SECURITY EVENTS AND ANOMALIES POLICY

Policy: Security Events and Anomalies
Policy Owner: CIO
Change Management
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Approved By: 

Crosswalk
NIST Cyber Security Framework (CSF) DE, AE
NIST SP 800-53 Security Controls AC-4, AU-6, CM-2, IR-4, IR-5, IR-8, CA-3, RA-3, CA-7, SI-4
NIST SP 800-171 Protecting Controlled Unclassified Information 3.1.3, 3.1.12, 3.1.13, 3.1.14, 3.1.15, 3.1.18, 3.1.20, 3.1.21, 3.1.22, 3.3.1, 3.3.2, 3.3.3, 3.3.4, 3.3.5, 3.3.6, 3.3.7, 3.3.8, 3.3.9, 3.4.7, 3.6.1, 3.6.2, 3.6.3, 3.13.1, 3.13.12, 3.13.13, 3.13.15, 3.13.16, 3.13.17, 3.13.8, 3.14.7
Center for Internet Security Critical Security Control 6, 9, 12, 19
Payment Card Industry Data Security Standard (PCI DSS) v3.2 1.1, 1.2, 1.3, 1.4, 8.3, 10.1, 10.2, 10.3, 10.4, 10.5, 10.6, 10.7, 10.8, 10.9, 11.4, 12.10

PURPOSE
To provide Pomona College with guidance to develop and implement the appropriate activities to identify the occurrence of an information security event.

POLICY
Pomona College employs controls to detect anomalous activity in a timely manner. Information regarding detected anomalous activity is gathered in order to understand the potential impact to Pomona College.

NETWORK OPERATIONS BASELINE

Pomona College develops, documents, and maintains under configuration control, a baseline configuration of the Pomona College system's network operations.

Pomona College reviews and updates the network operations baseline configuration:
- Annually or
- When required, due to an identified vulnerability, or
- As an integral part of installations and/or upgrades to the network

Procedure Mapping
The Pomona College system enforces approved authorizations for controlling the flow of information within the system and between interconnected systems.

- All outgoing network traffic to the internet must pass through at least one application-layer filtering proxy server
  - The proxy supports decrypting network traffic, logging individual TCP sessions, blocking specific URLs, domain names, and IP addresses to implement a blocklist, and applying a list of allowed sites that can be accessed through the proxy while blocking all other sites.

Pomona College:

- Authorizes connections from the Pomona College system to other systems through the use of Interconnection Security Agreements
- Employs deny-all, permit-by-exception for connections between the Pomona College system and external systems
- Documents for each interconnection, the interface characteristics, security requirements, and the nature of the information communicated
- Reviews and updates the Interconnection Security Agreements annually

### SECURITY EVENT DETECTION AND ANALYSIS

Pomona College:

- Configures monitoring systems on Demilitarized Zone (DMZ) networks to record:
  - At minimum, packet header information and if possible full packet header
  - Preferably full packet header and payloads of the traffic destined for or passing through the network border
- Deploys NetFlow collection and analysis
- Deploys monitoring devices:
  - Strategically within the Pomona College system to collect essential information
    - This includes network-based IDS sensors on internet and extranet DMZ systems and networks that look for unusual attack mechanisms and detect compromises of these systems.
    - At ad hoc locations within the Pomona College system to track specific types of transactions of interest to Pomona College
  - Employs automated tools to support near real-time analysis of events
  - Periodically scans for back-channel connections to the internet
- The Pomona College system monitors inbound and outbound network connections for unusual or unauthorized activities or conditions.
  - Network boundary devices, including, but not limited to, firewalls, network-based IPS, and inbound and outbound proxies, are configured to verbosity log all traffic arriving at the devices, both allowed and blocked.
  - Network based IPS devices are deployed to complement IDS by blocking known bad signatures or the behavior of potential attacks.
- The Pomona College system alerts the Security Incident Response Team (SIRT) when indications of a compromise or potential compromise occur.

### EVENT CORRELATION

Pomona College correlates security event information and incident responses to achieve an organization-wide perspective on incident awareness and response.
EVENT IMPACT

- Events are assessed by Pomona College utilizing the Pomona College risk assessment methodology in order to determine the potential impact of detected security events.
  - The results of security event risk assessments are documented in risk assessment reports.
  - Security event risk assessment reports are reviewed by the Security Official, or designee, and then disseminated to any appropriate personnel across the college.
- Pomona College coordinates incident handling activities with contingency planning activities.

EVENT DETECTION COMMUNICATION

- Pomona College:
  - Reviews and analyzes event detection records and logs regularly
  - Event detection information is communicated to appropriate parties in a timely manner to the Security Official, or designee