

# CIS Controls Version 8

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# CIS Control 1: Inventory and Control of Enterprise Assets

## What is inventory and control of Enterprise Assets

- Knowing what devices are on the network and what access/permissions they have are critical to enterprise network security.

## Why is inventory and control of enterprise assets important?

- Hackers/attackers will constantly scan a network until an exploitable entry point is established. Once in a network, attackers can access sensitive data. Knowing what devices are on an Enterprise's network allows us to address any flaws and properly fortify all possible unwanted access points.

# CIS Control 2

## Inventory and Control of Software Assets

A thorough inventory and assessment of all software used on devices within an enterprise's network will make for a more well-protected network. Attackers' backdoor programs and bots allow them long-term control over systems by exploiting users who visit malicious websites and unknowingly download files used by attackers to gain control of a system and exploit possible program vulnerabilities. Updating and patching programs are critical in defending a network.



ACTIVELY MANAGE  
SOFTWARE ON  
NETWORK.



INSURING ONLY  
APPROVED SOFTWARE  
(OPERATING  
SOFTWARE AND APPS).  
ENTERPRISE APPROVED



PREVENTING OF  
UNAPPROVED  
SOFTWARE AND  
REMOVAL OF  
UNAPPROVED  
SOFTWARE IF  
NECESSARY



## CIS CONTROL 3: Data Protection

- ▶ Cis Control 3 - Data Protection
  - ▶ - proper security, handling , management and disposal of data.
  - ▶
- ▶ Why is data protection important
  - ▶ - To prevent attackers from extracting sensitive data of an enterprise, its employees and clients.







## CIS CONTROL 4: Secure Configuration of Enterprise Assets and Software

- ▶ What is secure configuration of enterprise assets and software?
  - ▶ create and manage a secure configuration for portable end user devices such as (Cell phones, tablets . Etc). Network devices; non- computing/lot devices, servers and software (Apps and operating systems )
- ▶ Why is secure configuration of enterprise assets and software important?
  - ▶ Attackers will exploit unconfigured software and other enterprise assets

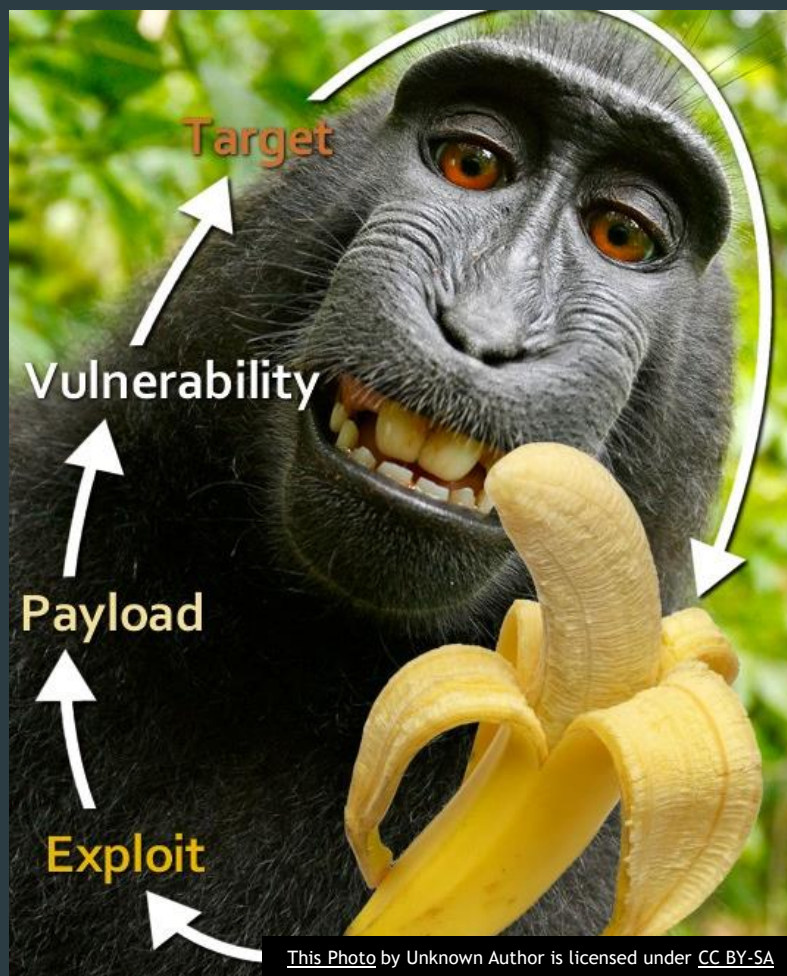
# CIS Control 5: Account Management

- ▶ Data for user accounts (Emails, user accounts, enterprise administration, service accounts, assets for and software) **should be protected using established processes and tools.**
- ▶ Why is CIS control 5 important ?
  - ▶ Attacker use account credential data to access to confidential and private information, disrupt services , and or gain control over systems.

