Database administrator

**Job description**

Database administrators (DBAs) design, write and take care of computer database systems so that the right person can get the right information at the right time. They work with database software to find ways to store, organise and manage data. They identify user needs, set up computer databases and test systems ensuring that they perform as they should. Data integrity, backup, security and troubleshooting are critical parts of the database administrator’s job.

The exact role requirements vary depending on the size of the organisation, the database management system (DBMS) technology and the needs of the database owners. For example, in large organisations database planning and design may be the responsibility of dedicated database analysts, whereas in small organisations the DBA may be required to perform these roles.

**Work activities**

Setting up and organising a database or re-organising an existing database by writing precise instructions for the computer.

Writing programs to perform queries to extract useful information and to produce reports as necessary.

Designing programs to protect the database from computer hackers or to weed out problems in the database.

Monitoring the system to ensure that users do not tamper with the information or the structure of the database.

Ensuring that only people with authorisation are allowed access to confidential information.

Creating computer models from the database system that predict the results of a product design change, a move to a new location, or a change to a billing process.

**Work conditions**

Travel: not a normal feature during the working day.

Working hours: normally includes regular unsocial hours including overnight and weekends when maintenance and development work is undertaken. Can also involve being on call in case of emergencies.

Location: in towns or cities throughout the country.

Opportunities for self-employment: possible.

**Typical employers**

- Financial services
- Manufacturing firms
- Educational institutions
- Banks
- Consulting firms
- Telecommunications firms
- Public sector organisations.

**Career development**

Career prospects will vary depending on employer and level of experience and responsibility.

**Salaries**

Republic of Ireland: There are no set pay scales so salaries vary according to employer, location and type of business.

Northern Ireland: Starting graduate salaries for those working in IT average at around £18,000.
Database administrator (continued)

Entry requirements and training

Database administrators generally need to have a few years’ experience before moving into this area. Ideally they would have spent a couple of years cutting their teeth in a graduate IT role working with databases to equip themselves for the job.

A database administrator should have expert knowledge of the database management system which the organisation uses (eg Oracle, IBM DB2 or MySQL) as well as a variety of other technical skills, including database query languages (SQL, PL/SQL), hardware and operating system knowledge, and strong problem solving skills.

For this job, you also need solid technical knowledge and to be a good analyst and problem solver with a desire to succeed. You need to be able to work on your own or as part of a team. A willingness to learn and quickly acquire new knowledge is essential.

Specific degree subjects required

Open to non-graduates and graduates of any discipline with the requisite skills/knowledge of databases.

Other relevant degree subjects

• Computer programming
• Computer systems management
• Computing/computer science
• Information technology
• Mathematics
• Software development
• Software engineering.

Postgraduate study

A pre-entry postgraduate qualification while not a requirement is likely to improve your prospects especially if your first degree is not in computing.

Training

Mainly in-house.

Tips for applications

Gain relevant experience particularly during summer vacations. Become familiar with relevant industry software.

Skills and qualities

• Mathematical aptitude and strong problem-solving skills.
• Excellent IT and programming skills.
• Excellent organisational, time and project management skills.
• Accuracy and attention to detail.
• Teamwork skills because most projects require input from individuals with different roles.
• Self-development skills to keep-up-to-date with fast-changing trends.
• Professional approach to time, costs and deadlines.