



# Policy-Based Controls

Security Architecture & Tool Sets

# Policy-Based Controls

- Policies provide the control objectives the organization wants to achieve
- This is the desired end state, not the method or activities to accomplish them
- Security controls are used to achieve the control objectives
  - Physical Controls
  - Logical Controls
  - Administrative Controls



# Physical Controls

- Controls that impact the physical world
- Examples:
  - Fences, gates, locks, lighting, alarm systems, fire suppressions systems, etc.



# Logical Controls

- Technical controls to enforce confidentiality, integrity, and availability
- Examples:
  - ACLs in firewalls and routers, encryption schemes



# Administrative Controls

- Procedural controls to implement good cybersecurity practices
- Examples:
  - Separation of duties, background checks, reviewing of log files, etc.

LogTime	Computer	Protocol Type	Source IP	Destination IP	Access type	Attack
11/16/2015 03:14:30 PM	CISCO-ASA	UDP	182.72.211.60/35445	192.163.2.34/467	interface interface_name	
11/16/2015 03:14:30 PM	CISCO-ASA	UDP	182.72.211.61/789	192.163.1.26/233		
11/16/2015 03:14:30 PM	CISCO-ASA				for icmp	
11/16/2015 03:14:30 PM	CISCO-ASA	UDP	182.72.211.60/35445	192.163.2.34/467	interface interface_name	
11/16/2015 03:14:30 PM	CISCO-ASA				for icmp	
11/16/2015 03:14:30 PM	CISCO-ASA	UDP	182.72.211.61/789	192.163.1.26/233		
11/16/2015 03:14:30 PM	CISCO-ASA	UDP	182.72.211.61/789	192.163.1.26/233		
11/16/2015 03:14:31 PM	CISCO-ASA	ICMP	10.4.1.2	10.2.1.1	interface dmz	
11/16/2015 03:14:31 PM	CISCO-ASA	UDP	10.1.1.1	192.163.1.1	interface outside	Snork attack
11/16/2015 03:14:31 PM	CISCO-ASA	ICMP	10.4.1.2	10.2.1.1	interface dmz	
11/16/2015 03:14:31 PM	CISCO-ASA	UDP	10.1.1.1	192.163.1.1	interface outside	Snork attack
11/16/2015 03:14:31 PM	CISCO-ASA	ICMP	10.4.1.2	10.2.1.1	interface dmz	
11/16/2015 03:14:31 PM	CISCO-ASA	UDP	10.1.1.1	192.163.1.1	interface outside	Snork attack
11/16/2015 03:14:31 PM	CISCO-ASA	ICMP	10.4.1.2	10.2.1.1	interface dmz	
11/16/2015 03:14:31 PM	CISCO-ASA	UDP	10.1.1.1	192.163.1.1	interface outside	Snork attack
11/16/2015 03:14:31 PM	CISCO-ASA	ICMP	10.4.1.2	10.2.1.1	interface dmz	
11/16/2015 03:14:31 PM	CISCO-ASA	UDP	10.1.1.1	192.163.1.1	interface outside	Snork attack
11/16/2015 03:14:31 PM	CISCO-ASA	UDP	10.1.1.1	192.163.1.1	interface outside	Snork attack
11/16/2015 03:14:31 PM	CISCO-ASA	ICMP	10.4.1.2	10.2.1.1	interface dmz	
11/16/2015 03:14:31 PM	CISCO-ASA	ICMP	10.4.1.2	10.2.1.1	interface dmz	



# Combining Control Objectives

- Physical, Logical, and Administrative controls are most effective when they are combined together
- Example:
  - To prevent theft of the data from a server
    - Physical controls for building access
    - Logical controls like encryption
    - Administrative controls like requiring two people

