LONDON SCHOOL OF HYGIENE & TROPICAL MEDICINE
PROFESSIONAL SUPPORT SERVICES

ITS

Networks & Telecoms Infrastructure Manager

GENERAL INFORMATION

The London School of Hygiene & Tropical Medicine

The London School of Hygiene & Tropical Medicine is a world-leading centre for research and postgraduate education in public and global health. Our mission is to improve health and health equity in the UK and worldwide; working in partnership to achieve excellence in public and global health research, education and translation of knowledge into policy and practice.

Founded in 1899, the School has expanded in recent years at its two main sites on Keppel Street and Tavistock Place. Our staff, students and alumni work in more than 150 countries in government, academia, international agencies and health services.

Research income has grown to more than £180 million per year from national and international funding sources including UK government and research councils, the European Union, the Wellcome Trust, Gates Foundation and other philanthropic sources. Our diverse research talents, skills and experience, underpin our position as a leader in public and global health. These range from the molecular to the global, the theoretical to the applied, the analytical to the political. Our staff are conducting research in more than 100 countries.

We have 3,300 staff based all around the world with core hubs in London and at the MRC Units in The Gambia and Uganda, which joined LSHTM in February 2018. Our outstanding, diverse and committed staff make an impact where it is most needed - deploying research in real time in response to crises, developing innovative programmes for major health threats, or training the next generations of public and global health leaders and researchers.

Working in partnership is central to achieving our mission. Our strategic collaborations in the UK and across high-, middle- and low-income countries deliver health and socioeconomic benefits across the world, especially in the most disadvantaged communities.

LSHTM is also a member of the M8 Alliance of Academic Health Centers, Universities and National Academies, the Association of Schools of Public Health in the European Region, and the Consortium of Universities for Global Health.

We deliver research-led educational programmes to future health leaders, managers and researchers across the world. We have more than 1,200 face-to-face Master's and Doctoral students, 3,000 studying by distance learning, and 1,000 each year on short courses and continuous professional development. Our free online courses are studied by more than 70,000 participants globally.

LSHTM performs strongly in various global university league tables. In the 2019 CWTS Leiden Ranking LSHTM is ranked the UK's top university for the proportion of academic research with women listed as authors, first in Europe for publishing open access research, and first in Europe and eighth in the world for research impact in sciences (for the proportion of its total publications ranking in the top 10% of most cited research).

In the US News Best Global Universities Ranking 2019, we ranked ninth in the UK overall and 13th in the world in the fields of social sciences and public health. We ranked 27th for medicine in the 2019 QS World University Rankings.

In the 2019 Shanghai World Ranking we placed 201-300 overall and ranked 4th in public health (1st in the UK), 17th in clinical medicine, and 76-100 in human biological sciences. In 2017, the inaugural Center for World University Rankings by Subject placed LSHTM first in the world for tropical medicine research, second for parasitology and seventh for infectious diseases, public, environment and occupational health, and social sciences and biomedical.

LSHTM was named University of the Year 2016 by Times Higher Education and awarded a Queen's Anniversary Prize for Higher and Further Education in 2017 in recognition of our response to the 2014 Ebola epidemic in West Africa. LSHTM does not appear in the Times Higher Education World University Rankings as universities are excluded if they do not teach undergraduates.

We seek to foster and sustain a creative and supportive working environment based upon an ethos of respect and rigorous scientific enquiry. We embrace and value the diversity of our staff and student population and seek to promote equality as an essential element in contribution to improving health worldwide.

LSHTM is one of around 20 specialist institutions that receive institution specific funding from the Office for Students (OfS). This funding recognises the additional costs that LSHTM incurs because of its unique range of teaching, specialist facilities, and the scale of its contributions to national and international agencies.

