Creating and Managing an Incident Response Team for a Large Company

Using good communication skills, clear policies, professional team members and utilizing training opportunities, a company can run a successful incident response team. CSIRTs will continue to serve as an important component in supporting the management of risk and security in the business. By utilizing these passive and active phases of a CSIRT, the business will improve its security efforts across the enterprise and protect confidentiality, integrity and availability of its information systems.
Creating and Managing an Incident Response Team for a Large Company

GCIH Gold Certification

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Accepted:
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1) Incident Response Team Basics

   a) Introduction

   The computer security incident response team’s (C.S.I.R.T.) function is to react in a timely fashion, to intrusions, types of theft, denial of service attacks and many other events that have yet be to executed or considered against their company. The CSIRT will be responsible for investigating and reporting on malicious insider activity, internet spam, human resource violations and copyright infringements.

   The CSIRT will typically be called into action by a notification or triggered event but can also be called into action by a discovery while performing one of many passive services. Call Centers, Help Desks, business unit liaisons, legal representatives, email notifications or anonymous forms from an Intranet will all be entry points into calling the CSIRT into action.

   b) CSIRT Services

   CSIRT serve several purposes. In addition to identifying, containing and eradicating a successful intrusion, the CSIRT will educate, communicate, execute vulnerability assessment, shape policy and more.

   i) Passive Services
There are several passive services that the CSIRT will perform to provide the company aide protecting its information systems in anticipation of future malicious activity.

Vulnerability Assessment

The CISRT will perform vulnerability assessment against company assets. The CSIRT will verify reported vulnerabilities and how they can be exploited. The vulnerability assessment service can help the business to identify infrastructure that is a high risk and can also provide data on a system that has had incident response procedures executed against it. The vulnerability assessment service will help identify when the recovery phase of an incident response effort has mitigated the intrusion. Maintaining current vulnerability assessment data for the company’s high risk systems can better mitigate the security threats to the company.

Announcements and Information Disclosure

The announcement function is used to notify business units of potential threats to information systems, external virus outbreaks that can affect the infrastructure and new compliance objectives. The CSIRT will monitor technical developments and trends to help identify attack vectors. The announcement service will provide guidance to the business to aide in mitigating security threats before they happen.
In some cases, when investigating an intrusion, a disclosure of sensitive information will be uncovered. In the case of medical information (ePHI) or identity theft data loss, the CISRT will perform defined disclosure procedures. Depending on what data was exposed and which state the personally identifiable information owner resides in, the disclosure notification procedures will vary. Disclosure procedures will involve crafting notification letters, obtaining identity theft protection services for the affected parties, working with corporate communications to deal with the media, and potentially providing law enforcement evidence of the intrusion.

Intrusion Detection Service

The intrusion detection service is conducted by the monitoring efforts of the CSIRT. In some cases the security group and the CSIRT will be separate teams and monitoring of IDS and IPS technologies may be shared. In these cases, alerting on intrusion information will be passed up to the CSIRT for incident handling. The intrusion detection service typically monitors intrusion detection equipment, intrusion prevention equipment, security event manager logs and performs periodic intrusion discovery procedures. When an event of interest is identified, the CSIRT will move into its active services mode.

ii) Active Services
There are several services that the CSIRT will perform during an incident. The active services are typically what is expected of a CSIRT and are designed to contain, eradicate, recover, and report on an incident.

**Incident Handling**

Incident handling involves analyzing the incidents and events. Incident handling’s goal is to identify the scope of the incident, document the damage caused, and provide available response tactics. Incident handling typically involves incident analysis, evidence collection, tracking the origins of the intruder, response support for the victim(s) of the attack and coordination among other IRT, administrators and service providers.

**Vulnerability Handling**

Vulnerability handling involves gathering data around operating system and application vulnerabilities. The CSIRT will perform assessments against hardware and software to verify suspected vulnerabilities and help determine how the vulnerabilities can be exploited. The service will aide in determining the proper response to repair a vulnerability and can notify others about the mitigating strategy.

