Post Title:	Network - Principal Engineer
Grade:	*8*

Job Description

2.1. Purpose

The Network – Principle Engineer will develop, support and manage network products and services deployed on behalf of the University Group.

The Network – Principle Engineer is responsible for the day to day operation, security and delivery of our network services. They will develop and support products and services that are efficient, secure, perform optimally and are aligned to business goals and objectives. The post holder is responsible for the maintenance of configuration data, capacity planning, service availability and continuity. They will adhere to service levels and all operational processes (such as incident, problem, change management processes) pertaining to network services.

The Network - Principle Engineer will provide technical expertise and leadership for the network engineering function, in accordance with the overall network architecture. They will participate in continuous improvement analysis and design, as well as the development of network based solutions.

2.2. Main Duties and Responsibilities

1. Explains the purpose of and provides advice and guidance on the application and operation of elementary physical, procedural and technical security controls. Performs security risk, vulnerability assessments, and business impact analysis for server & storage systems. Investigates suspected attacks and manages security incidents. Uses forensics where appropriate.

2. Maintains an in-depth knowledge of network technology, and provides expert advice regarding its application. Supervises specialist consultancy.

3. Monitors the market to gain knowledge and understanding of currently emerging technologies. Identifies new and emerging network technologies and products. Assesses their relevance and potential value to the Group. Contributes to briefings of staff and management.

4. Promotes and ensures use of appropriate techniques, methodologies and tools.

5. Produces outline system designs and specifications, and overall architectures, topologies, configuration databases and design documentation of networks and networking technology within the organisation. Specifies user/system interfaces, including validation and error correction procedures, processing rules, access, security and audit controls. Assesses associated risks, and specifies recovery routines and contingency procedures. Translates logical designs into physical designs.

6. Coordinates and manages planning of the system and/or acceptance tests, including network security testing. Takes responsibility for integrity of testing and acceptance activities and coordinates the execution of these activities. Provides authoritative advice and guidance on any aspect of network test planning and execution. Defines and communicates the network test strategy for the project. Manages all network test processes, including test plans, resources, costs, timescales, test deliverables and traceability. Manages client relationships with respect to network testing matters. Identifies process improvements, and contributes to corporate testing standards and definition of best practice.

7. Leads a team, providing expert technical knowledge in the systems testing of network products. Provides specialist guidance information to support, systems testing and quality assurance functions to assist in improving procedures.

8. Takes responsibility for installation projects, providing effective team leadership, including information flow to and from the customer during project work. Develops and implements quality plans and method statements. Monitors the effectiveness of installations and ensures that appropriate recommendations for change are made.

9. Provides advice, assistance and leadership associated with the planning, design and improvement of service and component availability. Investigates all breaches of availability targets and service non-availability, with the instigation of remedial activities. Plans arrangements for disaster recovery together with supporting processes and manages the testing of such plans.

10. Performs defined tasks to monitor service delivery against service level agreements and maintains records of relevant information. Analyses service records against agreed service levels regularly to identify actions required to maintain or improve levels of service, and initiates or reports these actions.

11. Maintains secure configuration, applying and maintaining tools, techniques and processes to identify, track, log and maintain accurate, complete and current information.

12. Develops implementation plans for complex requests for change relating to the network. Evaluates risks to the integrity of the service environment inherent in proposed implementations. Seeks authority for those activities, reviews the effectiveness of change implementation, suggests improvement to organisational procedures governing change management. Leads the assessment, analysis, development, documentation and implementation of changes based on requests for change.

13. Assesses and analyses release components. Provides input to scheduling. Carries out the builds and tests in coordination with testers and component specialists maintaining and administering the tools and methods. Ensures, where possible, information exchange with configuration management. Ensures release processes and procedures are maintained.

14. Evaluates new network software, reviews network software updates and identifies those that merit action. Ensures that network software is tailored to facilitate the achievement of service objectives. Plans the installation and testing of new versions of network software. Investigates and coordinates the resolution of potential and actual service problems. Ensures that operational documentation for network software is fit for purpose and current. Advises on the correct and effective use of network software.

