**ABOUT THIS TEMPLATE**

This template provides a customizable Incident Response Plan to help your organization respond to a cyberattack. Based on security industry best practices, it is designed to set the foundation for an incident response strategy that is pragmatic and simple to adopt.

This template is meant to be customized, helping you define your risk criteria, roles and responsibilities and crisis communication strategies. Use this document as a resource to coordinate the efforts of everyone in your organization involved in incident response – security leaders, operations managers, help desk teams, identity and access managers, as well as audit, compliance, communications, and executives.

*Please note that commentary and guidance on completing your IR Plan is generally italicized in this template and should be modified or removed once you’ve customized the plan to best suit your organization.*

**EXECUTIVE SUMMARY**

To maintain the trust of our employees, customers, and partners and meet regulatory requirements, it is essential that we do everything we can to protect confidential information and systems in the face of a cyberattack. The better prepared we are to respond to a potential cyberattack, the faster we can eradicate any threat and reduce the impact on our business.

This document describes the plan for responding to information security incidents at [Company Name]. This document will explain how to detect and react to cybersecurity incidents and data breaches, determine their scope and risk, respond appropriately and quickly, and communicate the results and risks to all stakeholders.

Effective incident response involves every part of our organization, including IT teams, legal, technical support, human resources, corporate communications, and business operations. It is important that you read and understand your role as well as the ways you will coordinate with others.

This plan will be updated *[at least annually]* to reflect organizational changes, new technologies and new compliance requirements that inform our cybersecurity strategy. We will conduct regular testing of this plan to ensure everyone is fully trained to participate in effective incident response.

**ROLES, RESPONSIBILITIES & CONTACT INFORMATION**

This Security Incident Response Plan must be followed by all personnel, including all employees, temporary staff, consultants, contractors, suppliers and third parties operating on behalf of *[Business Name].* All personnel are referred to as ‘staff’ within this plan.

Below are details about the roles and responsibilities of each member of [Company Name] to prevent and respond to a workplace incident. It is not an exhaustive list of duties but designed to give each employee a general understanding of their role and the roles of other employees in incident response and prevention.

# Incident Response Team Responsibilities

The Incident Response Lead is responsible for:

* Making sure that the Security Incident Response Plan and associated response and escalation procedures are defined and documented. This is to ensure that the handling of security incidents is timely and effective.
* Making sure that the Security Incident Response Plan is current, reviewed and tested at least once each year.
* Making sure that staff with Security Incident Response Plan responsibilities are properly trained at least once each year.
* Leading the investigation of a suspected breach or reported security incident and initiating the Security Incident Response Plan when needed.
* Reporting to and liaising with external parties, including pertinent business partners, legal representation, law enforcement, etc., as is required.
* Authorizing on-site investigations by appropriate law enforcement or third-party security/forensic personnel, as required during any security incident investigation. This includes authorizing access to/removal of evidence from site.

Security Incident Response Team (SIRT) members are responsible for:

* Making sure that all staff understand how to identify and report a suspected or actual security incident.
* Advising the Incident Response Lead of an incident when they receive a security incident report from staff.
* Investigating and documenting each reported incident.
* Taking action to limit the exposure of sensitive data and to reduce the risks that may be associated with any incident.
* Gathering, reviewing, and analysing logs and related information from various central and local safeguards, security measures and controls.
* Documenting and maintaining accurate and detailed records of the incident and all activities that were undertaken in response to an incident.
* Assisting law enforcement during the investigation processes. This includes any forensic investigations and prosecutions.
* Initiating follow-up actions to reduce likelihood of recurrence, as appropriate.
* Determining if policies, processes, technologies, security measures or controls need to be updated to avoid a similar incident in the future. They also need to consider whether additional safeguards are required in the environment where the incident occurred.

All staff members are responsible for:

* Making sure they understand how to identify and report a suspected or actual security incident.
* Reporting a suspected or actual security incident to the Incident Response Lead (preferable) or to another member of the Security Incident Response Team (SIRT).
* Reporting any security related issues or concerns to line management, or to a member of the SIRT.
* Complying with the security policies and procedures of [*BUSINESS NAME]*.

