Royal Devon University Healthcare NHS Foundation Trust

JOB DESCRIPTION

JOB DETAILS	
Job Title	Infrastructure Engineer
Reports to	Solution Architect
Band	7 – Subject to matching
Department/Directorate	Digital Services

JOB PURPOSE

The Infrastructure Engineer will be part of the EPR ECSA team, reporting to the Solution Architect, and be responsible for the implementation and administration of the underlying infrastructure and platforms that provide the foundation for the secure and safe operation of all Trust systems, specifically the EPR.

The EPR forms the core of the Trust's clinical facing digital systems and is therefore a critical core service. Maintaining high levels of availability and performance are a key to the success of the solution.

The post holder will be part of a dedicated team focussed on the EPR platform and infrastructure, including the application delivery platform, web servers, printing infrastructure, virtualisation, and storage. Close communication with the other infrastructure and BAU teams is critical to ensuring that the environments and subsystems are appropriately supported and managed.

The post holder will be required to be proactive in terms of responding to issues, engaging in project planning exercises, collaborating across the technical and config team as well as with the suppliers, automating processes where possible, and participating in DR and business continuity tests.

KEY RESULT AREAS/PRINCIPAL DUTIES AND RESPONSIBILITIES

- Installation and management of the various infrastructure and platform elements which provide the foundations of the Trust solutions. Including, but not limited to, application deployment platforms, web servers, database servers, data warehouse environment, backup system, storage, virtualisation platform, print server management and end user computing.
- Proactive monitoring and management of the warranted environment to ensure high availability to the required standard (99.99%).
- Delivery of suitable reporting mechanisms, such that the organisation can be assured of the system meeting the agreed high availability and performance requirements.
- Manage that reporting and monitoring actively to analyse root causes for problems and to implement plans to remediate them.
- Implementation of warranted environment upgrades to an agreed standard.
- Provision of ongoing BAU support for the system both in-hours and out-of-hours as part of the on-call team.
- Be a subject matter expert on assigned technologies.
- Continual analysis and monitoring of the services under ownership to create and implement improvement plans.
- Ensure that Business Continuity plans and Disaster Recovery plans are documented and tested regularly.
- Ensure that delivered services comply with National and Local standards as detailed in the Data Security and Protection Toolkit (DSPT), ISO27001, BS7799, Cyber Essentials and Information Governance, and risk assess non-compliance.

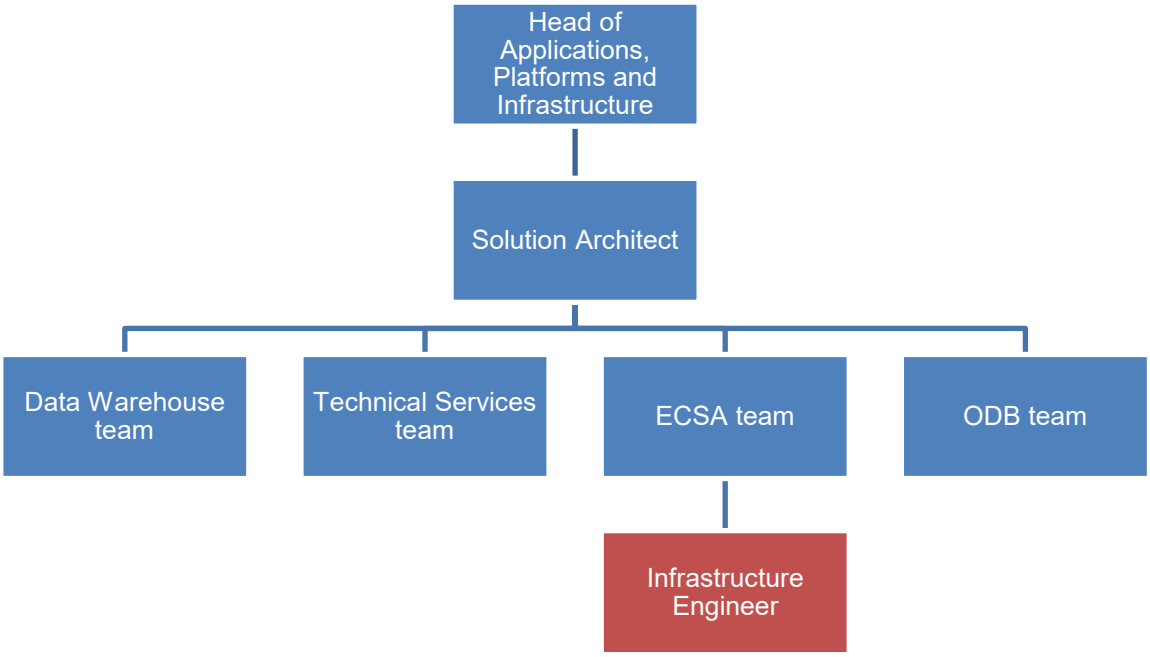
KEY WORKING RELATIONSHIPS

No. of Staff reporting to this role: 0

The post holder is required to deal effectively with staff of all levels throughout the Trust as and when they encounter on a day-to-day basis. In addition, the post holder will deal with the wider healthcare community and external organisations. This will include verbal, written and electronic media.
Of particular importance are working relationships with:

