IT Security
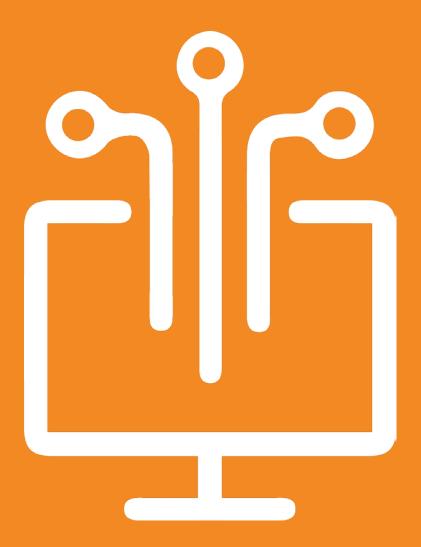# Career Guide

A guide for information security analysts, network and computer systems administrators.

CareerPoint

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Finding Your Way to a Career: IT Security

IInformation security analysts plan and carry out security measures to protect an organization's computer networks and systems. Analysts also assess system vulnerabilities for security risks to make them as secure as possible. In a world where cybercrime and cyberattacks are a constant and increasing threat, security analysts are vitally important in protecting valuable data and software within an organization.

How to use this document to learn more.

As one of the Top 100 Hot Jobs for 2022, information security analyst is a promising occupation for job seekers in West Michigan. To find out if this might be a good career choice for you, use this Career Map to examine:

- Who might enjoy this kind of work.
- Qualifications needed in this career field.
- Growth potential and levels of pay.
- Valuable skills for this type of work.
- Common tools and technology used in this work.
- Occupations, responsibilities, and other job titles.

This information is drawn from national data and insights from West Michigan employers. It is meant as a starting point for job seekers and career coaches to work together in the exploration of meaningful and fulfilling careers.

Exploring Occupations in IT Security

Information security analysts are ultimately responsible for the safety of an organizations digital network. They may monitor the network for security breaches, investigate violations, or install software such as firewalls and data encryption programs. They might also develop security standards for their organization, research the latest information in technology security trends, or recommend security enhancements to management.

The Path to Success

Who might enjoy this type of work?

People who work in the information security analysts field tend to enjoy:

- Mental problem solving.
- Working with ideas and using cognitive (thinking) skills.
- Following set procedures and routines.
- Working with data and details more than with ideas.
- Having a clear line of authority to follow.
- Practical, hands-on problem solving.
- Working with real world materials like wood, tools, and machinery.

People who do well in this work generally perform well in such areas as:

- Responsibility
- Ingenuity
- Achievement
- Adaptability
- Information Skills

Qualifications needed in this career field.

Nationally, most people working in an information security role have a bachelor's degree.

Sample certifications also include:

Information Security Analysts credential sample: Certified Information Systems Security Professional, Certified Information Security Manager, GIAC Certifications.

Network and Computer Systems Administrators credential sample: Cisco Certified Network Associate, CompTIA Network+, CompTIA Security+.

Growth potential.

In the West Michigan counties of Allegan, Barry, Ionia, Kent, Montcalm, Muskegon and Ottawa, there were 3,597 information security analyst jobs in 2020. That number is projected to grow by at least 7% to 3,848 by 2025.

Valuable skills for this type of work.

Tasks and functions performed by information security analysts include:

- Interacting with computers.
- Getting information.
- Identifying objects, actions, and events.
- Making decisions and solving problems.
- Updating and using relevant knowledge.

Common tools and technology used in this work.

Tools: packet sniffers; security monitoring tools; physical security equipment

Technology: network security software; antivirus software; encryption software

Mapping a Career:

IT Security
Network and Computer Systems
Administrator

Computer and Information Systems Administrators

$43.53 - 68.28

Information Security Analyst

$33.77 - $49.41

Database Administrators

$27.92 - $41.58

Network and Computer Systems Administrators

$26.50 - $40.11

Computer Network Support Specialist

$20.03 - 31.77

Computer User Support Specialist

$19.47 - $29.35

Wage ranges represent 25th - 75th percentile.
Timeframes represent the typical education and experience combined.
See page 6 for detailed description of occupations.

LESS THAN 2 YEARS

2-4 YEARS

5-9 YEARS

10+ YEARS

IT Security: A Field Guide

Occupations, responsibilities and other job titles.

Information Security Analyst

Plan, implement, upgrade, or monitor security measures for the protection of computer networks and information. Assess system vulnerabilities for security risks and propose and implement risk mitigation strategies. May ensure appropriate security controls are in place that will safeguard digital files and vital electronic infrastructure. May respond to computer security breaches and viruses.

Examples of locally used job titles: information security officer, information security specialist, information systems security analyst, information systems security officer (ISSO), information technology security analyst (IT security analyst), information technology specialist, network security analyst, security analyst, systems analyst

Network and Computer Systems Administrator

Install, configure, and maintain an organization's local area network (LAN), wide area network (WAN), data communications network, operating systems, and physical and virtual servers. Perform system monitoring and verify the integrity and availability of hardware, network, and server resources and systems. Review system and application logs and verify completion of scheduled jobs, including system backups. Analyze network and server resource consumption and control user access. Install and upgrade software and maintain software licenses. May assist in network modeling, analysis, planning, and coordination between network and data communications hardware and software

Examples of locally used job titles: information analyst, information systems manager (IS manager), information technology specialist (IT specialist), local area network specialist (LAN specialist), local area network administrator (LAN administrator), network administrator, network coordinator, network manager, systems administrator

West Michigan Works! is part of the statewide Michigan Works! system and the workforce development agency in West Michigan. We serve the employers and job seekers of Allegan, Barry, Ionia, Kent, Montcalm, Muskegon and Ottawa counties.

We partner with employers, educators, economic developers and community organizations to create a qualified workforce that meets our region's current and future talent needs and fuels our shared economic future.

Learn more at: https://www.westmiworks.org/

CareerPoint

CareerPoint helps students and job seekers find their place in the world of work by matching interests and abilities with training, support, and meaningful and rewarding careers.

By providing training and tools, CareerPoint supports the workforce professionals who help people navigate the West Michigan job market.

CareerPoint promotes evidence-based coaching to help students and job seekers discover and follow pathways to rewarding careers. This model follows seven steps to each participant's success.

Learn more at: https://talnetcareerpoint.org/