

Post Title:	DBA - Principal Engineer
Grade:	8

Job Description

2.1. Purpose

The DBA - Principal Engineer will develop, support and manage database products and services deployed on behalf of the University Group.

The DBA - Principal Engineer is responsible for the day to day operation, security and delivery of our database 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 database services.

The DBA - Principal Engineer will provide technical expertise and leadership for the database administration function, in accordance with the overall data architecture. They will participate in continuous improvement analysis and design, as well as the development of database based solutions. At a principal level they will be seen as an expert in their field and are expected, where relevant, to write technical papers and strategies.

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. **(SFIA SCTY 4)**.
2. Actively maintains recognised expert level knowledge in database technologies. Provides definitive and expert advice in the field of database administration. Oversees the provision of specialist advice by others, consolidates expertise from multiple sources, including third party experts, to provide coherent advice to further organisational objectives. Supports and promotes the development and sharing of specialist database knowledge within the organisation. **(SFIA TECH 5)**.
3. Monitors the external environment to gather intelligence on emerging database technologies. Assesses and documents the impacts, threats and opportunities to the organisation. Creates reports and technology roadmaps and shares knowledge and insights with others. **(SFIA EMRG 5)**.

4. Provides advice, guidance and expertise to promote adoption of methods and tools and adherence to policies and standards. Evaluates and selects appropriate methods and tools in line with agreed policies and standards. Implements methods and tools at programme, project and team level including selection and tailoring in line with agreed standards. Manages reviews of the benefits and value of methods and tools. Identifies and recommends improvements. Contributes to organisational policies, standards, and guidelines for methods and tools. **(SFIA METL 5)**.
5. Provides expert guidance in the selection, provision and use of database and data warehouse architectures, software and facilities. Provides specialist expertise in the design characteristics of database management systems (DBMS) or data warehouse products/services. Ensures that physical database design policy supports transactional data requirements for performance and availability. Ensures that data warehouse design policy supports demands for business intelligence and data analytics. **(SFIA DBDS 5)**.
6. Coordinates and manages planning of the system and/or acceptance tests, including software security testing, within a development or integration project or programme. 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 test planning and execution. Defines and communicates the test strategy for the project. Manages all test processes, including test plans, resources, costs, timescales, test deliverables and traceability. Manages client relationships with respect to testing matters. Identifies process improvements, and contributes to corporate testing standards and definition of best practice. **(SFIA TEST 5)**.
7. Provides advice, assistance and leadership associated with the planning, design and improvement of service and component availability. Includes the investigation of 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. **(SFIA AVMT 5)**.
8. 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. **(SFIA SLMO 4)**.
9. Proposes and agrees the configuration items (CIs) to be uniquely identified with naming conventions. Ensures that operational processes are in place to maintain secure configuration, consistent classification and management of CIs, and for the verification and audit of configuration records. Develops, configures and maintains tools (including automation) to identify, track, log and maintain accurate, complete and current information. Reports on the status of configuration management. Identifies problems and issues and recommend corrective actions. **(SFIA CFMG 4)**.
10. Develops implementation plans for complex requests for change. Evaluates risks to the integrity of service environment inherent in proposed implementations (including

availability, performance, security and compliance of the business services impacted). 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. **(SFIA CHMG 5)**.

11. 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 - manual or automatic. Ensures, where possible, information exchange with configuration management. Ensures release processes and procedures are maintained. **(SFIA RELM 4)**.
12. Evaluates new system software, reviews system software updates and identifies those that merit action. Ensures that system software is tailored to facilitate the achievement of service objectives. Plans the installation and testing of new versions of system software. Investigates and coordinates the resolution of potential and actual service problems. Ensures that operational documentation for system software is fit for purpose and current. Advises on the correct and effective use of system software. **(SFIA SYSP 5)**.
13. 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. Contributes to capacity modelling and planning. Supports the design of service component capacity. **(SFIA CPMG 4)**.
14. Provides technical expertise to enable the correct application of operational procedures. Uses infrastructure management tools to determine load and performance statistics. Contributes to the planning and implementation of maintenance and installation work, including building and configuration of infrastructure components in virtualised environments. Implements agreed infrastructure changes and maintenance routines. Configures tools to automate the provisioning, testing and deployment of new and changed infrastructure. 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. **(SFIA ITOP 4)**.
15. Develops and maintains procedures and documentation for databases. Identifies, evaluates and manages the adoption of appropriate database administration tools and processes, including automation. Contributes to the setting of standards for definition, security and integrity of database objects and ensures conformance to these standards. Manages database configuration including installing and upgrading software and maintaining relevant documentation. Monitors database activity and resource usage. Optimises database performance and plans for forecast resource needs. **(SFIA DBAD 5)**.
16. 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. **(SFIA PBMG 5)**.

17. 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. **(SFIA USUP 5)**.
18. Manages aspects of the product lifecycle enabling the product to meet the needs of customers/users and achieve financial or other targets. Acts as product owner for one or more lower-value products or services; prioritises product requirements and owns a product backlog. Analyses market and/or user research, feedback, expert opinion and usage data to understand needs and opportunities. Facilitates uptake of products by planning development of product collateral, supporting and evaluating campaigns, and monitoring product performance. Rolls out product trials and product launches. **(SFIA PROD 4)**.

Deputises for the Systems - 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 Systems - 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	<ul style="list-style-type: none"> • 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. 	<ul style="list-style-type: none"> • OCP. • MCSE (Data Management and Analytics). • ITIL. • CISSP.
Knowledge & Experience	<ul style="list-style-type: none"> • Significant experience of building and operating IT infrastructure. • Understanding global / local business differentiation. • Knowledge of customer behaviours, needs and expectations. • Digital business literacy. • Tracking of emerging trends. 	<ul style="list-style-type: none"> • Understanding of business organisation, politics and culture. • Ability to understand related industries. • Higher Education experience.
Interpersonal Skills	<ul style="list-style-type: none"> • Results orientation. • Collaboration / teamwork. • Adaptability. • Openness to learning. • Communication, listening and information gathering. • Creative and innovative thinking. • Resolving conflicts and problems. • Decisiveness. • Accountability. • Influencing and persuading. 	<ul style="list-style-type: none"> • Conceptual thinking. • Strategic thinking. • Leading, inspiring and building trust.
Job-related Skills, Abilities & Competencies	<ul style="list-style-type: none"> • Supplier management. • Integrating solutions. • Understanding digital technologies. • Understanding existing systems and technology. • Problem solving. • SQL. • Oracle database administration. • SQL Server database administration. • OLTP and data warehouse design and operation. • Cyber-security within database technologies. 	<ul style="list-style-type: none"> • Public cloud infrastructure. • Microsoft Azure. • Amazon Web Services.
Other	<ul style="list-style-type: none"> • A flexible approach to working hours 	

Requirements	and location, including a willingness to travel, locally, nationally or overseas, as required. <ul style="list-style-type: none">• Requirement to work on call in order to facilitate the 24*7 support demands of a global organisation.• An appreciation of other cultures; the global reach of the University Group 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.	
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