JOB DESCRIPTION

Job Title: Networks & Telecoms Infrastructure Manager	
Department /Division/Unit: ITS	
Faculty/Professional Service: Academic Services	
Location: 8 Bedford Square	
Reports to: Head of Infrastructure and Architecture Services	
Responsible for: 3 x Network Engineer, 1 x Telecommunications Manager	
Full Time/Part Time/Casual: Full time	**Hours (if less than full time):**
Grade: PSP7	

Job Purpose

Reporting to the Head of Infrastructure and Architecture Services, the Networks & Telecoms Infrastructure Manager is responsible for the maintenance, development and integration of the School's network, telecoms and security infrastructure. They are also responsible for co-ordinating and managing resources within the Networks and Telecoms team.

Leading a team of technical experts, the role holder is responsible for supporting, maintaining and developing the School's physical and active network, telecoms and security infrastructure and the systems that manage and support those environments. S/he is a member of the Networks and Telecoms team, leading and implementing projects to develop the network and the services they integrate with and ensuring that day-to-day support of these services delivers the level of service the School's users and systems depend upon.

They will also lead in architecting and delivering new IT developments and projects within the School with a particular focus on the School's building refurbishment programme and contribute to general technical development and standards as a key member of the IT Services Solution Design Authority.

Principal Duties and Responsibilities

Responsibilities

- Leading and line-managing the Networks and Telecoms team within ITS, this group of technical experts and the services areas they manage, currently four full-time staff on Scale 6.
- Support, maintain and develop the School's core physical and active network, telecoms and security infrastructure and allied systems (including services to support DNS, firewall, radius functionality and external connectivity) and with other members of ITS, ensure service availability within SLAs.
- This entails coherent organisation of information in an audience-relevant manner which is accessible and both technically and legally compliant
- Ensuring 24x7x365 coverage and performance monitoring of critical systems in in place.
- The regular and timely maintenance and upgrading of software infrastructure to ensure the effective running and security of these core systems.

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- Respond rapidly to any service-availability problems and deal expediently with service threats/breaches while keeping your line manager and other stakeholders informed.
- Working in close collaboration with the School's Programme Management Office, lead on the development and implementation of projects, ensuring clients/stakeholders are kept informed at all stages, milestones are implemented to specification and projects completed within agreed deadlines and budget.
- Advise and support users of network services across the School to ensure network connected services are procured, installed and maintained to standards which ensure they are operating effectively without adversely impacting the availability or security of the network infrastructure and its users.
- Lead and manage the technical development and maintenance of the School's network, telecoms and security infrastructure in collaboration with stakeholders within IT Services and across the School, acting as deputy for the Head of Infrastructure and Architecture Services as required.
- Working as an active member of IT Services Change Advisory Board (CAB) and Solution Design Authority (SDA) ensure that new applications meet the School's technical standards and that any change within the Schools IT systems is managed appropriately.
- Establish detailed development project requirements and technical specifications and translate these into effective proposals, specifying creative and efficient solutions
- Manage, maintain and develop the supporting systems that underpin the School's network infrastructure including dns, dhcp, ipam, firewall, radius, logging, and other network management systems.
- Where necessary deputise for the Head of Infrastructure and Architecture Services and assume responsibility for the wider team in his/her absence.

Communications

- General communication with members of the supported functional areas (PMO, Estates, Procurement, etc.), IT Services staff and stakeholders of the systems and platforms that the role supports. This would be done on an as-required basis, most likely daily or more frequently.

- Explanation of systems and procedures to members of the functional areas (PMO, Estates, Procurement, etc.), IT staff and other School staff in general through formal presentations and meetings. Depending on the content or subject this could be daily, but more likely at numerous points during the week.

- Liaison with external contractors and suppliers working as the customer and at times the supplier to deliver timely and appropriate communications to ensure the successful specification, procurement and implementation of new network infrastructure. This will involve active participation in design and site meetings, the design process and the platforms they make use of and communicating effectively to ensure standards are met while working collaboratively to ensure any problems are resolved in a timely manner. The regularity of these interactions is dependent on the project lifecycle, varying from weekly to daily contact for extended periods of time.

