CompTIA Security+ Exam SY0-701

Lesson 14

Summarize Security Governance Concepts

Lesson 14

Topic 14A

Policies, Standards, and Procedures

Policies (1 of 2)

- Vital in establishing effective governance and ensuring organizational compliance
- Form the framework for operations, decision-making, and behaviors, and rules for a compliant and ethical corporate culture
- Align the organization around common goals, prevent misconduct, and remove inefficiencies
- Common Policies
  - Acceptable Use Policy (AUP)
  - Information Security Policies
  - Business Continuity & Continuity of Operations Plans (COOP)
  - Disaster Recovery
  - Incident Response
  - Software Development Life Cycle (SDLC) Policy
  - Change Management

Policies (2 of 2)

Guidelines:

- Recommendations that steer actions in a particular job role or department
- They are more flexible than policies and
- Allow flexibility for their implementation

Procedures

- Define step-by-step instructions and checklists
- Ensure a task is completed in a compliant and repeatable way
- Playbooks
  - Collection of critical actions generally associated with Security Operations (SOC)
- Examples
  - Onboarding/Offboarding
  - Background Checks
  - Service/Software Provisioning
  - Desktop Deployment
  - Patching and updating
  - “Go-Live” actions
  - After hours support
  - Ticket management

Standards

- Define a set of best practices and include specific details
  - Often associated with regulations and polices
  - Regulations and policies use standards to offload details
  - Standard can change often while policy remains the same
  - Standard can be managed by subject matter experts
- Industry Standards
  - ISO 27k series, NIST 800 series Special Publications, PCI-DSS, FIPS, many others…
- Internal Standards
  - Encryption, coding Practices, audit, many others…

Legal Environment (1 of 2)

- Governance committees ensure their organizations abide by all applicable cybersecurity laws and regulations to protect them from legal liability
- Frameworks, benchmarks, and configuration guides may be used to demonstrate compliance with legal/regulatory requirements
- Global Law
- National Law
- State/Local Law
- Industry Regulations
- Privacy Legislation

Legal Environment (2 of 2)

- Privacy
  - GDPR
  - CCPA
  - Many others
- Energy
  - North American Electric Reliability Corporation (NERC) (United States and Canada)
- Education & Children
  - Family Educational Rights and Privacy Act (FERPA) (United States)
  - Children's Internet Protection Act (CIPA) (United States)
  - Children's Online Privacy Protection Act (COPPA) (United States)
- Healthcare
  - Health Insurance Portability and Accountability Act (HIPAA) (United States)
- Financial Services
  - Gramm-Leach-Bliley Act (GLBA) (United States)
  - Payment Card Industry Data Security Standard (PCI DSS) (Contractual obligation)
- Government
  - Federal Information Security Modernization Act (FISMA) (United States)
  - Criminal Justice Information Services Security Policy (CJIS) (United States)
  - The Government Security Classifications (GSC) (United Kingdom)

Governance and Accountability

- Governance practices ensure organizations abide by all applicable cybersecurity laws and regulations to protect them from legal liability.
- Governance Boards
- Committees
- Centralized vs Decentralized
- Managing Risk and Revising Policies

- Data Governance Roles
  - Owner
  - Controller
  - Processor
  - Custodian

Review Activity: Policies, Standards, and Procedures

- Policies
- Procedures
- Standards
- Legal Environment
- Governance and Accountability

Lab Activity

- ADAPTIVE LAB: Using a Playbook

Lesson 14

Topic 14B

Change Management

Change Management Programs (1 of 2)