**Evidence Handling**

Evidence can be defined as any object found on an information system that could be involved in attacking the system or other systems around it. These can be computer viruses but also include exploit scripts, toolkits, log files, or even hardware devices such as physical key loggers.
Lessons Learned Reporting

The reporting service primary goal is to document what happened and how the business can improve its’ defenses. The CSIRT will conduct a “lessons learned” or a post mortem meeting to discuss the incident and educate the management team. Incident Reporting is beginning to become an auditable event for external auditors to test against.

iii) Management Services

Awareness Training

Awareness training can be a service offered by the CSIRT. Since the CSIRT is typically conducting in depth investigations and vulnerability assessments against the businesses information assets, then next logical step is for the CSIRT to educate the technology teams about good security practices pertaining to the information systems that are being administered.

CSIRT will also seek opportunities to build awareness of the user base through newsletters, announcements, lessons learned, marketing campaigns, and websites.

Risk Assessments

The CSIRT can have important insight into risk assessments. When the business conducts a risk assessment to bring on a new technology or application, a member of the CSIRT should be a participant in the effort. The experience of the CSIRT members will help identify risk points, potential vulnerabilities, and threats.

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Compliance Certifications

The CSIRT can also perform compliance certifications. The team can conduct security evaluations on information systems or services to ensure the security or the pass / fail of a compliance regulation. The team can be used to provide guidance on best practices and recommendations for purchasing, installing or securing new systems.

c) CSIRT Policies and Standards

Policies are documented principles adopted by the management team. The policies of an organization should be clearly understood by the entire workforce and the knowledge of the incident response policy will allow the CSIRT to act on their responsibilities.

i) Incident Response Policy

Building an incident response policy involves several objectives.

First, an Incident Response Policy cannot be enforced unless it has management approval. Endorsement by management is critical. Without this approval the team will be destined to encounter business roadblocks that will hinder a timely incident response. In some cases, it may not even be allowed.

Second, the policy must be clear. Any employee should be able to easily understand what the policy is about. If a non-technology oriented employee is confused by the policy, then the policy should be rewritten.
Third, the policy must be to the point. A long-winded policy will either be a bad policy or one that would include sections that should be in a procedure document instead.

Forth, the policy must be usable and implementable. Avoid statements that sound appropriate but will be open to interpretation. At the same time, the policy should not include objectives that the CSIRT will not be able to execute due to business processes or corporate culture.

Once the policy as been created, it is important to make regular checks against its effect on the workforce. When changes occur in the business direction or new technology systems are implemented, update the policy to match the new processes.

ii) Incident Response Standards and Procedures

A successful CSIRT is a team that has documented standards and procedures. Standards should be written from how the CSIRT will begin its investigations and report the findings to standards written for how the CSIRT will be trained and what authority the members will be granted.

A good standard will define when the CSIRT will contain and clean up incidents and when the team will watch and gather information for litigation.

Having good recovery procedures are essential. It is very rare to find a CSIRT member that has mastered every operating system and application in
your environment. Having procedures to follow on how to correctly down and restore a system can help prevent time consuming efforts and alleviate some of the stress of the incident.

These written procedures will aide the CSIRT in formalizing how investigations are carried out, how evidence is handled, what organizations are notified at what times, how post mortem reporting is conducted, how malicious software is to be eradicated and how to perform a recovery of an information system.

iii) Code of Conduct

The code of conduct policy for the CSIRT is a set of rules outlining how a team member will behave in a way that supports the goals of the incident response team and the mission statement of the company. The code of conduct will be used when no other policy or procedure applies. It should reflect the natural behavior of a professional incident handler. An example of a CSIRT code of conduct policy was written by the original manager of the CERT, Rich Pethia.

iv) Disclosure Policy

It is important to define the CSIRT disclosure policy. Without the policy, the team will have no guidance on who to disclose to, what to disclose and when to disclose the information. Traditionally, CSIRT staff treated all

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1 CERT Coordination Center.
information reported to them as confidential and information around security incidents were not distributed to other organizations. In some cases, law enforcement or other response teams were included when coordinating the response to the incident.

