

**Job Title**: Lead Cloud Infrastructure Engineer

**Department:** Digital, Technical Delivery

**Reports to:** Principal Operations Manager

**Direct Reports:** 2

**Location:** Mansfield,Activity Based On-Site

**Contract Type:** Permanent

**Grade:** CA5+

**Main purpose of the job**

* Configure, manage, implement, monitor and optimise (technically, operationally and financially) the Authority’s AWS cloud computing services, in line with industry practice and government standards.
* Provide technical leadership for the on-going management and migration of on-premise infrastructure services to the cloud, and support the wider Digital programme, providing thought leadership in your areas of expertise.
* Support your technical peer group in championing the use of cloud native and open source technologies, adopting a DevOps culture, agile working practices and a modern standards approach to automation and testing.
* Provide technical leadership in your areas of specialism, supporting the Technical Leads, Architects and the Digital leadership team
* Ensure the ongoing security, confidentiality, integrity, availability and recoverability of Digital services in accordance with business KPIs and OLAs.

**Responsibilities**

**Specific**

* Define, maintain, improve and optimise the design, architecture and security of the Authority’s cloud computing platforms.
* Support the evaluation, implementation and migration to cloud computing platforms.
* Seek out opportunities arising from the adoption and integration of new computing technologies.
* Champion, develop and support continuous integration and continuous development (CI/CD).
* Deliver high quality infrastructure as code.
* Support complex, operational databases using various technologies and platforms.
* Employ a data driven strategy to operational activities, seeking out efficiencies through automation.
* Ensure the ongoing secure and economic operation, confidentiality, integrity and availability of cloud and Linux based on-premise IT platforms.
* Assist with the architectural design and persistence of a secure, on-premise and cloud computing, network configuration.
* Manage environments and systems through effective technology selection, load balancing and performance tuning.
* Ensure that system architecture provides appropriate availability, resilience and capacity matched to business need.
* Champion a DevOps culture and collaborative, agile working practices performing incident, problem, change and configuration management activities in accordance with continual service improvement processes.
* Assist with the effective support, maintenance and management of on-premise infrastructure services prior to their cloud replacement, migration or replacement.
* Demonstrate a detailed understanding of the principles, techniques and configuration of backup and recovery services in accordance with business continuity and disaster recovery requirements.
* Ensure that IT services meet stakeholder needs, are secure, and meet both industry best practice and mandated compliance standards.
* Support the Enterprise and Solutions Architect, effectively engaging in working groups and forums on technical and architectural matters.

**Team Lead**

* Lead and develop the Cloud Infrastructure Engineering (AWS) team (including in-house and third party engineers) to ensure that an effective and sustainable Cloud support regime is developed and maintained.
* Coach and mentor, lead and motivate, individuals to deliver high performance whilst fostering and encouraging a culture of customer focus, collaboration, innovation, automation efficiency, continual improvement and change.
* Ensure the timely setting and successful completion of team objectives and team management related administration tasks.
* Ensure consistency of approach by team members, promote the sharing of good practice across the team and drive positive customer service principles across team activities.
* Ensure the continuing professional development of team members through the effective identification, tracking, completion and documentation of training, skills, and knowledge transfer.

**General**

* Act in line with the behaviours and values of the organisation
* Manage your own performance to be accountable for meeting individual, team and corporate objectives
* Act in accordance with the Scheme of Delegation and ensure propriety and regularity in the handling of public funds
* Actively demonstrate the Authority’s customer service standards expected of your role
* Follow and contribute to the improvement of operational and team processes and procedures
* Assist with the preparation and delivery of the team’s objectives, budgets and financial records
* Identify opportunities and implement change leading to team development, system improvement and ensuring good value for money
* Maintain and develop positive stakeholder relationships in order to promote the Authority and assist it to meet its objectives
* Support research and development projects
* Ensure that the Authority’s statutory responsibilities are effectively discharged
* Carry out any further reasonable requests from your line manager