- Delivering detailed technical briefings to IT and functional area staff on the use and development of the supported systems. Delivering formal and informal training to stakeholders of the systems, either on a one-to-one basis or to small groups. Ad hoc, likely several times a year.

- Drafts and sends targeted communications to groups of users on behalf of the networks and telecoms team to advise on services and systems. Is able to

summarise and simplify technical and complex information in order to communicate effectively with non-specialists. Depending on the content or subject this could be daily, but more likely at numerous points during the week.

- Produces and maintains technical specification documents, defining network standards that specify the network architecture, system documentation, change logs, etc.; recorded either in standard document format or through web-based collaboration systems. Most likely this is a weekly activity.
- Establishment, maintenance and development of a set or system of stakeholder-focused support documentation, offering a knowledgebase for reference and other self-help materials. An ad hoc, as-required activity whose frequency of recurrence will vary; monthly or more often.
- Research and briefing documents based on the analysis of stakeholder requirements and/or system developments. An ad hoc, as-required activity whose frequency of recurrence will vary; monthly or more often.
- Change and system development log maintenance. Frequency perhaps up to daily.
- Provision of detailed specialist technical advice by telephone and in person frequently involving conveying complex concepts to non-specialists. Depending on the content or subject this could be daily, but more likely at numerous points during the week.
- Liaison with other specialists within the department and across the School in order to resolve complex technical issues for users e.g. Applications and Support Officers, Core Systems and Infrastructure Manager.
- Regularly resolves complex technical enquiries by e-mail and through Service Desk our ITSM tool by establishing the problem and providing detailed step by step instructions in a range of specialist areas.
- Employs specialist knowledge to present complex information in an accessible written format.

Teamwork and Motivation

- Provide clear leadership and management to the Networks & Telecoms team that deliver and support the core network, telecoms and security infrastructure, ensuring effective line management through the setting of team and individual objectives, appraisals and the provision of staff development
- Organise, co-ordinate and delegate where appropriate the team's task and work package list according to pressures of work, priorities and project activities, both internally and externally to the team. This would be an activity done on an at least weekly, but more likely daily basis.
- Develop and encourage a close working relationship across the team and with the stakeholders across the School (particularly the PMO and Estates)
- Foster and build strong relationships with all members of the Networks & Telecoms team, and the wider IT Services team
- Work closely with the Head of Infrastructure and Architecture Services in order to plan work on day-to-day and project-based initiatives, contributing flexibly to the requirements of the role and the goals of the team
- Facilitate knowledge sharing within the team by providing and initiating training in the core technologies the team supports and the services that underpin them
- Contribute to the recruitment process of new staff
- Carry out duties core associated with line-management e.g. appraisals, induction schedules, probationary reviews, mentoring.

Liaison and Networking

- Liaise with key business partners across the School in relation to the development of systems infrastructure, integration and solutions, playing the lead role in taking these systems forward, in conjunction with appropriate support & resources from the PMO (Project Management Office).

- Liaison with key staff and business partners of the supported functional areas in order to act as a point of contact on all technical and system matters relating to the network, telecoms and security infrastructure. This would also involve providing advice, direction and training support

- Liaison with members of IT Services as required to contribute to strategic and operational planning and to facilitate information-sharing and exchange and to expedite problem-solving

- Collaborate on projects which require inter-team and inter-departmental working

- Act as a point of contact for both internal and external auditors of the supported infrastructure systems

- Liaison with external suppliers on matters of development, planning and support, act as a primary point of contact for matters relating to the core systems and infrastructure. Liaison with and contribution to internal and external user groups supporting these systems. This will require collaboration with external colleagues in order to contribute and influence the direction and the development of the supported systems.

