

# Cybersecurity Essentials

Address these 30 items to secure your organization.

Use this checklist to ensure you are accounting for privacy concerns, compliance issues, and the policies and procedures critical to maintaining a secure organization with a culture of cybersecurity.

For more information, see our detailed summaries on the following pages.










## Privacy Program

<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>	
01.	Internal privacy policy development	02.	Employee privacy policy training	03.	Internal policy for data retention

## Security Program

<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>	
04.	Security awareness training	05.	Phishing awareness training	06.	Clean desk policy implementation
<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>	
07.	Visitor program enforcement	08.	Identify digital assets	09.	Multi-Factor Authentication (MFA)

## Tools

<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>	
10.	Virtual Private Network (VPN)	11.	Secure Wi-Fi / wireless networking	12.	Secure Email Gateway (SEG)
<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>	
13.	System auditing	14.	Backup solution implementation	15.	Backup solution testing
<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>	
16.	Domain Name System (DNS) and content filtering	17.	Endpoint Detection and Response (EDR)	18.	Security Incident and Event Management (SIEM)



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## System Hardening

<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>	
19. Unused program removal		20. Group policies and active directory usage		21. Secure Endpoints configuration	
<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>	
22. Perimeter security implementation		23. Patch management plan in place		24. Cloud app behavior monitoring	

## Vulnerability Management and Assessment

<input type="checkbox"/>		<input type="checkbox"/>	
25. Vulnerability analysis and resolution strategy design		26. Vulnerability management program	

## Response

<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>	
27. Incident response policy		28. Incident response procedures		29. Incident response roles and responsibilities	

<input type="checkbox"/>		<p>Security is a shared responsibility. As attacks have grown in number and sophistication, small businesses no longer have the resources to deal with security issues effectively. In fact, in a recent study*, 59% of SMBs believe that all or the majority of their cybersecurity needs will be outsourced in the next five years. Partnering with us provides the confidence and peace of mind that we're working with the best in the industry to secure your organization.</p> <p><small>* The State of SMB Cybersecurity in 2020</small></p>
30. Trusted partners to manage and monitor		



# Cybersecurity Essentials - Details

## Privacy Program

### 01. Internal privacy policy

Your internal privacy policy should include employee records, email and internet usage, client/customer usage, internal systems and access, mobile devices, laws and regulations, and consequences for violating the policy. Prepare for the need to have a public-facing privacy policy, if you do not already have one.

### 02. Employee training on the privacy policy

After creating privacy policies, you need to train your staff to ensure they understand the content.

### 03. Internal policy for data retention

Creating a policy for data retention controls how long your company will retain data. This policy reduces the impact of a data breach and cuts data storage costs.

## Security Program

### 04. Security awareness training of employees and contractors

Use online security training that is tailored to the needs of the organization. Such courses provide employees and contractors with a basic understanding of the potential physical and cybersecurity threats and how to respond.

### 05. Phishing awareness training

It is recommended to use a service to randomly test users on their ability to identify phishing emails monthly to determine where additional training is needed.

### 06. Clean desk policy

The adoption of a clean desk policy is designed to allow for the protection of any information and data that may be found at a user's workstation. With the removal or secure storage of sensitive information when employees or workforce personnel are away from their desks, the MSP organization can ensure that data confidentiality, integrity, and availability may be guaranteed.

### 07. Visitor program

Having a clearly understood visitor policy and escort program is vital to the security of employees, workforce personnel, clients, physical assets, and important data. The type of visitor policy needed fully depends on your MSP office and workspace's type, size, and location.

### 08. Identify digital assets

Conduct at a minimum an annual risk assessment that includes a complete digital asset inventory, known vulnerability report, and an assessment of risk and impact to the business.

### 09. Multi-Factor Authentication (MFA)

MFA is a preventative method that employs answers to a combination of prompts that involve something you know, something you have, and something you are to authenticate access into a system. These prompts can range from "where did you go to high school" to biometric methods like fingerprints and can combine passwords with technology by using text messages or emails as an additional authentication step. At least two of the three must be used to achieve MFA.

## Tools

### 10. Virtual Private Network (VPN)

A VPN is an encryption-based communication method that connects a remote office or worker to an organization's private network over a shared or public network. The encryption effectively makes a tunnel within the public network that data can pass through without being read by eavesdroppers.

