Security Frameworks

What are they for?

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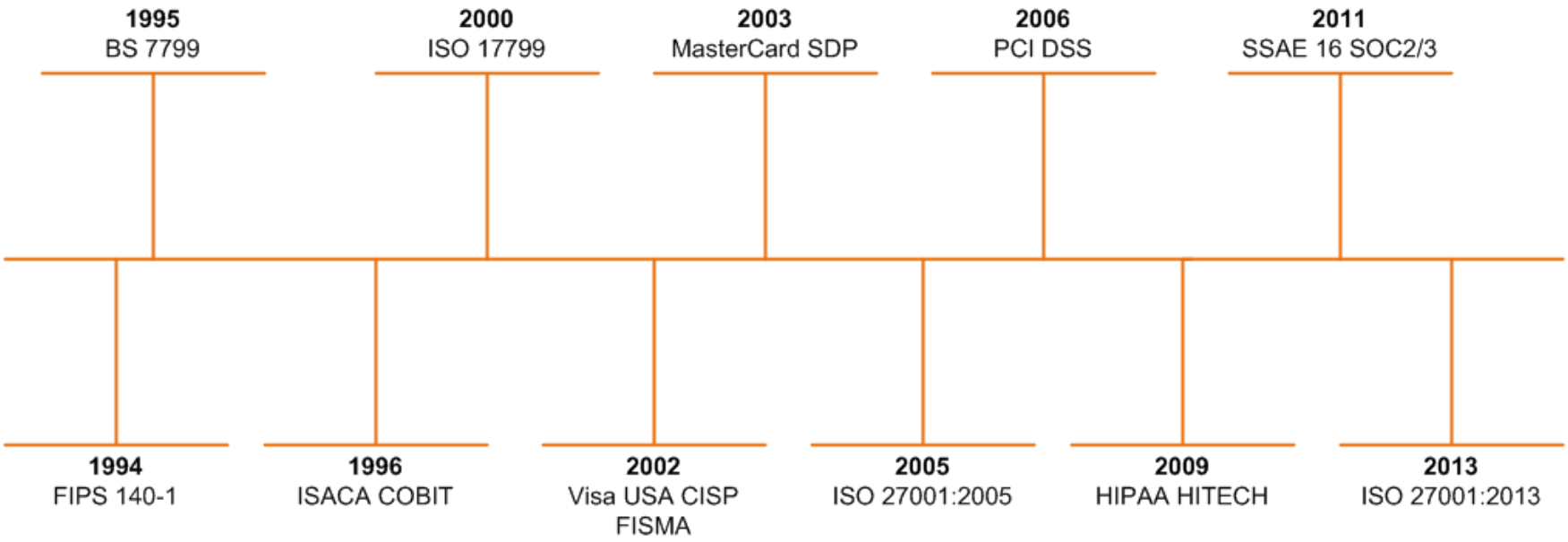
Agenda

- What is a security framework?
- Common security frameworks
- The control triad
- Where security frameworks fit
- Deeper dive

What Is A Security Framework?

- Shared security knowledge base
- What works to secure infrastructure, systems and data
- Frequency of review and assessment

Security Frameworks Timeline



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Common Security Frameworks

- NIST/FIPS
  - General security framework
- ISO/IEC 27000
  - General security framework
- Payment Card Industry
  - Focused on the security of payment card data

Common Security Frameworks

- Health Information Technology for Economic and Clinical Health (HITECH)
  - Focused on protected health information (PHI)
- Federal Information Systems Management Act (FISMA)
  - Focused on security of all government information systems

Common Security Frameworks

- ISACA COBIT
  - Overall IT audit framework with sections on security and privacy