Service Delivery

- Devise, implement, manage and maintain the School's core network, telecoms and security infrastructure
- Design, implement, support and maintain solutions to integrate these services in to current and any future School systems
- Ensure that the Networks & Telecoms team reacts in a timely and effective manner to requests for problem resolution and development tasks
- Monitor problem resolution and support request fulfilment against agreed standards and KPIs e.g. by ensuring timely resolution of Helpdesk tickets
- Develop these core systems and their integration potentialities; providing the strategy & planning for these systems in the context of wider IT and School strategy
- Act as a primary point of contact both inside and outside the IT Services team for all matters relating to network, telecoms and security infrastructure and their associated systems
- Capture stakeholder requirements for changes and enhancements to core network, telecoms and security infrastructure. Understanding the users' needs is key to delivering a tailored and efficient solution
- Assess future directions and developments required for the core systems. Plan for and advertise changes and enhancements to the systems
- System monitoring, diagnosis and problem resolution

Decision Making

- Work with stakeholders of all core network, telecoms and security infrastructure in order to form impactful decisions about their future development and direction. Initiate and formulate development policy and planning that will provide for ongoing system enhancement and development

- Employs specialist technical knowledge and understanding to decide on a case-by-case basis which technologies and products should be used when maintaining and developing the network, security and telecoms infrastructure
- Manage the planning and tracking of the core network and telecoms team budget, ensuring that systems are effectively maintained and resourced over their lifecycle
- Contribute to the maintenance and development of technical design and standards across solutions delivered by IT Services to the School as an active member of the Solution Design Authority
- Plan, monitor and direct the work regimes of the Network Engineers and Telecoms Manager, factoring support requirements, project work and current resourcing and pressures
- Plan and provide direction for regimes to ensure the patching and upgrade of all systems the Networks & Telecoms team support, to ensure the service availability and security of those systems.
- Write reports and/or participate in meeting schedules to provide input to the decision-making process that will affect future developments to *all* supported systems and their interconnected interfaces
- Contribute to IT Services strategy via appropriate line-management channels

Planning and Organising

- Under the direction of the Head of Infrastructure and Architecture Services, and in conjunction with the Project Management Office (PMO), initiate, plan, manage and drive through projects relating to the development of the network, telecoms and security infrastructure. This is an important requirement of the role, ensuring that systems are continually assessed and developed
- On a day-to-day, week-to-week and longer basis organise the Networks & Telecoms team work regime, planning time and resources to achieve objectives in a timely and agreed manner, as well as ensuring business-as-usual activities are covered effectively
- Act as the project manager for larger network & telecoms systems infrastructure projects, assess the business case for change and plan the project according to agreed principles and guidelines. This requires use of designated documentation and communications frameworks, the effective use of resources available (both internal and external to the team) and the monitoring of progress.
- Provide input to longer term planning frameworks, such as the IT Services strategic plan, in order to ensure that all network, telecoms and security infrastructure is effectively represented and catered-for within the medium to longer term timeframe
- Ensure the maintenance of records and detailed documentation of all integrated systems to facilitate the testing, management, installation and configuration of these services

Initiative and Problem Solving

- A key area of the role is to capture stakeholder requirements and analyse these in order to formulate and devise future developments and strategy relating to the network, telecoms and security infrastructure. This may involve not only information gathering (directly or from other members of the team), but in-depth analysis of system & business processes. This will require the use of comprehensive techniques to analyse the impact of these changes on the existing environment and the ability to devise and provide pertinent and innovative solutions and mitigations that support and develop the system and maintain wider network and service reliability.

- The role requires that problem-solving & fault-finding, as well as general support, are core components of the support of the network, telecoms and security infrastructure. This would manifest itself on a day-to-day basis as general and technical administrative tasks and the decisions to be made as and when to apply solutions. In-depth technical expertise is required in all areas of the infrastructure and allied services this team supports, both from a physical and active perspective, utilising proactive reporting and alerting tools and the analysis of system logs and monitoring facilities. This applies individually and through the general approach of the team as a whole

- The role would be expected to devise innovations that could be applied to the supported network, telecoms and security infrastructure, either from a technical or business process point of view. These would need to be perceived, considered, aligned and developed within the wider strategic framework, both at a team and School level.