The policy should outline the information disclosure restrictions placed on the CSIRT staff. What will be reported to law enforcement? If the incident involved the disclosure of personally identifiable information, when do you disclose to the affected individuals? Personal information includes, but is not limited to, information regarding a person's home or other personal address, driver's license, marital status, financial information, credit card numbers, bank accounts, parental status, sex, race, religion, political affiliation, personal assets, home or other personal phone numbers, and so on. Did the incident involve the disclosure of electronically protected healthcare information as defined in HIPAA? Did the incident involve social security numbers? If the CSIRT is to engage law enforcement, can the business afford to have equipment confiscated?

The disclosure policy will specify (sometimes legal) limitations that outlines how or when law enforcement is notified, customers are notified, external CSIRTs and upper management.

There are very clear state laws in the United States that outline when companies must notify individuals that their personal information has been disclosed by unauthorized events. At least 35 states, as of Q1 2007, have

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2 http://hipaa.yale.edu/guidance/index.html

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enacted legislation requiring companies and government agencies to disclose security breaches involving personal information.\(^3\)

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<thead>
<tr>
<th>State</th>
<th>Code Reference</th>
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<tr>
<td>Arizona</td>
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<td>Ga. Code § 10-1-910 et seq.</td>
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<td>Idaho</td>
<td>Id. Code §§ 28-51-104 to 28-51-107</td>
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<tr>
<td>Illinois</td>
<td>815 Ill. Comp. Stat. 530/1 et seq.</td>
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<td>Indiana</td>
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<td>Kansas</td>
<td>50-7a01, 50-7a02 2006 S.B. 196</td>
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<td>Michigan</td>
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<td>New Jersey</td>
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<td>New York</td>
<td>N.Y. Bus. Law § 899-aa</td>
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<td>North Carolina</td>
<td>N.C. Gen. Stat § 75-65</td>
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<td>Tennessee</td>
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\(^3\) [http://www.ncsl.org/programs/lis/cip/priv/breachlaws.htm](http://www.ncsl.org/programs/lis/cip/priv/breachlaws.htm)

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Utah | Utah Code § 13-44-101 et seq.
Vermont | Vt. Stat. Tit. 9 § 2430 et seq.
Washington | Wash. Rev. Code § 19.255.010
Wisconsin | Wis. Stat. § 895.507

Timing of a disclosure event is imperative. It is important to perform incident investigations and be as certain as possible about the disclosure events. At the same time the CSIRT should be notifying the victims as soon as possible. If the duration between the identification and the notification are too great, the company can face litigation and even greater loss of public opinion. It is imperative that the CSIRT utilize legal council when drafting a disclosure communication to anyone as this notification can have enormous consequences to the company’s reputation.

Disclosure Procedures to External CSIRT

There will be times where the company CSIRT will want to notify external CSIRT such as the CERT/CC, FIRST, or private Managed Security Solutions Partners (MSSP). To be successful, it is important that coordination occurs among law enforcement, National CSIRTs and the research community who have experience in responding to security incidents. External CSIRTs can play an important role by helping their constituents protect their systems, detect, identify, and analyze compromises to the security of those systems and effectively coordinate the response to the attack. External CSIRT teams

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4 http://www.privacyrights.org/ar/ChronDataBreaches.htm
5 http://www.first.org/members/teams/
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can also be evangelists in promoting and helping other organizations build effective incident management capabilities.

The details for sharing of information will change depending on the incident and how the external CSIRT will benefit from the information. Information is typically disclosed to:

- Inform other CSIRT of a large attack.
- Inform other teams about a new vulnerability or attack vector.
- Contact other sites that are the target of an incident to help coordinate the remediation.

Procedures should be clearly written for the internal CSIRT to follow when submitting an incident outside the organization. When reporting intruder activity, it is important to ensure that you provide enough information for the external CSIRT to be able to understand and respond to your report, but still filter any information that would be considered sensitive to the company.

v) Evidence Handling Procedures

During the CSIRT’s active services, it is important to track information pertaining to the incident. This tracking of information should be at a level of detail that can be useful for recalling the event years later. Handling procedures should record information in logical organized methods to provide historical records and actions taken by the team. In many cases, this information can be used for statistical reporting purposes in management.

