructure and problem management process to identify failures and resolve with minimum outage. Makes sound decisions in emotionally charged environments on appropriate action required to minimise business impact. Rapidly identifies failing component, selects alternatives such as repair, replace or reconfigure.

Proficiency Level 4 - Provides leadership and is accountable for the entire problem management process. Schedules and ensures well trained human resources, tools, and diagnostic equipment are available to meet emergency incidents. Has depth of expertise to anticipate critical component failure and make provision for recovery with minimum downtime. Constructs escalation processes to ensure that appropriate resources can be applied to each incident.

**Knowledge Examples**

K1 the organisation's overall ICT infrastructure and key components

K2 the organisation's reporting procedures

K3 the organisation's critical situation escalation procedures

K4 the application and availability of diagnostic tools

K5 the link between system infrastructure elements and impact of failure on related business processes

**Skills Examples**

S1 monitor progress of issues throughout lifecycle and communicate effectively

S2 identify potential critical component failures and take action to mitigate effects of failure

S3 conduct risk management audits and act to minimise exposures

S4 allocate appropriate resources to maintenance activities, balancing cost and risk

S5 communicate at all levels to ensure appropriate resources are deployed internally or externally to minimise outages

# E - Manage

## E.8. Information Security Management

Implements information security policy. Monitors and takes action against intrusion, fraud and security breaches or leaks. Ensures that security risks are analysed and managed with respect to enterprise data and information. Reviews security incidents, makes recommendations for security policy and strategy to ensure continuous improvement of security provision.

**Proficiency Levels**

Proficiency Level 2 - Systematically scans the environment to identify and define vulnerabilities and threats. Records and escalates non-compliance

Proficiency Level 3 - Evaluates security management measures and indicators and decides if compliant to information security policy. Investigates and instigates remedial measures to address any security breaches.

Proficiency Level 4 - Provides leadership for the integrity, confidentiality and availability of data stored on information systems and complies with all legal requirements.

**Knowledge Examples**

K1 the organisation's security management policy and its implications for engagement with customers, suppliers and subcontractors

K2 the best practices and standards in information security management

K3 the critical risks for information security management

K4 the ICT internal audit approach

K5 security detection techniques, including mobile and digital

K6 cyber attack techniques and counter measures for avoidance

K7 computer forensics

**Skills Examples**

S1 document the information security management policy, linking it to business strategy

S2 analyse the company critical assets and identify weaknesses and vulnerability to intrusion or attack

S3 establish a risk management plan to feed and produce preventative action plans

S4 perform security audits

S5 apply monitoring and testing techniques

S6 establish the recovery plan

S7 implement the recovery plan in case of crisis

**Responsibilities:**

- Directs, manages and administers the operational of data and VoIP systems.
- Analyze business requirements to develop technical network solutions and their framework.
- Provide design, engineering and architectural support to manage the network infrastructure including technical requirements, analysis, design and implementation of WAN, LAN, WLAN and VoIP.
- Install, configure, administer and maintain all Network switches and routers.
- Provide level-2/3 network support including system monitoring and troubleshooting to resolve issues.
- Engineer, document and implement LAN, WAN and WLAN solutions.
- Analyze existing operations and make recommendations for the improvement and growth of the infrastructure and IT global systems.
- Provide input to approve purchase of supplier equipment per standards.
- Participate in system acceptance testing and change management process.
- Manage the operational related projects.
- Perform rigorous problem root cause analysis, focusing on lessons learned to improve processes.
- Reporting to the head of ICT Finance
- Provide monthly status reports about the goals to be achieved

**Qualifications:**

- A bachelor degree with minimum of 5 -10 years' experience as Network specialist in financial organizations.
- Working experience with multivendor global enterprise environment.
- Working experience in architecting large scale global networks and documentation.
- Working experience in SIP design and support.Working experience and understanding of OSI or TCP/IP model.
- Working experience and understanding in technical areas: Networking Protocols/Services BGP, OSPF, IPSec, GRE, HSRP/VRRP, NAT/PAT, SNMP, MPLS, VoIP, SIP, VPLS, QoS, T1, DS3, Ethernet, Firewalls, etc.
- Excellent technical abilities and working experience of network infrastructure.
- Knowledge of wireless protocols (802.11) and Wireless Controllers.

- Preferred experience in network load balancers.
- Project management skills, ability to manage time and complex tasks, and working knowledge of SLAs.
- Strong interpersonal and communication skills and the ability to work effectively with a wide range of constituencies to communicate technical information and non-technical personnel.
- Required English and Dutch oral and written