- The role holder is responsible for the ensuring that service uptime across core network, telecoms and security infrastructure is maintained to as high a degree as is possible through the comprehensive testing and development of resiliency within each service area and the approach taken to maintenance, including appropriate change-control procedures. They are required to devise, and test on a regular basis, disaster recovery solutions, to guarantee the rapid restoration of services in the event of failures.

Analysis and Research

- Capturing stakeholder requirements and analysis of these in order to formulate future developments, policy and strategy relating to all the supported network, telecoms and security infrastructure and allied services

- Responsible for the devising and implementation of policies, standard procedures and best-practise in relation to the use of all the supported network, telecoms and security infrastructure and allied services

- Maintain a broad understanding of the available technologies and the commercial marketplace in order to work out the best way to specify, procure and implement potential solutions and/or developments

Sensory and Physical Demands

- Use of computer equipment in an office environment
- Manual handling and working at height as required to install and maintain network equipment

Work environment

- Work in a standard office environment
- Work in the School's main datacentres, likely to be on a weekly or fortnightly basis
- Work on a building site to participate in the planning, supervising and carrying out of works to deploy new network infrastructure. The regularity of this activity is dependent on the project lifecycle, varying from monthly to daily contact for extended periods of time.

Pastoral Care and Welfare

- Responsible through the appraisal process for members of the Networks & Telecoms team for the direction and influence of personal development and training

- Mutual support of colleagues, leave planning

Team Development

- Mentoring and coaching of team members in support of technical and personal development goals
- Providing direction for the Networks & Telecoms team, in resource & task planning, approach, and behavioural & procedural service support standards
- Responsible for the appraisal of members of the Networks & Telecoms team, including support and direction of personal development plans and training opportunities
- Contribute to the induction of new colleagues within IT Services on the scope, use of the supported systems and facilities
- Provide one-to-one and/or small group training for direct colleagues or other team members on support of business and integration systems

Teaching and Learning Support

- Deliver knowledge sharing presentations to groups of all sizes on the development of the networks, telecoms and security infrastructure and their supporting systems.
- Be responsible for the establishment of a comprehensive library of supporting documentation that fully describes the network, telecoms and security infrastructure. To act as a resource for colleagues within ITS and to stakeholders across the School in the procurement and support of the systems they operate.

Knowledge and Experience

- Hold relevant professional qualifications or equivalent experience
- Experience of supporting Network, Telecoms and Security infrastructure deployed in HE and/or FE
- Experience of procuring, supporting, administering and configuring enterprise wide Network, Telecoms and Security infrastructure.
- Significant knowledge of the configuration and administration of network routing protocols to support enterprise networks
- Significant knowledge of the configuration and administration of firewall and security infrastructure to support enterprise networks
- Experience of working with and/or integrating cctv, access control, IoT, audio-visual and other building/campus systems with network infrastructure and systems
- Experience of the planning, procurement and deployment of new data cabling services within campus and data centre networks
- Experience of the project lifecycle involved in designing and deploying network infrastructure to support new build and refurbishment projects
- The PRINCE2 project management methodology
- Experience of managing and planning budgets
- The ability to think logically and to track faults methodically and resolve them
- A focus on results – consistent delivery of projects on time and to specification
- The ability to effectively manage a small specialist technical team, including time and resource planning, and the cover & division of responsibilities
- An ability to identify teaching and business requirements and successfully apply these to the development of the supported services and facilities; combined with a

strong customer focus – demonstrating a thorough understanding of customer needs

- Well-developed communication skills: verbal, written and via presentations. The ability to sell ideas or benefits and build persuasive arguments based on data, logic and the objective merits of solutions

- Excellent interpersonal skills, including the ability to establish effective working relationships with staff and students from a wide variety of backgrounds; the ability to communicate technical issues to non-technical users effectively

Generic duties and responsibilities of all LSHTM employees

This job description reflects the present requirements of the post but may be altered at any time in the future as duties and responsibilities change and/or develop providing there is full consultation with the post-holder.