15. Monitors service component capacity and initiates actions to resolve any shortfalls according to agreed procedures. Applies techniques to control the demand upon a particular resource or service.

16. Drafts and maintains procedures and documentation for network applications support. Manages network application enhancements to improve business performance. Advises on network application security, licensing, upgrades, backups, and disaster recovery needs. Ensures that all requests for support are dealt with according to set standards and procedures.

17. Provides technical expertise to enable the correct application of operational procedures. Uses management tools to determine load and performance statistics. Contributes to the planning and implementation of maintenance and installation work. Implements agreed infrastructure changes and maintenance routines. 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.

18. Drafts and maintains procedures and documentation for network support. Makes a significant contribution to the investigation, diagnosis and resolution of network problems. Ensures that all requests for support are dealt with according to set standards and procedures.

19. Ensures that appropriate action is taken to anticipate, investigate and resolve problems in systems and services. Ensures that such problems are fully documented within the relevant reporting system(s). Enables development of problem solutions. Coordinates the implementation of agreed remedies and preventative measures. Analyses patterns and trends.

20. Ensures that incidents are handled according to agreed procedures. Investigates escalated incidents to responsible service owners and seeks resolution. Facilitates recovery, following resolution of incidents. Ensures that resolved incidents are properly documented and closed. Analyses causes of incidents, and informs service owners in order to minimise

probability of recurrence, and contribute to service improvement. Analyses metrics and reports on performance of incident management process.

21. Develops and maintains the standards, processes and documentation for data centres. Optimises efficiency in population of data centre space. Ensures adherence to all relevant policies and processes. Uses data centre management tools to plan, record and manage the types of infrastructure installed and the associated power, space and cooling capabilities, usage and actions to meet corporate sustainability targets.

22. Manages aspects of the product lifecycle, working with colleagues in other disciplines to enable effective marketing and customer support. May act as product owner for one or more lower value products or services.

Deputises for the Network Manager as required.

AND such other duties as are within the scope of the spirit of the job purpose, the title of the post and its grading.

2.3. Supervision Received

Line management is from the Network Manager.

2.4. Supervision Given

None.

2.5. Contacts

• IT Services staff, including Executive Team.

• University Group Leadership Team.

• Staff and students in other Schools / Support Areas of the University Group.

• External Suppliers and other education institutions.

3. Person Specification

ATTRIBUTES	ESSENTIAL	ADVANTAGEOUS
Education & Qualifications	• A degree relevant to IS/IT. • Or full membership of an IS/IT professional body. • Or substantial experience in lieu of the above which demonstrates a professional approach to IS/IT development.	• CCNP. • ITIL. • CISSP.
Knowledge & Experience	• Understanding global / local business differentiation. • Knowledge of customer behaviours, needs and expectations. • Digital business literacy. • Tracking of emerging trends.	• Understanding of business organisation, politics and culture. • Ability to understand related industries. • Higher Education experience.
Interpersonal Skills	• Results orientation. • Collaboration / teamwork. • Resolving conflicts and problems. • Adaptability. • Openness to learning. • Decisiveness. • Accountability. • Communication, listening and information gathering. • Creative and innovative thinking. • Influencing and persuading.	• Conceptual thinking. • Strategic thinking. • Leading, inspiring and building trust.
Job-related Skills, Abilities & Competencies	• Supplier management. • Integrating solutions. • Understanding digital technologies. • Understanding existing systems and technology. • Problem solving. • Voice and data networking. • LAN/WAN infrastructure. • Cyber-security within network technologies.	• Public cloud infrastructure. • Microsoft Azure. • Amazon Web Services.
Other Requirements	• A flexible approach to working hours and location, including a willingness to travel, locally, nationally or overseas, as required. • Requirement to work on call in order	

	to faciliate the 24*7 support demands of a global organisation. • An appreciation of other cultures; the global reach of the University and its international agenda. • A mature, professional and self-motivated approach to tasks. • Ability to represent IT Services in formal and informal settings. • Able to work under pressure. • Ability to work flexibly and extended hours by agreement to meet tight, fixed deadlines or as required by service imperatives. • Health & Safety Awareness.	