# Database administration DBAD

Installing, configuring, monitoring, maintaining databases and data stores, ensuring performance and security while adapting to evolving technologies.

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| **Guidance Notes:**  Database administration involves managing operational databases in production environments as well as supporting databases for development, testing, and iterative improvements. The focus is on ensuring database availability, integrity, security, and performance across a variety of database types, including relational, NoSQL, and cloud-based databases.  Activities may include, but are not limited to:   * identifying and acting on automation opportunities to improve performance and value from databases, data stores and data pipelines * using database management system software and tools including both cloud-based and on-premises solutions * applying knowledge of the logical database schema * ensuring compliance with data privacy laws and regulations * designing and implementing disaster recovery and backup strategies * integrating and managing databases across hybrid environments, combining on-premises and cloud-based solutions * monitoring emerging database technologies and trends |

## Level 2

Executes operational procedures, runs automation scripts, and performs routine maintenance and monitoring of databases.  
Adjusts automation tasks as needed to meet operational standards for databases under supervision.  
Reports on database performance, addresses issues directly when possible, or escalates to others for resolution.

## Level 3

Provisions, installs, configures, and ensures the maintenance and reliability of databases.  
Monitors databases for load, performance, and security events. Reports metrics and resolves operational issues.  
Executes standard operational procedures, including database backups and restorations.  
Automates routine database administration tasks to specifications using standard scripts and tools.

## Level 4

Applies technical expertise to maintain and optimise databases, executing updates and employing automation tools. Configures tools and/or creates scripts to automate database tasks.  
Maintains operational procedures and checks that they are followed. Uses database management tools to monitor load and performance statistics.   
Investigates and enables the resolution of database operational issues. Provides reports and proposals for improvement to stakeholders.  
Contributes to the planning and implementation of database maintenance and updates. Implements agreed database changes and maintenance routines.

## Level 5

Provides technical leadership to optimise the performance of databases.  
Drives the adoption of tools and automated processes for effective database management and delivery.  
Oversees the planning, installation, maintenance, and acceptance of new and updated database components and database-based services. Aligns to service expectations, security requirements, and other quality standards.  
Ensures database operational procedures and documentation are current and effective, tracks and addresses operational issues, and reports to stakeholders.