**Competencies Level**

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| --- | --- |
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| **Seeing the bigger picture** - has an in-depth understanding and knowledge of how the role fits with and supports The Coal Authority’s business priorities | **5** |
| **Changing and improving** - responsive, innovative and seek out opportunities for continuous improvement | **6** |
| **Making effective decisions** - objective; uses sound judgement, evidence and knowledge to provide accurate, expert and professional advice in a timely manner | **6** |
| **Leading and communicating** - leads from the front and communicates with clarity, conviction and enthusiasm | **6** |
| **Collaborating and partnering** - creates and maintains positive, professional and trusting working relationships with a wide range of people, within and outside The Coal Authority, to achieve results | **5** |
| **Building capability for all** - has a strong focus on continuous learning for self, others and the organisation | **5** |
| **Achieving commercial outcomes** - has a commercial, financial and sustainable mind-set to ensure all products and services deliver added value and stimulate growth | **5** |
| **Delivering good value for money** - achieves a good mix of quality and effectiveness for minimal cost and to improve return on investment | **5** |
| **Managing a quality service** - plans, organises and manages their time and activities to deliver a high-quality customer experience | **5** |
| **Delivering at pace** - delivers timely performance, with energy, and taking responsibility and accountability for high-quality outcomes | **5** |

**Person specification**

**Job Title:** Lead Cloud Infrastructure Engineer **Department:** Digital

|  | **Essential** | **Desirable** |
| --- | --- | --- |
| **Qualifications and Training** | * Educated to degree level in Information Technology, Computer Science or similar**Note:** Relevant HND and/or an extensive, proven track record in cloud computing systems administration will be considered in place of degree level qualification
* AWS training and certification: Foundational, Associate and Professional certifications
 | * Azure/Google professional training and certifications
* Linux/Red Hat Certified Engineer/Administrator
* Cisco certification/s
* Storage administrator professional certification/s
* Backup administrator professional certification/s
* Microsoft MTA, MCSA, MCSE
* VMWare Certified Professional
* ITIL
* Any other formal IT qualifications/membership of British Computer Society or similar professional body
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| **Experience and Knowledge** | **Cloud native technical skills – experienced in the effective configuration and operation of:** |
| * Ansible
* Containerisation (Docker, Podman)
* Gitlab CI/CD pipelines
* Gitlab
* Grafana
* Kubernetes
* Packer
* Prometheus
* Scripting languages (Bash, Powershell, Python)
* Terraform
 | * Any other equivalent cloud native approaches, skills and technologies
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| **Skills and Abilities****Skills and Abilities** | **Demonstrable understanding of secure IaaS and PaaS in a major public cloud provider (AWS preferred, others considered):** |
| * Account and event logging and auditing
* Data migration
* Database administration
* High availability, backup and disaster recovery
* Identity access management
* Infrastructure as code
* Monitoring and alerting
* Resource utilisation reporting, analysis and cost management
* Scalable compute and storage
* Software defined networking
* Well Architected Frameworks

**AWS services:*** CloudTrail
* CloudWatch
* EC2
* ECS/EKS
* ElastiCache
* IAM
* KMS
* Lambda
* RDS for PostgreSQL
* Route 53
* S3
* Security Hub
* VPC
* Web Application Firewall
 | * Equivalent Azure/Google cloud computing knowledge

**AWS services:*** CloudFormation
* CloudTrail
* GuardDuty
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|  | **Demonstrable technical experience in the creation, management and administration of on-premise ICT infrastructure:** |
| * Backups
* Databases
* Linux/UNIX operating systems
* Monitoring and alerting
* Networking
* Servers
* Storage
 | * Cisco networks
* ESRI ArcGIS
* IBM Business Automation Workflow
* NGINX
* Red Hat Enterprise Linux
* Red Hat JBOSS
* SQL Server
* Veeam backup + replication
* Windows Server
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| **Technical skills, experience and knowledge.** | **A thorough understanding of networking concepts, network security and related technologies, with experience in their implementation and operation:** |
| * Architecture, design, implementation and maintenance of secure, robust and scalable network environments
* Secure integration of on-premise and cloud computing platforms and services
 | * Hands-on experience of the design, implementation and management of security devices including VPN gateways, firewalls and unified threat management devices
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| **Other** | * Champion the use of cloud computing, with a thorough understanding of the key principles of a modern standards approach, able to coach and mentor other members of the team
* Ability to translate logical designs into physical designs
* Create and update support documentation and diagrams
* Ability to work under pressure to tight deadlines, whilst managing a high and varied workload
* Excellent communication and interpersonal skills
* Plan and schedule projects and tasks/packages of work
 | * Experience of working in a software development environment.
* Project management methodologies, terminology and applications.
* Understanding of GIS technology and data sets.
* Financial and budget management
* Manage and record risks, identify effective, mitigating control measures whilst understanding quality control implications
* Manage and hold to account suppliers and contractors whilst effectively managing supplier relationships
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