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reports. For every incident, best practices capture and track, at a minimum, the following set of information:

- Local Tracking Number / External CSIRT Tracking Number
- Category of Incident
  - Disclosure, Hacking Attempt, Worm Outbreak, Malicious Insider, etc.
- Brief Description
- Contacts for all Parties Involved
- Subjective Priority
  - Critical, High, Medium, Low, Informational
- Evidence Gathered
  - who, what, where, why, how, when
- History of Actions
  - Record all actions by the team. This will be important if litigation is an optional outcome.
- Current Status of the Incident
  - Active, On Hold, Complete, etc.

CSIRT should utilize electronic collaboration tools such as a Microsoft SharePoint Server. Team members should have a single point to deposit, search, and update data on incident activities. Additionally, incidents should be archived for some predetermined period of time, using the collaboration tool. The SharePoint tool allows for a repository of electronic data, online workflow capabilities, versioning, automatic alerting and very flexible role
based access for team members and additional stake holders outside the team.

Physical evidence should be maintained in a designated “war room”. An empty office or conference room can be converted into a CSIRT war room with the understanding that the team will have sole access to a physically secured room. Locking cabinets for hard drives, tapes, and notes on tracking of the equipment are a must.

2) Primary Phases of the CSIRT

The functions that the CSIRT perform during active services are going to be considered the heart of the CSIRT mission. These primary functions are preparation, identification, containment, eradication, recovery, and lessons learned.

a) Identification

How does the company detect an event? What triggers the CSIRT into action? The answer for most is a mixed one.

– Technology departments deploy intrusion prevention sensors, monitor firewall logs, review honeypot activity\(^6\), analyze antivirus alerts, review vulnerability assessment reports, examine authentication events, etc.

\(^6\) [http://www.honeynet.org](http://www.honeynet.org) is a popular open source honeypot project

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Business units will typically educate and raise awareness about security risks to make the workforce use their eyes and ears to identify suspicious activity.

When either of these groups detects an event, the CSIRT should be notified.

i) Triage Role

The goal of the triage role is to ensure that information about an event is gathered from a single point of contact. The triage role is the primary contact for the CSIRT for the business. Contacted by email, fax, telephone, anonymous form, or hallway conversation, the triage role will kick off the incident procedures by calling into action the correct team members to start the investigation.

The company should be trained on how to report information to the CSIRT. The triage role should be clearly defined, contact methods should be easily accessible, simple and defined procedures for reporting and clear guidelines on types of events to be reported.

ii) Identification Tasks

The CSIRT should have a member of the management team as its sponsor. This is typically the CSO, CIO or VP over the technology department. Notify your sponsor that an investigation has started. If
additional resources are needed outside the CSIRT, the sponsor will help with obtaining what is needed.

It is in the identification function that a primary incident handler should be assigned. The responsibility of the primary handler is to ensure coordination, documentation, and communication with the CSIRT and any other departments or organizations directly involved. The primary handler will be responsible for the quality of the incident handling procedures for the assigned event.

The information gathered in this identification phase is critical. The first goal of the team is to determine whether the incident reported is actually an incident. The team will be asking assessment questions such as, what are the affected systems, if a vulnerability is present, the value of the system to the business (i.e. mission critical), can the vulnerability be exploited remotely, was this incident user error, was data exposed to unauthorized individuals, does this incident affect companies outside our own?

Be sure to establish good chain of custody scenarios. Document the “who, what, where, when”, whenever possible. Each piece of evidence must be under the control of a CSIRT member at all times and document the storage of evidence if it is secured. The chain of custody will be important for law enforcement if the evidence is going to be used in litigation.

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7 See appendix for law enforcement contact information
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b) Containment

The containment function is designed to prevent the attack from affecting systems, people, or organizations any more than it has already. The CSIRT is now trying to keep the scenario from getting worse.