# CIS CONTROL 6: ACCESS CONTROL MANAGEMENT

- ▶ What is Access Control Management?
  - ▶ Tools and protocols designed to manage access, assign, remove and deny privileges for user in an enterprise.
- ▶ Why is access control management necessary?
  - ▶ User, administrators and clients only need the privileges necessary to what their role is in the enterprise. Unnecessary privileges given to user creates security risks that could've been easily prevented.





## CIS CONTROL 7: Continuous Vulnerability Management

- ▶ What is Continuous vulnerability management ?
  - ▶ - planned process to continuously observe track and manage vulnerabilities on devices in an enterprises network.
- ▶ Why is continuous vulnerability management important ?
  - ▶ continuous management of enterprise vulnerabilities is important in recovering from an attack and shrinking the window of a possible attack.



# CIS CONTROL 8: Audit Log Management

- ▶ What is Audit Log Management?
  - ▶ Log audit management is useful to track, retain, and review logs. \
- ▶ Why is Audit Log Management important?
  - ▶ Its is important to have audit log management when using logs to detect and understand attacks by “Hackers”





## CIS CCONTROL 9: Email and Web Browser Protections

- ▶ What is Email and Web Browser Protections?
  - ▶ It is the process of protecting against and detecting threats that come through email and web browsing.
- ▶ It is important to protect an Enterprise from web and email attacks.
  - ▶ Attackers will use web and email attacks to manipulate administrative privileges and or extract data.



## CIS Control 10: Malware Defenses

- ▶ What is malware defense?
  - ▶ Prevention of unauthorized installation software, apps, and codes that may contain malicious content.
- ▶ Why is malware defense important?
  - ▶ Malware defense is important to Enterprise network integrity. Malware executable codes can disrupt an enterprises services and network functionality.



# CIS Control 11: Data Recovery

## What is data recovery ?

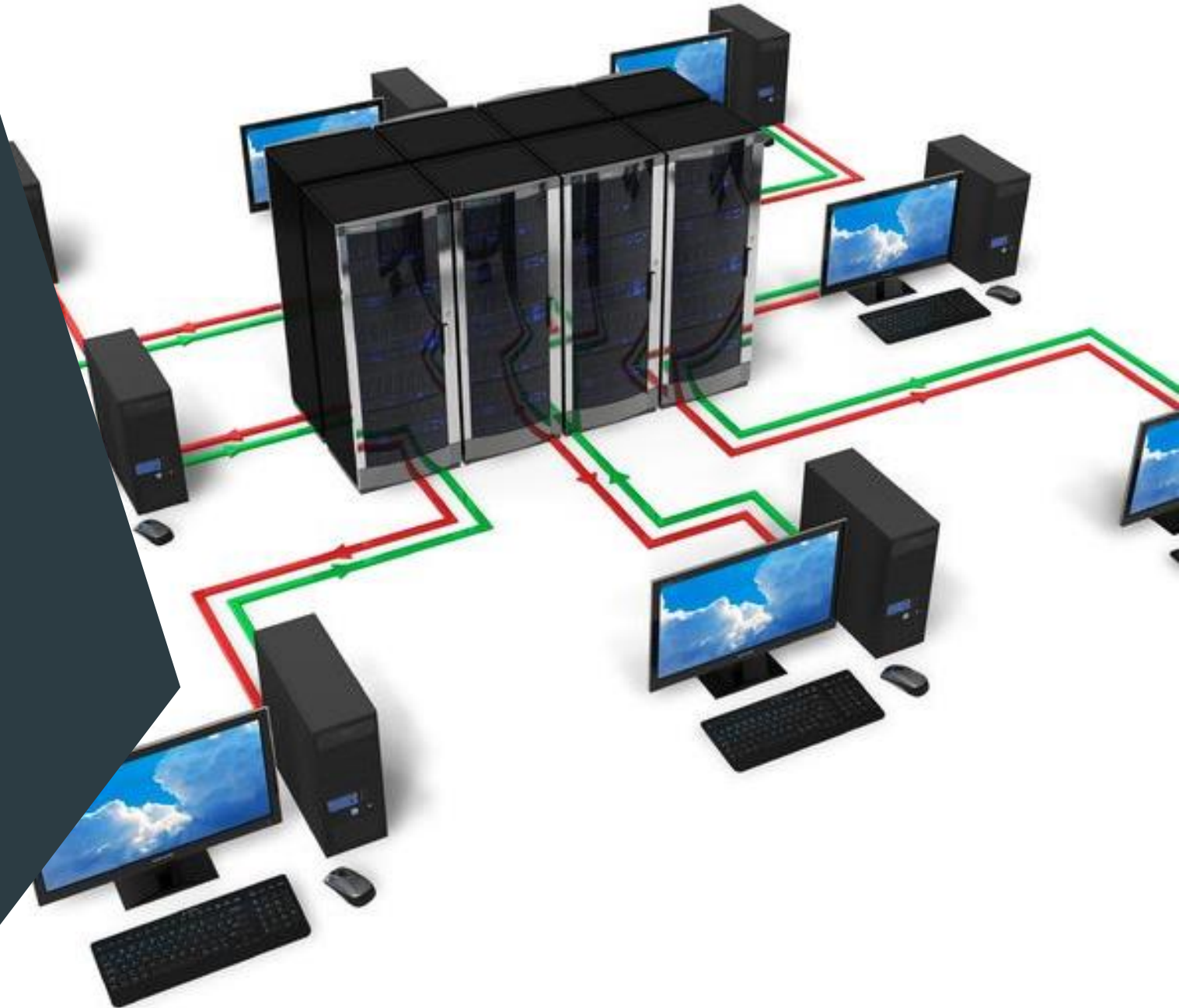
- The process of creating and storing a trusted state of an enterprise's network.