Internal to the Trust	External to the Trust
• Divisional Directors • Trust Service Managers • Information Asset Owners • Digital Services Division • Finance Department • Procurement Department • Internal Committees and Governance meetings • Trust User Base	• External Clients and Partners • 3rd Party Service and Solution Providers • NHS Digital and NHSX • NHS England and NHS Improvement • Colleagues in other NHS and Social Care organisations

ORGANISATIONAL CHART



FREEDOM TO ACT

- The post holder will deliver an agreed infrastructure framework, using highly specialised technical skills and knowledge to meet the requirement.
- Be responsible for own area of work, working autonomously to plan and organise workload to meet multiple and often conflicting deadlines.
- Work in a complex and unstructured multi-disciplinary environment, be able to act with minimum guidelines and set standards for others.
- Be a lead specialist in the EPR infrastructure, using own initiative whilst resolving day to day issues.
- Works to achieve agreed objectives and is given freedom to do this working within broad professional or organisational policies.
- The post holder will be expected to make informed decisions in the absence of other senior colleagues whilst undertaking out of hours on call support.
- The post holder will be expected to follow national and local policies and guidelines and respond to guidance by adjusting practice and procedures.

COMMUNICATION/RELATIONSHIP SKILLS

- Establish effective relationships and communications between the Trust's digital teams ensuring

that all parties are aware of relevant processes and procedures.
- Ensure that change control procedures are embedded into all digital delivery activity.
- Effectively translate highly technical aspects into understandable concepts and language for other members of the Digital Services Division and programme teams.
- Persuade and negotiate, where required, with BAU teams to ensure they understand the requirements of databases and their integrated solutions.
- The post holder will provide and receive highly complex and sensitive information. They will be a skilled communicator with the ability to construct and deliver concise yet insightful communications on complex and sensitive matters related to their role, for dissemination to diverse audiences.
- Demonstrate/present complex build work (Epic infrastructure) in an easy-to-understand format to individuals and/or groups of staff, including senior and director level.

ANALYTICAL/JUDGEMENTAL SKILLS

- Create, understand, and follow processes to ensure successful execution of critical maintenance procedures.
- Ranging from highly complex to simple, analyse where tasks can be automated or scripted to ensure consistency and efficiency and write scripts and processes to implement that automation.
- Analyse problems in an agile and highly logical manner to troubleshoot technical failures.
- Act as an escalation point for complex technical issues, requiring focus and concentration across the organisation.
- Be an expert in the application areas, troubleshoot problems and address questions from end users regarding the application.
- Using specialist knowledge and experience, act upon incomplete information to make inferences and support decision making.
- Assist other engineers with complex build and have a skilled knowledge base within the infrastructure.

PLANNING/ORGANISATIONAL SKILLS

- Plan and deliver handover sessions for the BAU teams to promote understanding of the solution and provide for effective support following the implementation.
- Actively manage system monitoring reports to analyse root causes for problems and to implement plans to remediate them.
- Engage in capacity planning exercises with internal teams at all levels, as well as Epic, to ensure availability and performance standards are not compromised by planned changes.
- Plan and implement ongoing upgrades and updates to the Trust EPR environments over short-, medium- and long-term timeframes, align and adjust plans and resource requirements accordingly, in coordination with other teams, and ensuring that access is not impacted.
- Support the implementation and on-going management of complex projects, services and initiatives in accordance with the agreed priorities of the team.
- Ensure delivery of agreed work to tight deadlines, prioritising own workload.
- Maintain schedules and raise any risks or issues to the appropriate level.

PATIENT/CLIENT CARE

- Patient contact is incidental.

POLICY/SERVICE DEVELOPMENT

- Working with the Solution Architect to:
    - Produce technical architecture documents that define the EPR environments.
    - Produce SOPs for the operation of the warranted environment.
    - Produce SOPs for backup, recovery and restoration of the EPR environments.
- Writing complex test plans to review and adapt the systems/ applications.

FINANCIAL/PHYSICAL RESOURCES

- Responsible for the secure and safe operation of assigned infrastructures in the Trust warranted environment such as web servers, database servers, data warehouse environment, print servers.