# Roles, Responsibilities and Contact Information

*[Below is a list of roles within an organization required to conduct a comprehensive, coordinated incident response. You should customize this list to match the size, structure, and regulatory and industry requirements of your organization. Include contact information for everyone involved in incident response, both internally and externally. You should keep a hard copy of your incident response plan and contact information accessible.]*

|  |  |  |
| --- | --- | --- |
| ROLE | RESPONSIBILITY | CONTACT DETAILS |
| **INFORMATION SECURITY** | | |
| **CSO / CISO** | Strategic lead. Develops technical, operational, and financial risk ranking criteria used to prioritize incident response plan.  Authorizes when and how incident details are reported.  Main point of contact for executive team and Board of Directors. | Name  Phone  Email |
| **Incident Response Team Lead and Team Members** | Central team that authorizes and coordinates incident response across multiple teams and functions through all stages of a cyber incident.  Maintains incident response plan, documentation, and catalog of incidents.  Responsible for identifying, confirming, and evaluating extent of incidents.  Conducts random security checks to ensure readiness to respond to a cyberattack. | Name  Phone  Email |
| **Identity and Access Team Lead and Team Members** | Responsible for privilege management, enterprise password protection and role-based access control.  Discovers, audits, and reports on all privilege usage.  Conducts random checks to audit privileged accounts, validate whether they are required, and re-authenticate those that are.  Monitors privileged account uses and proactively checks for indicators of compromise, such as excessive logins, or other unusual behavior.  Informs incident response team of potential attacks that compromise privileged accounts, validates and reports on the extent of attacks.  Takes action to prevent the spread of a breach by updating privileges. | Name  Phone  Email |
| **IT Operations and Support** (internal) | Manages access to systems and applications for internal staff and partners.  Centrally manages patches, hardware and software updates, and other system upgrades to prevent and contain a cyberattack. | Name  Phone  Email |
| **Technical Partners**  (ISP, MSP, Hosting, Testing Partners, etc.)  **Third Party External Incident Response Teams** | Manages security controls to limit the progression of a cyberattack across third-party systems and organizations.  Coordinates with Internal Response Team to manage risks. Professional Incident response teams help ensure a solid Incident Response process is followed. It is highly recommended that the company identify and prepare an External Response Team that can be available in an emergency IR situation and provide any requested information prior to an emergency to help them become familiar with your environment. | Name  Phone  Email  Name  Phone  Email |
| **COMPLIANCE** | | |
| **Legal Counsel** | Confirms requirements for informing employees, customers, and the public about cyber breaches.  Responsible for checking in with local law enforcement.  Ensures IT team has legal authority for privilege account monitoring. | Name  Phone  Email |
| **Audit & Compliance** | Communicates with regulatory bodies, following mandated reporting requirements. | Name  Phone  Email |
| **Human Resources** | Coordinates internal employee communications regarding breaches of personal information and responds to questions from employees. | Name  Phone  Email |
| **Regulatory Contacts** | Receives information about a breach according to timeline and format mandated by regulatory requirements. | Name  Phone  Email |
| **COMMUNICATIONS** | | |
| **Marketing & Public Relations Lead** | Communicates externally with customers, partners, and the media.  Coordinates all communications and request for interviews with internal subject matter experts and security team.  Maintains draft crisis communications plans and statements which can be customized and distributed quickly in case of a breach. | Name  Phone  Email |
| **Web & Social Media Lead** | Posts information on the company website, email, and social media channels regarding the breach, including our response and recommendations for users.  Sets up monitoring across social media channels to ensure we receive feedback or questions sent by customers through social media. | Name  Phone  Email |
| **Technical Support Lead** (Internal) | Provides security bulletins and technical guidance to employees in case of a breach, including required software updates, password changes, or other system changes. | Name  Phone  Email |
| **Technical Support Lead** (External) | Provides security bulletins and technical guidance to external users in case of a breach. | Name  Phone  Email |

# Testing and Updates

[Annual] testing of the Incident Response Plan using walkthroughs and practical simulations of potential incident scenarios is necessary to ensure the SIRT are aware of their obligations, unless real incidents occur which test the full functionality of the process.