## Why is data recovery important ?

- In the event of a successful attack, having a stored pre-incident state of the network allows an enterprise to return to a trusted functioning network.

## CIS CONTROL 12: Network Infrastructure Management

- ▶ What is network infrastructure management ?
  - ▶ Tracking, reporting and correcting network devices. Attacker prevention. Identifying exploitable vulnerabilities.
- ▶ Why is network infrastructure management important
  - ▶ Network security is ever changing. Up to date network infrastructure is necessary to the integrity of a network as attacker will probe for inconsistencies in routers, firewalls and switches rules.



# CIS Control 13: Network Monitoring and Defense

- ▶ What is Network monitoring and defense?
  - ▶ Enterprise's network tools and software configuration used to monitor and protect against external attacks.
- ▶ Why is monitoring and defense important?
  - ▶ Attackers are persistent and their methods evolve. It is important keep a close watch on network security tools, they may need updating, patching and revised configuration.





# CIS Control 14: Security Awareness and Skills Training

## What is Security Awareness and Skills Training ?

- Established procedures to and guidelines geared to security awareness for employees and clients.

## Why is Security Awareness and Skills Training important ?

- The easily influenced point of access into cyber network are the human users.

# CIS Control 15: Service Provider Management

## What is service provider management ?

- Service providers are often granted access to sensitive. Service providers may provide support of systems and processes used by Enterprise's IT department.

## Why is service provider management important/

- Service providers handle and manage data of Enterprise's clients and employees. Its important have guidelines for how this information used and stored.

# CIS Control 16: Application Software Security

What is application software security ?

- Security of Applications in a network. Software developed in the enterprise, acquired or hosted.

Why is application software security important ?

- Attackers can use Application software data (I.E., account credentials) to attack and compromise a network.



# CIS Control 17: Incident Response Management

What is incident response management ?

- Policies, training, logs, plans, for effective reporting of attack events.

Why is incident report management important?

- Effective incident response management is needed to quickly respond recover or quarantine an attack.

# CIS Control 18: Penetration testing

- ▶ What is penetration testing ?
  - ▶ Testing the fortification of Enterprises assets by means of ethical hacking.
- ▶ Why is penetration testing important ?
  - ▶ Penetration testing helps cyber security defenders discover vulnerabilities in an Enterprise cyber network.

# Ethical Hacking

# References

- ▶ <https://www.cisecurity.org/controls/v8/>
- ▶ <https://www.crowdstrike.com/cybersecurity-101/advanced-persistent-threat-apt/>
- ▶ <https://www.oceg.org/standards/>
- ▶ <https://compliance-group.com/hipaa-rules-and-regulations/>
- ▶ <https://www.youtube.com/watch?v=q2t91jLmh3k> - Penetration testing