

# Introduction to cybersecurity

Imagine that you're preparing for a storm. You've received notification that a storm is coming. You prepare by gathering the tools and materials you'll need to stay safe. You make sure your windows and doors are secure. You assemble a first aid kit, tools, food and water. You're prepared. The storm hits and there are powerful winds and heavy rain. The storm is using its force to try and breach your home. You notice some water leaks and begin patching them quickly in order to minimize any risk or potential damage.

Handling a security incident is no different. Organizations must prepare for the storm by ensuring they have the tools to mitigate and quickly respond to outside threats. The objective is to minimize risk and potential damage.

As a security analyst, you'll work to protect your organization and the people it serves from a variety of risks and outside threats. And if a threat does get through, you and your team will provide a solution to remedy the situation.

To help you better understand what this means, we'll define security and discuss the roles of security professionals in organizations.

Let's start with some definitions: Cybersecurity, or security, is the practice of ensuring confidentiality, integrity, and availability of information by protecting networks, devices, people, and data from unauthorized access or criminal exploitation.

For example, requiring complex passwords to access sites and services improves confidentiality by making it much more difficult for a threat actor to compromise them. A threat actor is any person or group who presents a security risk.

Now that you know the definition of security, let's discuss what security teams do for an organization.

Security protects against external and internal threats. An external threat is someone outside of the organization trying to gain access to private information, networks or devices.

An internal threat comes from current or former employees, external vendors, or trusted partners. Often these internal threats are accidental, such as an employee clicking on a compromised link in an email. Other times, the internal actor intentionally engages in activities such as unauthorized data access or abusing systems for personal use.

Experienced security professionals will help organizations mitigate or reduce the impact of threats like these.

Security teams also ensure an organization meets regulatory compliance, or laws and guidelines, that require the implementation of specific security standards.

Ensuring that organizations are in compliance may allow them to avoid fines and audits, while also upholding their ethical obligation to protect users.

Security teams also maintain and improve business productivity. By establishing a plan for business continuity, security teams allow people to do their jobs, even in the case of something like a data breach.

Being security conscious can also reduce expenses associated with risks, such as recovering from data loss or operational downtime, and potentially avoiding fines. The last benefit of security that we'll discuss is maintaining brand trust. If services or customer data are compromised, this can lower trust in the organization, damage the brand, and hurt the business in the long term. Loss of customer trust may also lead to less revenue for the business.

Now, let's go over some common security-based roles. After completing this certificate program, here are some job titles you may want to search for: Security analyst or specialist, Cybersecurity analyst or specialist, Security operation center or SOC analyst, Information security analyst.

You'll also learn more about the responsibilities associated with some of these job titles later in the program.

As you may now realize, the field of security includes many topics and concepts and every activity you complete in this program moves you one step closer to a new job. Let's keep learning together.

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