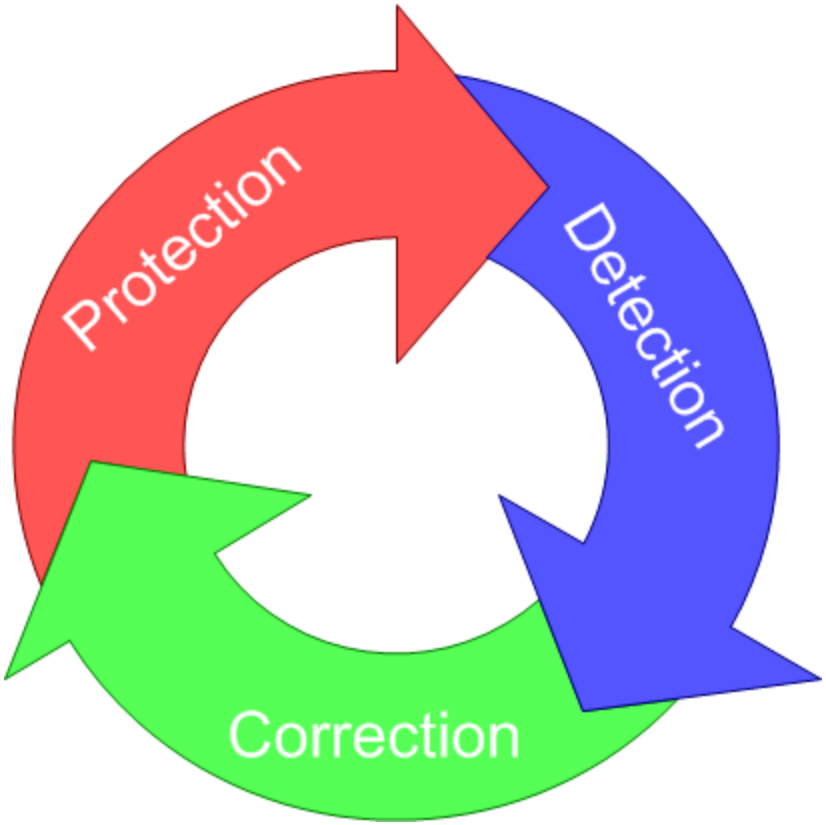
Common Security Frameworks

- Statement on Standards for Attestation Engagements (SSAE) 16
  - Service Organization Controls 3 (SOC 3)
  - Service Organization Controls 2 (SOC 2)

Just A Quick Comment

- SSAE 16 SOC 2/3 is not a security framework per se
  - Specifies security domains
  - Controls and testing are dependent on the customer and auditor defining those components
  - Need to review report in detail to determine if it is usable and what is usable

The Control Triad



The Control Triad

- Protection
  - Stops an attack or abuse
- Detection
  - Identifies an attack or abuse when protection fails
- Correction
  - Identifies changes to correct the control failure(s)

Where Security Frameworks Fit

- Define what
  - Infrastructure
  - Operating systems
  - Applications
  - Data

Where Security Frameworks Fit

- Define why
  - Threats
  - Risks
  - Vulnerabilities

Where Security Frameworks Fit

- Define how
  - Techniques for securing infrastructure and systems
  - Mitigation of risks

Where Security Frameworks Fit

- Define when
  - Real time
  - Daily
  - Weekly
  - Monthly
  - Annually
  - Periodically

Where Security Frameworks Fit

- Periodically
  - Periodically ≠ annually
  - Defined by your organization's risk assessment
  - May vary by device or application