1. The Incident Response Plan will be tested [at least once annually].
2. The Incident Response Plan Testing will test [your business]’s response to potential incident scenarios to identify process gaps and improvement areas.
3. The SIRT will record observations made during the testing, such as steps that were poorly executed or misunderstood by participants and those aspects that need improvement.
4. The Incident Response Lead will ensure the Security Incident Response Plan is updated and distributed to SIRT members.

# INCIDENT RESPONSE PROCESS OVERVIEW

Below is the structured 6-step process followed in this document as defined by the SANS Institute in their [Incident Handler’s Handbook](https://www.sans.org/reading-room/whitepapers/incident/incident-handlers-handbook-33901). The six steps outlined are:

1. **Preparation**—review and codify an organizational security policy, perform a risk assessment, identify sensitive assets, define which are critical security incidents the team should focus on, and build a Computer Security Incident Response Team (CSIRT).
2. **Identification**—monitor IT systems and detect deviations from normal operations and see if they represent actual security incidents. When an incident is discovered, collect additional evidence, establish its type and severity, and document everything.
3. **Containment**—perform short-term containment, for example by isolating the network segment that is under attack. Then focus on long-term containment, which involves temporary fixes to allow systems to be used in production, while rebuilding clean systems.
4. **Eradication**—remove malware from all affected systems, identify the root cause of the attack, and take action to prevent similar attacks in the future.
5. **Recovery**—bring affected production systems back online carefully, to prevent additional attacks. Test, verify and monitor affected systems to ensure they are back to normal activity.
6. **Lessons learned**—no later than two weeks from the end of the incident, perform a retrospective of the incident. Prepare complete documentation of the incident, investigate the incident further, understand what was done to contain it and whether anything in the incident response process could be improved.

# Incident Response Checklist

*[Below is a reporting template to use for documenting the steps and documentation gathered during your review and response to a cyber incident involving privileged accounts. Make updates to reflect your approved process and the tools you use. Add a responsible party for each step now, so everyone knows what data they need to gather and steps to take when an incident happens.]*

To demonstrate and improve the effectiveness of [Company Name] incident response team and security tools, [Company Name] requires a record of all actions taken during each phase of an incident. Supporting documentation is required, including all forensic evidence collected such as activity logs, memory dumps, audits, network traffic, and disk images.