The post-holder will carry out any other duties, tasks or responsibilities as reasonably requested by the line manager, Dean of Faculty, Head of Department or Director of Professional Service.

The post holder will be responsible and accountable for ensuring all School policies, procedures, Regulations and employment legislative requirements are adhered to including equality and diversity and health and safety.

This job description is not a definitive or exhaustive list of responsibilities but identifies the key responsibilities and tasks of the post holder. The specific objectives of the post holder will be subject to review as part of the individual performance review (appraisal) process.

PERSON SPECIFICATION

This form lists the essential and desirable requirements needed by the post holder to be able to perform the job effectively.

Applicants will be shortlisted solely on the extent to which they meet these requirements.

Job Title: Networks & Telecoms Infrastructure Manager	
Department/Division: ITS	

Competency	Evidence	E/D	A/I
Education, Qualifications and Training	Hold a relevant degree	E	A
	Hold relevant professional qualifications or have equivalent experience	E	A
	Hold a relevant project management or IT services management qualification e.g. PRINCE2, ITIL	D	A
Experience	Managing a team, including time and resource planning, and the cover & division of responsibilities	E	A/I
	Significant experience of project management and delivery in a complex environment	E	A/I
	Significant experience of managing an enterprise network and telecoms infrastructure	E	A/I
	Experience of successful stakeholder management	E	A/I
	Working within a customer support role and providing excellent standards of customer care.	E	A/I
	Working in a public sector/educational environment	D	A
Technical skills	Significant experience and technical capability to directly manage and develop the active elements of an enterprise wired and wireless network environment	E	A/I

	The experience and technical capability to manage the onward connectivity from an enterprise network and the security infrastructure and risks associated with that	E	A/I
	Experience of working within an enterprise setting directly managing Juniper Networks switching and routing, HPe Aruba wireless infrastructure and Palo Alto firewall infrastructure	D	A/I
	Experience of managing the installation of twisted pair and fibre data cabling services through the entire procurement lifecycle from specifying standards to managing and signing off on installation	E	A/I
	Significant experience of working directly to investigate and resolve issues relating to network failure and performance degradation in an enterprise network environment	E	A/I
	Experience of manging dns, dhcp, ipam, radius and network management services within an enterprise network environment	E	A/I
	Working knowledge of directory systems such ldap, AD, eDirectory	D	A
	Experience of managing Windows and linux server operating systems within a virtualised enterprise environment	E	A/I
	Experience of managing enterprise telephony services to deliver on premise, remote and mobile services	E	A/I
Personal qualities	Excellent interpersonal skills and the ability to build and sustain effective professional working relationships within IT and wider business environment	E	A/I
	Strong focus on customer care, including the ability to explain technical information to non-specialists	E	A/I
	Ability to manage priorities, deadlines, and time critical situations for multiple projects and clients	E	A/I
	An ability to identify and prioritise business requirements and successfully deliver them within the framework of IT development practices	E	A/I

E-Essential: Requirement without which the job could not be done
D-Desirable: Requirements that would enable the candidate to perform the job well

ASYLUM AND IMMIGRATION

The School will comply with current UKVI legislation, which requires all employees to provide documentary evidence of their legal right to work in this country prior to commencing employment. Candidates will be required to email a copy of their passport (and visa if applicable) to HR prior to their interview and if appointed will be asked to bring the original documents in to be copied and verified before their start date.

Applications from candidates who require sponsorship to work in the UK will be considered alongside other applications.   Applicants who do not currently have the right to work in the UK will have to satisfy UK Visas & Immigration regulations before they can be appointed.

Further information about Sponsorship and eligibility to work in the UK, can be found at:
https://www.gov.uk/guidance/immigration-rules/immigration-rules-appendix-skilled-worker

Date last reviewed/revised: 17/08/2022 PR