### 11. Secure Wi-Fi / wireless networking

Securing Wi-Fi in use at the organization is one vital component that protects data and ensures the security of critical business systems. Ensure these three items are addressed:

- Change the default admin password on the Wi-Fi router
- Update the Wi-Fi router firmware
- Create a guest Wi-Fi network

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## 12. Secure Email Gateway (SEG)

Email is the primary target hackers use to gain access to private company data. Email is often the least secure means of passing data into and within an organization. Modern methods of attacking email systems have grown in sophistication and the targeting of individuals.

## 13. System auditing

On the firewall solution, ensure that logging is enabled and that the logs are periodically reviewed by assigned staff to identify potential patterns that may indicate a compromise or ongoing attack. Many vendors provide or include a built-in reporting utility for the detailed analysis of information related to the network traffic with their firewall solutions.

## 14. Configure backup solution

One of the most known and least implemented security controls is data recovery, or specifically data backups. An organization may have many processes and utilities for backing up critical information. Implement a 3-2-1 backup solution.

## 15. Test backup solution

This process involves regularly testing backup media for reliability and testing the recovery procedure to ensure that the process has been verified during a disaster and can be replicated quickly.

## 16. Domain Name System (DNS) and content filtering

Use the Domain Name System (DNS) layer to filter content based on IP addresses to control web use and reduce infections by blocking sites known to pose a high risk of containing malware. While most firewalls have this included, remote users need an agent installed on their laptop or wireless device.

## 17. Endpoint Detection and Response (EDR)

Endpoint Detection and Response (EDR) is a cybersecurity technology that addresses the need for continuous monitoring and response to advanced threats. It is a subset of endpoint security technology

and a critical piece of an optimal security posture. Attackers do not work 8 am to 5 pm, so you need 24x365 for effective detection and response.

## 18. Security Incident and Event Management (SIEM)

Typically include the collection of security-related logs across network devices, the ability to correlate activity across multiple devices, and aids the ability for security analysts to search for and identify potential malicious activity.

## System Hardening

### 19. Clean up all unused programs on all systems

Every program installed on a host endpoint or server operating system is another avenue of potential entrance for a hacker. Removing unnecessary or unneeded programs helps to limit the number of ways into a system. Close unused ports.

### 20. Use group policies and active directory

It is recommended to clearly define what groups can access and maintain Microsoft Active Directory groups and rules. Occasionally, issues may arise due to simple user error that can open the gateway for a successful cyber-attack.

### 21. Secure Endpoint configurations

This includes reducing the attack surface, strengthening user account controls, enforcing device firewalls, and implementing secure policies while maintaining reasonable user efficiency.

### 22. Implement perimeter security

Properly configure and implement firewalls, routers, VPNs, and Intrusion Detection and Prevention systems (IDS/IPS).

### 23. Patch management plan

A regular part of the security routine should involve the planning, testing, implementing, and auditing patches through an automated patch management software.

# Cybersecurity Essentials - Details

## 24. Monitor and track behavior in cloud apps

Detect abnormal user behavior like impossible travel, unfamiliar sign-in properties, or suspicious inbox manipulation rules within cloud-based apps like Microsoft 365 and Azure AD to prevent attacks like business email compromise and ransomware.

## Vulnerability Management and Assessment

### 25. Define a vulnerability analysis and resolution strategy

Vulnerability management is a crucial component in understanding your organization's overall risk. Organizations need to understand how vulnerabilities impact the overall weaknesses within your environment.

### 26. Vulnerability management program

At the core of any vulnerability management program lies the fundamental process of software management. Most vulnerabilities are software "bugs" that can be exploited and possibly compromise confidentiality, information, or availability. As such, an MSP organization should take the time to understand all the software used within their environment.

Response

## 27. Incident response policy

Policies set the standard of behavior for activities; such examples include:

- Statement of Management Commitment
- Purpose and Objectives of the Policy
- Scope of the Policy
- Organizational Structure and Definition of Roles, Responsibilities, and Levels of Authority
- Severity Ratings of Incidents
- Performance Measures
- Reporting and Contact Forms

## 28. Incident response procedures

Procedures are the specific step-by-step instructions to execute individual processes as part of a plan specific to incident response, which is not the same as business continuity or disaster recovery.

## 29. Incident response roles and responsibilities

Know the key stakeholders and critical roles within the MSP organization who should care and be involved in a security incident. The responsible stakeholders and roles may change depending on the type of incident and the targeted resources of the organization.



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