UH PCI Incident Response Plan Guidelines

Merchant’s Incident Response Plan (IRP) must be developed for the Merchant’s SAQ type and complexity

• Merchant’s IRP must include appropriate SAQ PCI DSS processes and procedures.
• Merchant’s IRP should encompass all phases of the security incident response: Preparation, Detection & Analysis, Containment, Eradication & Recovery, Post-Incident Activity & Analysis

### Definition & Examples of a Security Incident:

- Severe violation of a security policy
- Server with regulated data allows unauthenticated access to the data
- A server is compromised
- A workstation or laptop with sensitive or regulated information is compromised
- Numerous computers are infected with a network worm
- Denial of Service attack with the potential to impact business critical services
- Loss or theft of a device/electronic media/paper that contains sensitive or regulated information
Phase 1: Preparation

- Identify what is “in-scope” for Merchant’s SAQ Requirements:
  - Inventory of devices, equipment, data
  - Current network map
  - Current data flow diagram
- Identify Incident Response (IR) Team; at a minimum, must include:
  - Merchant Account Contact
  - Merchant IT Contact
  - Fiscal Administrator
  - UH Treasury PCI Coordinator
  - UH CISO/UH Information Security Team member – Infosec will coordinate notifications if necessary

Phase 2: Detection & Analysis

- Potential Incident Detection (incident is not yet confirmed):
  - Automated alerts, anomalous activities/behavior, external notifications, etc.
- Assess situation quickly to determine if it is an actual security incident
  - Are there signs of compromise (e.g. suspicious file/process, logs show possible intrusion)?
  - Is there or is it possible that sensitive or regulated information is stored on the target?
  - What other data/systems did the target have access to (e.g. file shares, databases, development keys)?
  - Is the target a critical system?
- If “yes” to any of the above questions or if unsure about the situation, notify the UH Information Security Team and UH Treasury Office immediately

Phase 3: Containment, Eradication, Recovery

- Determine incident priority
  - What type of security incident
  - What is the scope of the incident
  - What is the impact of the event
  - What are the details of the attack
- Contain the incident to prevent and stop further compromise, data exfiltration, and additional attacks
- Collect evidence (e.g. RAM, hard drive image, system and network logs, packet captures, etc.)
- Identify the point of entry and root cause of the incident
- Rebuild or restore from backup
- Provide frequent status reports to the UH Information Security team
Phase 3 – continued:

- Collecting Evidence (contact infosec@hawaii.edu if unsure how to properly collect evidence):
  - Capture RAM (most important, most volatile)
    - Use a memory dumper
      - Windows: FTKImager, Rekall, DumpIt
      - Linux: LiME
  - Hard Drive Image
    - Need to collect a forensic copy of the full disk
  - Virtual Machine?
    - Pause or Snapshot the machine

- Typical IR/Analysis Work Flow includes:
  - Contain system (disconnect network)
  - Obtain volatile artifacts (capture RAM)
  - Image hard drive (raw format)
  - Analyze the image or copy of VM
    - Check for open network connections
    - Check running processes/services
    - Check startup locations/scheduled tasks/cron jobs
    - Check cache/temp folders
    - Check network and system logs/events/history
    - Check versions/patch level
    - Scan with anti-virus
  - Collect Evidence/Screenshots
  - Document activity and findings with date/times

Phase 4: Post-Incident Activity and Analysis

- Reporting
  - UH Treasury & UH Infosec will identify the reporting requirements as determined by applicable laws and regulations and work with the Merchant on the timeline, report format, and appropriate notifications
- After Action Analysis
  - Review cause of incident and implement technologies, policies, procedures to prevent it from re-occurring
  - Review response timeline, process and procedures to identify areas of improvement