Computers

Network Systems and Data Communications Analysts

Network Systems and Data Communications Analysts design and evaluate network systems, such as local area networks (LANs), wide area networks (WANs), and Internet systems. They perform network modeling, analysis, and planning, and may deal with the interfacing of computer and communications equipment. They often research and recommend network and data communications hardware and software. A Network systems and data communication analyst may deal with the interfacing of computer and communications equipment. They are sometimes responsible for supervising computer programmers.

Their duties include monitoring system performance, designing and implementing network configurations, network architecture (including hardware and software technology, site locations, and integration of technologies), and systems. They work with other Information Technology professionals to provide security measures and troubleshooting and maintenance as needed. In some cases they set up user accounts, regulate and monitor file access to ensure confidentiality and proper use. They maintain needed files by adding and deleting files on the network server and backing up files to guarantee their safety in the event of problems with the network.

This career path includes a variety of occupations related to design, development, and maintenance of Web sites and their servers. *Web developers* are responsible for day-to-day site design and creation. *Webmasters* are responsible for the technical aspects of the Web site, including performance issues, and for approving site content.

Network Systems and Data communications Analysts normally work in well-lighted, comfortable offices or computer laboratories. Some analysts telecommute, using computers to work from remote locations. They regularly attend conferences or training and study technical journals to keep up with changes in technology. Many work about 40 hours a week, but some work more than 50 hours a week In addition, some of these workers may be required to be "on call" outside of normal business hours in order to resolve system failures or other problems. Network systems and data communications analysts**,** like other workers who spend long periods on computers, are susceptible to eyestrain, back discomfort, and hand and wrist problems such as carpal tunnel syndrome.

Education/Training

How to Obtain:

Network Systems and Data Communications Analyst positions will occasionally only require a 2-year degree or certificate. However, more advanced positions require

completion of a four year bachelor's degree program (BA/BS), generally in a computer related field.

Employers in a technical or scientific environment may look for applicants who have a degree in a technical field, such as computer science, information science, applied mathematics, engineering, or the physical sciences. For jobs in a business environment, employers often seek applicants with a degree in a business-related field such as management information systems (MIS). A Master's Degree (MA/MS), in one of these fields may be necessary for some more complex jobs or for career advancement (completion time is generally 2 years).

Some employers require specific certifications which are generally offered by product vendors, software firms or specialized certification organizations. Major product vendors and software firms offering certification include, but are not limited to Microsoft and Novell.

- Microsoft: Microsoft Certified Technology Specialist (MCTS). This certification is in a specific application or program. MCTS certification in a specific application or program is granted to a candidate who takes and passes the corresponding MCTS examination.

- Microsoft: Microsoft Certified Applications Developer (MCAD). This certification requires a candidate to take and pass three exams.

- Novell: Novell Certified Engineer Enterprise Services (NCE ES). This certification requires a candidate to take and pass one exam.

- CompTIA: A+ Certification. This certification requires a candidate to pass: The 'essentials' examination, and the 'practical application' exam.

- The ICCP offers the Certified Computing Professional (CCP) designation. To earn this certification, a candidate must: Pass the core exam and pass two specialty exams.

Examples of specialty exams include:

- Information Systems - CORE

- Business Information Systems

- Business Process Management

- Data Management

- Database Administration

- Data and Information Quality

More Information on Certification:

- ICCP Certified Computing Professionals (CCP):
  http://www.iccp.org/iccpnew/ccp.html

- Microsoft Certified Applications Developer (MCAD):
  http://www.microsoft.com/learning/en/us/certification/mcad.aspx#tab2

- Novell Certified Engineer Enterprise Services (NCE ES):
  http://www.novell.com/training/certinfo/nce/

- Microsoft Certified Technology Specialist (MCTS):
  http://www.microsoft.com/learning/en/us/certification/mcts.aspx#tab2

- CompTIA A+ Certification:
  http://www.comptia.org/certifications/listed/a.aspx

Average Costs:

Tuition and fees for a master's degree earned at a public university in the following areas average per year* as follows: Computer science, information science, applied mathematics, engineering: $12,800; Physical Sciences: $10,200; Management information systems: $11,400; Business Administration (MBA): $16,000. Completion time is generally two years.

Total Cost of Certification Exams, not including the cost of exam study aids:

- Microsoft Certified Technology Specialist (MCTS): $125 per application or program

- Microsoft Certified Applications Developer (MCAD): $375

- Novell Certified Engineer Enterprise Services (NCE ES): $125 - $195

- ICCP Certified Computing Professional (CCP): $855

- CompTIA A+ Certification: $168

*Note: This figure does not include federal, state, or university financial aid resources such as grants, fellowships, scholarships or work study. It also does not include vocational rehabilitation or other state resources available specifically to people with disabilities. Out-of-pocket expense may be significantly less.