HUMAN RESOURCES

- Provide infrastructure support and guidance to members of the BAU team and provide technical guidance to less experienced personnel. Serve as a point of contact for resolution of complex application problems.
- Be proactive in liaising with other staff and teams to ensure that the EPR service is stable and well maintained.
- Technical competence will be required to be maintained through on-going attendance of conferences and courses.
- Write process and procedural documentation, deliver training, and provide support to the team where they require assistance to resolve issues.

INFORMATION RESOURCES

- Analyse and present performance monitoring data to provide assurance to the organisation and evidence requirements to influence service improvements.
- Document and maintain processes, procedures, and architectural documentation related to the solution.
- Ensure the Trust warranted environment is consistent with BAU asset and maintenance contracts registers.
- Support the Information Governance Manager in delivering the DSPT requirements relating to IT infrastructure.
- Ensure that the underlying infrastructure for the Epic system is designed, developed and configured to meet best practice administrative and digital working practices to achieve strong cyber security, availability and performance standards, whilst working to relevant legal and regulatory frameworks.
- In addition to the core duties of the role, be a lead specialist for the core infrastructure underpinning Trust digital systems.
- Plan, design and build elements of the infrastructure, which include major process redesign.
- Be custodian of the EPR infrastructure and system build for the core Epic system.
- Produce progress and exception reports to support monitoring of systems, data flows, and system health.
- Develop and maintain coherent, up-to-date and concise documentation using a range of tools and techniques, capturing complex information for later review, analysis and troubleshooting.

RESEARCH AND DEVELOPMENT

- Technical research will be required on an ad hoc basis.
- Regular audits of server and database licensing will be required to ensure compliance with legislation and regulations.
- Maintain and regularly test failover procedures to ensure high availability.

PHYSICAL SKILLS

- Advanced keyboard skills, with the knowledge and use of tools to extract, analyse, manipulate and maintain complex data sets.

PHYSICAL EFFORT

- Desk based job requiring sitting and/or standing for long periods of time.
- Lift and carry IT equipment on a rare basis.
- Travel to site as onsite work may be required on occasion

MENTAL EFFORT

- Frequent concentration is required for both short and extended periods of time when working with the team on tickets, developing policies and processes, and analysing technical solution designs for new systems.
- Maintain high levels of concentration whilst being interrupted to resolve both technical questions and system problems.

EMOTIONAL EFFORT

- Occasional need to work with people external to the team and understand their concerns.

WORKING CONDITIONS

- Occasional need to work within the data centre which is a noisy environment.
- Frequent VDU use.

OTHER RESPONSIBILITIES

Take part in regular performance appraisal.

Undertake any training required to maintain competency including mandatory training, e.g. Manual Handling

Contribute to and work within a safe working environment

You are expected to comply with Trust Infection Control Policies and always conduct him/herself in such a manner as to minimise the risk of healthcare associated infection

As an employee of the Trust, it is a contractual duty that you abide by any relevant code of professional conduct and/or practice applicable to you. A breach of this requirement may result in action being taken against you (in accordance with the Trust's disciplinary policy) up to and including dismissal.

You must also take responsibility for your workplace health and wellbeing:

- When required, gain support from Occupational Health, Human Resources or other sources.
- Familiarise yourself with the health and wellbeing support available from policies and/or Occupational Health.
- Follow the Trust's health and wellbeing vision of healthy body, healthy mind, healthy you.
- Undertake a Display Screen Equipment assessment (DSE) if appropriate to role.

GENERAL

This is a description of the job as it is now. We periodically examine employees' job descriptions and update them to ensure that they reflect the job as it is then being performed, or to incorporate any changes being proposed. This procedure is conducted by the manager in consultation with the jobholder. You will, therefore, be expected to participate fully in such discussions. We aim to reach agreement on reasonable changes, but if agreement is not possible, we reserve the right to insist on changes to your job description after consultation with you.

Everyone within the Trust has a responsibility for, and is committed to, safeguarding and promoting the welfare of vulnerable adults, children and young people and for ensuring that they are protected from harm, ensuring that the Trusts Child Protection and Safeguarding Adult policies and procedures are promoted and adhered to by all members of staff.

At the Royal Devon, we are committed to reducing our carbon emissions and minimising the impact of healthcare on the environment, as outlined in our Green Plan available on our website. We actively promote sustainable practices and encourage colleagues to explore and implement greener ways of working within their roles.