|  |  |  |  |
| --- | --- | --- | --- |
| PHASE OF CYBER INCIDENT | ACTION | TEAM MEMBER/ SYSTEM | DAY/TIME  ACTION TAKEN |
| **Incident Discovery and Confirmation** | Describe how the team first learned of the attack (security researcher, partner, employee, customer, auditor, internal security alert, etc.). |  |  |
| Analyze audit logs and security applications to identify unusual or suspicious account behavior or activities that indicate a likely attack and confirm attack has occurred. |  |  |
| Describe potential attacker, including known or expected capabilities, behaviors, and motivations. |  |  |
| Identify access point and source of attack (endpoint, application, malware downloaded, etc.) and responsible party. |  |  |
| Prepare an incident timeline to keep an ongoing record of when the attack occurred and subsequent milestones in analysis and response. |  |  |
| Check applications for signatures, IP address ranges, files hashes, processes, executables names, URLs, and domain names of known malicious websites. |  |  |
| Evaluate extent of damage upon discovery and risk to systems and privileged accounts. Audit which privileged accounts have been used recently, whether any passwords have been changed, and what applications have been executed. (See Appendix A for more information on Threat Classification). |  |  |
| Review your information assets list to identify which assets have been potentially compromised. Note integrity of assets and evidence gathered. (See Appendix A for more information on Threat Classification). |  |  |
| Diagram the path of the incident/attack to provide an “at-a-glance” view from the initial breach to escalation and movement tracked across the network. |  |  |
| Collect meeting notes in a central repository to use in preparing communications with stakeholders. |  |  |
| Inform employees regarding discovery. |  |  |
| Analyze incident Indicators of Compromise (IOCs) with threat intelligence tools. |  |  |
| Potentially share information externally about breach discovery. You may choose to hold communications during this phase until you have contained the breach to increase your chances of catching the attacker. If so, make sure this aligns with your compliance requirements. |  |  |
| **Containment and Continuity** | Enable temporary privileged accounts to be used by the technical and security team to quickly access and monitor systems. |  |  |
| Protect evidence. Back up any compromised systems as soon as possible, prior to performing any actions that could affect data integrity on the original media. |  |  |
| Force multi-factor authentication or peer review to ensure privileges are being used appropriately. |  |  |
| Change passwords for all users, service, application, and network accounts. |  |  |
| Increase the sensitivity of application security controls (allowing, denying, and restricting) to prevent malicious malware from being distributed by the attacker. |  |  |
|  | Remove systems from production or take systems offline if needed. |  |  |
| Inform employees regarding breach containment. |  |  |
| Analyze, record, and confirm any instances of potential data exfiltration occurrences across the network. |  |  |
| Potentially share information externally regarding breach containment (website updates, emails, social media posts, tech support bulletins, etc.). |  |  |
| **Eradication** | Close firewall ports and network connections. |  |  |
| Test devices and applications to be sure any malicious code is removed. |  |  |
| Compare data before and after the incident to ensure systems are reset properly. |  |  |
| Inform employees regarding eradication. |  |  |
| Potentially share information externally regarding eradication (website updates, emails, social media posts, tech support bulletins, etc.). |  |  |
| **Recovery** | Download and apply security patches. |  |  |
| Close network access and reset passwords. |  |  |
| Conduct vulnerability analysis. |  |  |
| Return any systems that were taken offline to production. |  |  |
| Inform employees regarding recovery. |  |  |
| Share information externally regarding recovery (website updates, emails, social media posts, tech support bulletins, etc.). |  |  |
| **Lessons Learned** | Review forensic evidence collected. |  |  |
| Assess incident cost. |  |  |
| Write an Executive Summary of the incident. |  |  |
| Report to executive team and auditors if necessary. |  |  |
| Implement additional training for everyone involved in incident response and all employees. |  |  |
| Update incident response plan. |  |  |
| Inform employees regarding lessons learned, additional training, etc. |  |  |
|  | Potentially share information externally (website updates, emails, social media posts, tech support bulletins, etc.). |  |  |

## Responsibilities At-a-Glance

| **Activity** | **Role** |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **CSIRT Incident Lead** | **IT Contact** | **Legal Representative** | **Communications Officer** | **Management** |
| Initial Assessment | Owner | Advises | None | None | None |
| Initial Response | Owner | Implements | Updates | Updates | Updates |
| Collects Forensic Evidence | Implements | Advises | Owner | None | None |
| Implements Temporary Fix | Owner | Implements | Updates | Updates | Advises |
| Sends Communication | Advises | Advises | Advises | Implements | Owner |
| Check with Local Law Enforcement | Updates | Updates | Implements | Updates | Owner |
| Implements Permanent Fix | Owner | Implements | Updates | Updates | Updates |
| Determines Financial Impact on Business | Updates | Updates | Advises | Updates | Owner |

# Document Control

|  |  |
| --- | --- |
| Document Name: | Security Incident Response Plan |
| Current Version: |  |
| Plan Owner: |  |
| Plan Approver: |  |
| Date of Last Review: |  |

**APPENDIX A**

**THREAT CLASSIFICATION**

*[In your incident response plan, include information on how you evaluate risk. You may develop your own threat classification or risk ranking system to determine the level of incident response necessary.]*

The CIA Triad (Confidentiality, Integrity, and Availability) is a framework for incident classification that helps to prioritize the level of incident response required for a cyberattack.

1. **Confidentiality** – Incidents involving unauthorized access to systems, including privileged account compromise. The more confidential the data or the more important the systems are to the business, the higher the potential impact.
2. **Integrity** – Incidents involving data poisoning, including leveraging a privileged account to corrupt or modify data. The more sensitive the data, the higher the potential impact.
3. **Availability** – Incidents that impact the availability or proper functioning of services, such as Distributed Denial of Service (DDoS) or ransomware, including use of privileged accounts to make unauthorized changes. The more critical the services to the business, the higher the potential impact.