A decision must be made when entering the containment phase. If evidence collected is going to be used for litigation, care must be taken to keep the system(s) from becoming contaminated by the containment efforts. Drives should be imaged, back ups performed, original copies secured, etc. Always use a backup or a copy to perform the incident handling procedures.

The CISRT should perform multiple backups as soon as it is practical. The backups can be used for forensics or in the off chance that containment procedures render the system(s) inoperable. In most cases, original media will be cataloged and secured, while a backup copy will be used to restore the system for eradication and recovery.

The containment phase can involve many tasks: Patching systems, password changes, firewall rule changes, account management, stopping of services and RootKit / Antivirus system scans. On the employee side the CSIRT may place phone calls to halt a business process, obtain paper materials or printouts that contain false information or send a corporate wide communication to alert the workforce.
c) Eradication

The eradication phase involves the removal of any malicious activity or artifacts left by the intrusion. Typically eradication engages in removing virus infections, backdoor software, data left by the intruder and uninstalling attack tools. If the system was hit with any flavor of a rootkit, formatting hard drives, reloading the system, patching and restoration from backup is highly recommended.

Vulnerability assessment and analysis is typically performed during the eradication phase. Initiating system and network level vulnerability scans will help the team find open vulnerabilities. In many cases, attackers often use the same vulnerability across the entire network. A quality scanner such as Qualys\(^8\) or Foundscan can go a long way in providing your CSIRT will vulnerability data. The CSIRT should research the vulnerability against the known information repositories such as CERT or BugTraq to understand the impact of the exploit against the company.

Improving the defenses of the systems or business process affected is vital. New firewall rules, host based intrusion prevention technologies, upgrades to more secure applications and patching are good techniques for improving the defenses. If the vulnerability is not removed, the system can become compromised all over. Business process can be strengthened by objectives such as implementing least access principles, encryption mechanisms and social engineering awareness.

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\(^8\) http://www.qualys.com/solutions/vulnerability_management/

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d) Recovery

The recovery phase is used to bring the restored system(s) back into production. Recovery will typically take place, according to the system owner, after business unit testing has been conducted.

Monitoring is an important objective during this phase. When the incident system(s) are brought back into production use, monitoring must be conducted to validate the eradication was successful. Auditing the operating system logs, intrusion detection or prevention logs, checking for backdoor ports, reviewing firewall logs and searching for any new vulnerabilities are standard procedures.

e) Lessons Learned

The best way to improve on a company’s defense is to learn from the mistakes made. The goal of the lessons learned reporting is to finalize the CSIRT documentation, and create a post mortem report for review. In most cases, a meeting is scheduled within a week to review the report. The report should focus on events leading up to the incident, generally what occurred, what was done to contain and eradicate, and what can be done to mitigate the vulnerability in the future. The reporting phase is a good time to note organizational problems that conflicted with the CSIRT’s procedures and suggest improvements. Invite the correct management, stake holders and information technology individuals to better expose the CSIRT’s efforts. The
lessons learned meetings can be a good place to obtain approval to fix business processes, obtain newer technologies, update incident handling procedures and to educate the business.

It is important to have the CSIRT members involved in the incident complete the lessons learned documentation as close to completing the incident as possible. These post mortem reports should be short but professional and designed for executive consumption.

3) CSIRT Membership

Outsiders may view the CSIRT as a team of highly educated technologists. Although technical experience is a good prerequisite, there are several attributes that are needed for a successful incident team. It is important for the company’s management team to understand the needs of the CSIRT. Specific incident response training, paid time off, and membership buy in from across the company are several topics that will need to be agreed upon.

a) CSIRT Staff

One of the challenging facets of building a successful incident response team is to employ a multifaceted team. A typical team will have the following schema:
- Primary Members
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- Technology Security Specialists
- System Administrators
- Network Engineers
- Desktop Support Specialists
- Disaster Recovery Coordinators

  Secondary Members
  - Inside Legal Council
  - Corporate HR Specialist
  - Corporate Communication Specialist
  - Physical Security or Facilities Coordinator
  - Management Team Sponsor

Geographically diverse companies will need to work out the combination of remote handlers with a centralized team. The primary members will be the core of the CSIRT and will work the majority of the smaller incidents. The secondary members will be expected to join the CSIRT when an event requires their expertise. A hoax email virus infection will not require the secondary members to be called into action, but payroll laptops going missing will no doubt call the entire team into action.