PERSON SPECIFICATION

Job Title	Infrastructure Engineer

Requirements	Essential	Desirable
QUALIFICATION/ SPECIAL TRAINING		
• Degree in a relevant subject or extensive equivalent experience	X	
• Professional qualification at masters level or equivalent experience to Masters level (gained at senior digital/management level)	X	
• Epic Certification in appropriate modules Epic certification must be achieved within 6 months of start date. Training may be undertaken in the USA and therefore the ability to travel to this destination is essential.	X	
KNOWLEDGE/SKILLS		
• Expert Windows server skills in Windows Server 2019 and above.	X	
• Excellent technical knowledge and practical experience of SAN technologies.	X	
• Excellent technical knowledge and practical experience of server virtualisation (VMware) technologies	X	
• Excellent scripting knowledge with a particular focus on the creation of reusable scripts for automating routine tasks	X	
• Knowledge of SQL Server administration in a critical operational environment		X
• Excellent documentation with the ability to convey technical information to infrastructure teams for support purposes	X	
• Knowledge of NHS Information Standards and their application in technical infrastructure		X
• Uses a combination of general and specialist IT knowledge and understanding to optimise the application of existing and emerging digital technology	X	
• Application of appropriate theoretical and practical methods to the analysis and solution of digital problems	X	
• Ability to analyse and interpret highly complex information	X	
• Advanced IT skills (MS Office applications)	X	
• Understanding of ITIL processes		X
• Highly effective interpersonal and communication skills when dealing with highly complex information	X	
• Able to prioritise tasks, work on own initiative and manage own workload	X	
• Motivational skills to encourage collaborative working to improve services where there may be resistance to change	X	
EXPERIENCE		
• Experience of managing mission critical systems to a high level	X	
• Experience in designing, implementing and managing resilient and scalable critical systems	X	
• Experience of managing change in a technical environment and its impact upon end users in a critical, high availability environment	X	
• Experience of the IT security and other relevant areas of NHS Information Governance and DSPT requirements	X	
• Experience of fostering knowledge of complex systems and information to technical teams for on-going support purposes	X	
• Proven experience in the ability to interact with personnel at all levels both clinical and non-clinical within healthcare	X	

• Experience of managing Active Directory and Data Centre environments in a critical environment	X	
• Evidence of managing change in a technical environment and its impact upon users and patients	X	
PERSONAL ATTRIBUTES		
• Demonstrate a personal commitment to professional standards, recognising obligations to society, professional institutions and the environment		X
• Be enthusiastic, responsive to new demands, willing to learn new skills and welcome change	X	
• Open and able to evaluate information to develop proposals for improvement	X	
• Connects with colleagues to collaborate effectively and recognise different organisational structures and cultures	X	
• Shares the service vision in a clear, consistent and honest way, inspiring staff to enhanced performance	X	
• Innovative, able to problem solve and make decisions	X	
• Self-motivated and able to work on own initiative and take responsibility for decisions	X	
• Personal credibility, with ability to quickly gain the confidence of others	X	
• Honesty, openness and integrity	X	
• Team player	X	
• Pragmatic	X	
• Logical approach to problem solving	X	
• Able to work in a pressurised environment.	X	
OTHER REQUIRMENTS		
• Flexible to the requirements of the role	X	
• There will be a requirement to work evenings and weekends to meet deadlines and to participate in a 24/7 and/or on call rota	X	
• Requirement to travel to other sites as required	X	
• Ability to travel independently	X	

WORKING CONDITIONS/HAZARDS		FREQUENCY (Rare/ Occasional/ Moderate/ Frequent) R	O	M	F
Hazards/ Risks requiring Immunisation Screening					
Laboratory specimens	N				
Contact with patients	N				
Exposure Prone Procedures	N				
Blood/body fluids	N				
Hazard/Risks requiring Respiratory Health Surveillance					
Solvents (e.g. toluene, xylene, white spirit, acetone, formaldehyde and ethyl acetate)	N				
Respiratory sensitisers (e.g isocyanates)	N				
Chlorine based cleaning solutions (e.g. Chlorclean, Actichlor, Tristel)	N				
Animals	N				
Cytotoxic drugs	N				
Risks requiring Other Health Surveillance					
Radiation (>6mSv)	N				
Laser (Class 3R, 3B, 4)	N				
Dusty environment (>4mg/m3)	N				
Noise (over 80dBA)	N				
Hand held vibration tools (=>2.5 m/s2)	N				
Other General Hazards/ Risks					
VDU use (> 1 hour daily)	Y				X
Heavy manual handling (>10kg)	Y	X			
Driving	Y	X			
Food handling	N				
Night working	Y		X		
Electrical work	N				
Physical Effort	Y	X			
Mental Effort	Y				X
Emotional Effort	Y		X		
Working in isolation	Y				X
Challenging behaviour	N				