When ranking the level of risk to the organization and the type of incident response required, you must consider the extent to which privileged accounts are compromised, including those associated with business users, network administrators, and service or application accounts. When privileged accounts are involved in the breach, the level of risk increases exponentially as does the response required.

**APPENDIX B**

**COMPLIANCE AND LEGAL OBLIGATIONS**

*Below is a list of regulations that include requirements for incident response, including preparation, documentation, and reporting. Select the requirements that apply to your organization, include the appropriate contacts in the contact section of this template, and make sure the actions and tools you have in place provide the capabilities to meet your obligations.*

**HIPAA and HITECH**

Any organization that creates, receives, maintains, or transmits electronic protected health information (ePHI) in the United States must meet HIPAA requirements for access control and data sharing.

* **Reporting requirements –** The HIPAA Breach Notification Rule, 45 CFR §§ 164.400-414, requires HIPAA covered entities and their business associates to provide notification following a breach of unsecured protected health information.
* Similar breach notification provisions implemented and enforced by the Federal Trade Commission (FTC) apply to vendors of personal health records and their third-party service providers, pursuant to section 13407 of the HITECH Act.
* **Learn more –** <https://www.hhs.gov/hipaa/for-professionals/breach-notification/index.html>

**PCI DSS**

PCI DSS provides organizations that accept, store, or transmit credit card data with guidelines for privilege management and a framework to protect cardholder data.

* **Reporting requirements –** PCI DSS requires entities have an incident response plan and alert effected parties immediately. [PCI DSS 3.2.1](https://www.pcisecuritystandards.org/document_library), released on May 2018, marks the latest version.
* You may want to set up an arrangement with an independent Payment Card Industry Forensic Investigator (PFI) to call if you need outside expertise.
* **Learn more –** <https://www.pcisecuritystandards.org/documents/PCI_SSC_PFI_Guidance.pdf>

**FISMA/NIST**

FISMA is United States legislation intended to protect the security, confidentiality, and integrity of government data systems. A FISMA audit is a test of an organization’s system against the controls outlined in various NIST publications such as NIST SP 800-53, NIST SP 800-171, FIPS 199, and FIPS 200.

* **Reporting requirements –** A FISMA audit is a test of an organization’s system against the controls outlined in various NIST publications such as NIST SP 800-53, NIST SP 800-171, FIPS 199, and FIPS 200.
* **Learn more –** <https://csrc.nist.gov/projects/risk-management>

**NERC/CIP**

The NERC Critical Infrastructure Protection (CIP) Standards apply to the cyber security aspects of the Bulk Electric System and its efficient and reliable supply.

* **Reporting requirements –** Reliability standards require the reporting of cyber security incidents that compromise, or attempt to compromise, a responsible entity’s Electronic Security Perimeter (ESP) or associated Electronic Access Control or Monitoring Systems (EACMS).
* **Learn more –** <https://www.nerc.com/pa/Stand/Pages/CIPStandards.aspx>

**SOX**

Sarbanes-Oxley (SOX) is designed to reduce corporate fraud by requiring an increase in the strength and granularity of security controls for financial auditing and reporting.

* **Reporting requirements –** Companies must disclose failure of security safeguards and security breaches to SOX auditors.
* **Learn more –** https://www.sarbanes-oxley-101.com/

**EU GDPR**

Any organization dealing with EU citizens' Personally Identifiable Information is obligated to meet standards for effective data protection, adequate security measures, and privacy by design to comply with EUGDPR.

* **Reporting requirements –** Under GDPR, breach notification is mandatory in all member states where a data breach is likely to result in a risk for the rights and freedoms of individuals. This must be done within 72 hours of first having become aware of the breach. Data processors are required to notify their customers, the controllers, without undue delay after first becoming aware of a data breach.
* **Learn more –** <https://www.eugdpr.org/key-changes.html>