Interpersonal Skills

Having a wide range of skills is a high priority, but communication skills will greatly improve the reputation of the team. You may find expert security engineers that would seem to be a fit in the CSIRT except for a lack of interpersonal skills. The team members should have common sense, exhibit
effective oral and written communication skills, show diplomacy when dealing with external groups, have the ability to follow standards and procedures, show integrity and have the willingness to continue their education.

Technical Skills

Technical skills will be important for a successful CSIRT. The primary members of the team will need to have a good amount of experience in their individual fields to effectively handle a security incident. Senior network engineers, senior system administrators, and senior security specialists will be good candidates for membership. The technical understanding provided by the experienced primary members will be needed for the large variety of incident scenarios that will be investigated.

b) CSIRT Training

Training of the CSIRT is important. Training will increase the skills of the team as new technologies are available, keep the team practiced, and educate the newest members.

Training should focus not only on forensic analysis and eradication techniques, but other general skills in communication, project management, evidence handling, team building, intruder techniques, compliance laws, privacy laws and ethics. The team should be periodically evaluated to determine ways to expand the skills that would increase the competency of the CSIRT.
Technical skills such as, but not limited to, firewall technologies, router and switch infrastructures, TCP/IP, Operating system installation and hardening, security event manager concepts, intrusion prevention technologies, vulnerability assessment techniques, wireless infrastructures, secure programming concepts, etc. should always be kept current.

New team members can be overwhelmed with the standards and procedures that they will be introduced to as an incident handler. In most cases, new CSIRT members will be paired with an experienced handler as a mentor. As the new team member becomes familiar with the roles of an incident handler, they can be used to draft communications, compose lessons learned reports for review, aide in research or work with evidence documentation.

c) Extensions of the CSIRT

A CSIRT, on occasion, may find that it will be unable to staff full time members. In these cases the CSIRT will need to develop good relationships with the subject matter experts needed when an incident is being investigated. The CSIRT policy can outline how outside employees can be called into service of the incident team when a set of criteria is met. You will see this situation more often for the human resources, legal council and physical facilities members. The management team should be clear on when the CSIRT can utilize these head count and what priority can be used. This standard
should be well established in advance so that these extended staff can be called into action quickly.

4) Conclusion

Using good communication skills, clear policies, professional team members and utilizing training opportunities, a company can run a successful incident response team. CSIRTs will continue to serve as an important component in supporting the management of risk and security in the business. By utilizing these passive and active phases of a CSIRT, the business will improve its security efforts across the enterprise and protect confidentiality, integrity and availability of its information systems.

5) References

CERT. Handbook for Computer Security Incident Response Teams (CSIRTs)

CERT. Defining Incident Management Processes for CSIRTs: A Work in Progress

SANS. Incident Handling Step-by-Step and Computer Crime Investigation: Book 1

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National Conference of State Legislatures.
http://www.ncsl.org/programs/lis/cip/priv/breachlaws.htm

http://www.microsoft.com/technet/SolutionAccelerators

Federal Bureau of Investigation
http://www.fbi.gov/contact/fo/fo.htm
Appendix A

FBI & Secret Service FIELD OFFICES

**ALABAMA**

**Birmingham**
FBI 205.326.6166/205.715.0232
2121 8th Avenue N.
Birmingham, AL 35203-2396
USSS 205.731.1144/205.731.0007
Daniel Building
15 South 20th Street, Suite 1125
Birmingham, AL 35233

**Mobile**
FBI 334.438.3674/215.415.3235
One St. Louis Centre
1 St. Louis Street, 3rd Floor
Mobile, AL 36602-3930
USSS 334.441.5851/334.441.5250
Parkview Office Building
182 St. Francis Street
Mobile, AL 36602