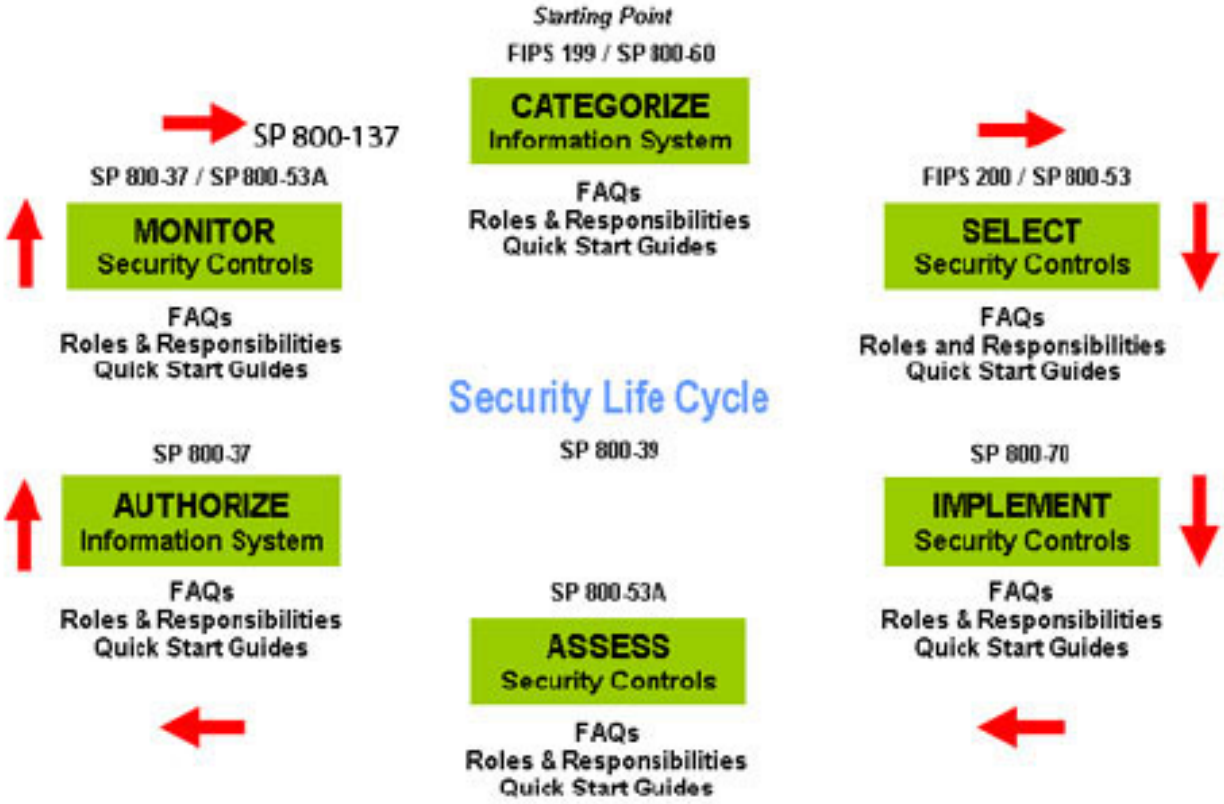
What Security Frameworks Do Not Do

- Security is not perfect
  - Compliance does not mean you cannot be breached or have a security incident
- Stop mistakes
  - Human errors still occur
  - Security frameworks use “defense in depth” to minimize impact of those errors

What Security Frameworks Do Not Do

- Security frameworks are bare minimums

A Bit Deeper Dive



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A Bit Deeper Dive

- PCI DSS
  - Build and maintain a secure network and systems
    - Requirement 1 - Install and maintain a firewall configuration to protect cardholder data
    - Requirement 2 - Do not use vendor-supplied defaults for system passwords and other security parameters

A Bit Deeper Dive

- PCI DSS
  - Protect cardholder data
    - Requirement 3 - Protect stored cardholder data
    - Requirement 4 - Encrypt transmission of cardholder data across open, public networks
  - Maintain a vulnerability management program
    - Requirement 5 - Protect all systems against malware and regularly update anti-virus software or programs
    - Requirement 6 - Develop and maintain secure systems and applications

A Bit Deeper Dive

- PCI DSS
  - Implement strong access control measures
    - Requirement 7 - Restrict access to cardholder data by business need to know
    - Requirement 8 - Identify and authenticate access to system components
    - Requirement 9 - Restrict physical access to cardholder data

A Bit Deeper Dive

- PCI DSS
  - Regularly monitor and test networks
    - Requirement 10 - Track and monitor all access to network resources and cardholder data
    - Requirement 11 - Regularly test security systems and processes
  - Maintain an information security policy
    - Requirement 12 - Maintain a policy that addresses information security for all personnel

A Bit Deeper Dive

NIST CATEGORY	PCI DSS
Categorize	Open PCI Scoping Toolkit
Select	Process, store or transmit cardholder data or “connected to” systems
Implement	Requirements 1, 2, 3, 4, 5, 6, 12
Assess	Qualified Security Assessor, Internal Security Assessor or self-assessment
Authorize	Requirements 7, 8, 9
Monitor	Requirements 10, 11

Thank You!

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