

Database and Systems Administrator and ICT Security Specialist

Database and systems administrators, and ICT security specialists plan, develop, maintain, manage and administer organisations' database management systems, operating systems and security policies and procedures to ensure optimal database and system integrity, security, backup, reliability and performance.

Job title examples

- Database Administrator/Database Operator/Database Specialist/Database Support/DBA
- ICT Security Specialist/ICT Security Administrator
- Systems Administrator/Systems Manager

Other jobs in this field of work

What database and systems administrators and ICT security specialists do

- design and maintain database architecture, data structures, tables, dictionaries and name conventions to ensure the accuracy and completeness of all data master files
- perform the operational establishment and preventive maintenance of backups, recovery procedures, and enforce security and integrity controls
- implement and administer database documentation, guidelines, policies and procedures
- test database systems and upgrades, such as debugging, tracking, reproduction, logging and resolve all identified problems, according to approved quality testing scripts, procedures and processes
- accept responsibility for the processes, procedures and operational management associated with system security and disaster recovery planning
- liaise with security vendors, suppliers, service providers and external resources; analyse, recommend, install and maintain software security applications; and monitor contractual obligations, performance delivery and service level agreements
- troubleshoot and provide service support in diagnosing, resolve and repair server-related hardware and software

malfunctions, encompass workstations and communication infrastructure

- prepare and maintain documentation, policies and instructions, and record and detail operational procedures and system logs
- ensure that the design of computer sites allows all components to fit together and

work properly, and monitor and adjust the performance of networks

- continually survey the current computer site to determine future network needs and make recommendations for enhancements in the implementation of future servers and networks

Main employing industries



- Mining
- Construction

Qualifications



The following government subsidised qualifications are available in NSW:

Diploma of Database Design and Development available as a qualification

Diploma of Information Technology Systems Administration available as a traineeship or qualification

Advanced Diploma of Network Security available as a qualification

Apprenticeships and traineeships: Find out how to get an [apprenticeship or traineeship](#).

Course fees: You may be eligible for government subsidised training under Smart and Skilled. Go to the [Course Finder](#) to find training in your area, estimate your fee and find a training provider.

Job prospects and pay



- There are around 12,371 database and systems administrators and ICT security specialists working in NSW.
- Over the next four years, employment in this occupation is expected to grow in NSW.

Average weekly full time earnings (before tax):

- Database and systems administrators, and ICT security specialists: \$1,610
- All occupations: \$1,200

Related jobs



- Computer Network Professional
- Software and Applications Programmer

To find out more regarding these related jobs, visit the [Job Guides Homepage](#).

Information sources

Occupations: Australian Bureau of Statistics, Australian and New Zealand Standard Classification of Occupations, 1220.0

Employment: Australian Bureau of Statistics, Labour Force, Australia, Detailed, Quarterly, 6291.0.55.003

Skills shortages: Department of Employment, Skill Shortage List NSW 2015-16

Job prospects: Centre of Policy Studies (CoPS), Victoria University, Employment Forecast Data for NSW 2015/16 to 2022/23

Earnings: Department of Employment, joboutlook.gov.au, based on ABS Characteristics of Employment Survey, August 2014