**Montgomery**
USSS 334.223.7601/334.223.7523
Colonial Financial Center
1 Commerce Street, Suite 605
Montgomery, AL 36104

**ALASKA**

**Anchorage**
FBI (907).276.4441/907.265.9599
101 East Sixth Avenue
Anchorage, AK 99501-2524
USSS 907.271.5148/907.271.3727
Federal Building & U.S. Courthouse
222 West 7th Avenue, Room 559
Anchorage, AK 99513

**ARIZONA**

**Phoenix**
FBI 602.279.5511/602.650.3024
201 East Indianola Avenue, Suite 400
Phoenix, AZ 85012-2080
USSS 602.640.5580/602.640.5505
3200 North Central Avenue, Suite 1450
Phoenix, AZ 85012

**Tucson**
USSS 520.670.4826/520.670.4826
300 West Congress Street, Room 4-V
Tucson, AZ 85701

**ARKANSAS**

**Little Rock**
FBI 501.221.9100/501.228.8509
24 Shackelford West Boulevard
Little Rock, AR 72211-3755
USSS 501.324.6241/501.324.6997
111 Center Street, Suite 1700
Little Rock, AR 72221-4419

**CALIFORNIA**

**Fresno**
FBI 209.487.5204/559.487.5013
5200 North Palm Avenue, Suite 207
Fresno, CA 93704

**Los Angeles**
FBI 310.477.6565/310.996.3359
Federal Office Building
1100 Wilshire Boulevard, Suite 1700
Los Angeles, CA 90024-3672
USSS 213.894.4830 213.894.2948
Roybal Federal Building
255 East Temple Street, 17th Floor
Los Angeles, CA 90012

**Sacramento**
FBI 916.481.9110/916.977.2300
4500 Orange Grove Avenue
Sacramento, CA 95841-4205
USSS 916.930.2130/916.930.2140
501 I Street, Suite 1700
Sacramento, CA 95814-2322

**San Diego**
FBI 858.565.1255/858.499.7991
Federal Office Building
9797 Aero Drive
San Diego, CA 92123-1800
USSS 619.557.5640/619.557.6658
550 West C Street, Suite 660
San Diego, CA 92101

**San Francisco**
FBI 415.553.7400/415.553.7674
450 Golden Gate Avenue, 13th Floor
San Francisco, CA 94102-9523
USSS 415.744.9026/415.744.9051
345 Spear Street
San Francisco, CA 94105

**Santa Ana**
FBI 714.246.8257/714.246.8261
200 W. Santa Ana Boulevard,
Suite 500
Santa Ana, CA 92701-4164

**Ventura**
USSS 805.339.9180/805.339.0015
5500 Telegraph Road, Suite 161
Ventura, CA 93003

**COLORADO**

**Colorado Springs**
FBI 719.632.3325/719.632.3341
212 N. Wahsatch, Room 204
Colorado Springs, CO 80903

**Denver**
FBI 303.629.7171/303.628.3085
1961 Stout Street, 18th Floor
Denver, CO 80202-1823
USSS 303.866.1010/303.866.1934
1600 Lincoln Street
Denver, CO 80264

**CONNECTICUT**

**New Haven**
FBI 203.777.6311/203.503.5098
600 State Street
New Haven, CT 06511-6505
USSS 203.865.2449/203.865.2525
265 Church Street, Suite 1201
New Haven, CT 06510

**DELAWARE**

**Wilmington**
FBI 302.573.6188/302.573.6190
One Rodney Square
920 King Street, Suite 414
Wilmington, DE 19801

**DISTRICT OF COLUMBIA**

**Washington, D.C.**
FBI (HDQRS.)
202.278.2000/202.278.2478
601 4th Street NW
Washington, D.C. 20535-0002
1100 L Street NW, Suite 6600
Washington, D.C. 20005
USSS (HDQRS.)
950 H Street NW
Washington, D.C. 20223

