

What information security analysts do

Information security analysts install software, such as firewalls, to protect computer networks. Information security analysts plan and carry out security measures to protect an organization's computer networks and systems. Their responsibilities are continually expanding as the number of cyber attacks increase.

Duties

Information security analysts typically do the following:

- Monitor their organization's networks for security breaches and investigate a violation when one occurs
- Install and use software, such as firewalls and data encryption programs, to protect sensitive information
- Prepare reports that document security breaches and the extent of the damage caused by the breaches
- Conduct penetration testing, which is when analysts simulate attacks to look for vulnerabilities in their systems before they can be exploited
- Help plan and carry out an organization's way of handling security
- Help computer users when they need to install or learn about new security products and procedures

Work environment

Information security analysts held about 75,100 jobs in 2012. Most analysts work for computer companies, consulting firms, and business and financial companies. The industries that employed the most information security analysts in 2012 were as follows:

Computer systems design and related services	27%
Finance and insurance	19
Information	10

Very few information security analysts are self-employed.

Work Schedules

Most information security analysts work full time. sometimes have to be on call outside of normal business hours in case of an emergency at their organization.

How to become one

Information security is a new field and many schools are still developing programs to teach the subject. Most information security analysts have a bachelor's degree in a computer-related field. They also usually need experience in a related occupation. Information security analysts usually need at least a bachelor's degree in computer science, programming, or a related field. As information security continues to develop as a career field Employers of information security analysts sometimes prefer applicants who have a Master's of Business Administration (MBA) in information systems. Programs offering the MBA in information systems generally require 2 years of study beyond the undergraduate level and include both business and computer-related courses.

Work experience

Information security analysts generally need to have previous experience in a related occupation. Many analysts have experience in an information technology department, often as a network or systems administrator. Some employers look for people who have already worked in fields related to the one in which they are hiring There are a number of information security certifications available and many employers prefer job candidates to have one.

Important qualities

Analytical skills. Information security analysts must carefully study computer systems and networks and investigate any irregularities to determine if the networks have been compromised.

Detail oriented. Because cyberattacks can be difficult to detect, information security analysts pay careful attention to their computer systems and watch for minor changes in performance.

Ingenuity. Information security analysts try to outthink cybercriminals and invent new ways to protect their organization's computer systems and networks.

Problem-solving skills. Information security analysts uncover and fix flaws in computer systems and networks

Pay

In May 2012, the median annual wages for information security analysts in the top four industries in which these analysts worked were as follows:

Finance and insurance	\$9 2, 08 0
Information	91 ,4 40
Computer systems design and related services	88 ,2 70
Management of companies and enterprises	81 ,1 30

Job outlook

Employment of information security analysts is projected to grow 37 percent from 2012 to 2022, much faster than the average for all occupations.

Demand for information security analysts is expected to be very high. Cyber Attacks have grown in frequency and sophistication over the last few years, and many organizations are behind in their ability to

detect these attacks. Analysts will be needed to come up with innovative solutions to prevent hackers from stealing critical information or creating havoc on computer networks.

In addition, as the healthcare industry expands its use of electronic medical records, ensuring patients' privacy and protecting personal data are becoming more important. More information security analysts are likely to be needed to create the safeguards that will satisfy patients' concerns.

Job prospects

Job prospects for information security analysts should be good. Information security analysts with related work experience will have the best opportunities