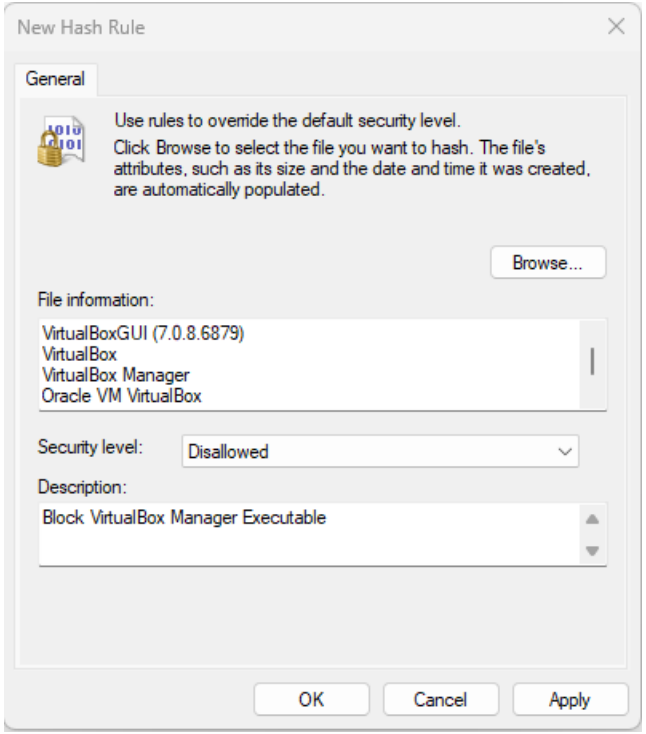
- Systematic approach that manages all changes made to a product or system
- Ensures that methods and procedures are used to handle changes efficiently and effectively
- Helps minimize risks associated with changes
- Ensure changes do not negatively impact security, availability, or performance

Change Management Programs (2 of 2)

- Stakeholder Input
- Change Review Board
- Impact Analysis
- Test Results
- Rollout Plans
- Backout Plans
- Maintenance Windows
- Standard Operating Procedures (SOPs)

Allowed and Blocked Changes

- Allow lists and deny lists play a role in change management practices.
- Allow lists help streamline change management by reducing the time and effort required for trusted changes.
- Deny lists includes blocked software, hardware, and specific change types.
- Allow and deny lists also refer to technical controls that exists in different context such as access controls, firewall rules, and software restriction mechanisms.



Software Restriction Policies (block list) can be based on file hash values. (Screenshot used with permission from Microsoft.)

Restarts, Dependencies, and Downtime

- Typically have a direct impact on business operations
- Dependencies complicate changes because a service restart in one area may significantly impact another
- Primary goal of change management is to minimize these disruptions
- Processes include communication requirements designed to inform/update stakeholders
- Legacy Systems and Applications
  - Often critical to business operations and difficult to manage
  - Legacy features often have compatibility issues when implementing changes

Documentation and Version Control

- Assessing how a change impacts existing policies, procedures, documentation and diagrams is essential, and change management plans should include provisions requiring updates to these documents as part of the implementation
- Version control
  - Tacking and controlling changes to documents, diagrams, code, or other important data
  - Historical record of changes

Review Activity: Change Management

- Change Management Programs
- Allowed and Blocked Changes
- Restarts, Dependencies, and Downtime
- Documentation and Version Control

Lab Activity

- Assisted Lab: Implementing Allow Lists and Deny Lists

Lesson 14

Topic 14C

Automation and Orchestration

Automation and Scripting

- Critical tools in modern IT operations
- Streamline processes
- Enhance security
- Improve efficiency
- Enforce security policies
- Reduce the risk of human error
- Reduce implementation time
- Provide clear audit trails

Automation and Orchestration Implementation

- Enhance efficiency by enabling repetitive tasks to be performed quickly and consistently
- Mitigate operator fatigue
- Orchestration enhances the impact of automation by coordinating automated tasks across different systems and software tools

Automation and Orchestration Implementation

- Security Automation
- DevOps
- Important Considerations
  - Complexity
  - Cost
  - Single Point of Failure
  - Technical Debt
  - Ongoing Support

Review Activity: Automation and Orchestration

- Automation and Scripting
- Automation and Orchestration Implementation

Lab Activity

- Assisted Lab: Use Cases of Automation and Scripting

Lesson 14

Summary