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<td>F 904.721.1211/904.727.6242</td>
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<td>7820 Arlington Expressway</td>
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<td>USDA 300 Ala Moana Boulevard, Room 4-230</td>
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Creating and Managing an Incident Response Team for a Large Company

Tim Proffitt

MARYLAND

Baltimore
FBI 410.265.8080/410.281.0339
7142 Ambassador Road
Baltimore, MD 21244-2754
USB 410.962.2200/410.962.0840
100 S. Charles Street, 11th Floor
Baltimore, MD 21201

Eastern Shore
USB 410.268.7286/410.268.7903
U.S. Naval Academy
Police Dept., Headquarters Building 257, Room 221
Annapolis, MD 21402

Frederick
USB 301.293.6434/301.694.8078
Rowley Training Center
9200 Powder Mill Road, Route 2
Laurel, MD 20708

MASSACHUSETTS

Boston
FBI 617.742.5533/617.223.6327
One Center Plaza, Suite 600
Boston, MA 02109
USB 617.565.5640/617.565.5659
Thomas P. O’Neill Jr. Federal Building
10 Causeway Street
Boston, MA 02222

MICHIGAN

Detroit
FBI 313.965.2323/313.237.4009
Patrick V. McNamara Building
477 Michigan Avenue, 26th Floor
Detroit, MI 48226

USB 313.226.6400/313.226.3952
Patrick V. McNamara Building
477 Michigan Avenue
Detroit, MI 48226

Grand Rapids
USB 616.454.4711/616.454.5816
330 Ionia Avenue NW, Suite 302
Grand Rapids, MI 49003-2350

Saginaw
USB 989.752.8076/989.752.8048
301 E. Genessee, Suite 200
Saginaw, MI 48607

MINNESOTA

Minneapolis
FBI 612.376.3200/612.376.3249
113 Washington Avenue South, Suite 1100
Minneapolis, MN 55401-2176
USB 612.348.1800/612.348.1807
U.S. Courthouse
300 South 4th Street, Suite 750
Minneapolis, MN 55401

MISSISSIPPI

Jackson
FBI 601.948.5000/601.360.7550
Federal Building
100 West Capitol Street
Jackson, MS 39269-1601
USB 601.965.4436/601.965.4012
Federal Building
100 West Capitol Street, Suite 840
Jackson, MS 39269

MISSOURI

Kansas City
FBI 816.512.8200/816.512.8545
1300 Summit
Kansas City, MO 64105-1362
USB 816.460.0600/816.283.0321
1150 Grand Avenue, Suite 510
Kansas City, MO 64106

Springfield
USB 417.866.8340/417.864.9467
901 St. Louis Street, Suite 306
Springfield, MO 65806

St. Louis
FBI 314.231.4324/314.519.2636
222 Market Street
St. Louis, MO 63103-2516
USB 314.539.2238/314.539.2567
Thomas F. Eagleton U.S. Courthouse
11 S. 10th Street, Suite 21.346
St. Louis, MO 63102

MONTANA

Great Falls
USB 406.452.8515/406.761.2316
11 Third Street North
Great Falls, MT 59401

NEBRASKA

Omaha
FBI 402.493.8688/402.492.3799
10755 Burt Street
Omaha, NE 68114-2000
USB 402.965.3670/402.445.9638
2707 North 108 Street, Suite 301
Omaha, NE 68164

NEW HAMPSHIRE

Manchester
USB 603.626.5631/603.626.5653
1750 Elm Street, Suite 802
Manchester, NH 03104

NEW JERSEY

Atlantic City
USB 609.487.1300/609.487.1491
Ventnor Professional Campus
8601 Ventnor Avenue
Ventnor City, NJ 08406

Newark
FBI 973.792.2000/973.792.3035
1 Gateway Center, 22nd Floor
Newark, NJ 07102-9899
USB 973.856.4500/973.984.5822
Headquarters Plaza, West Towers,
Speedwell Avenue, Suite 700
Morristown, NJ 07960

Trenton
USB 609.989.2008/609.989.2174
402 East State Street, Suite 3000
Trenton, NJ 08608

NEW MEXICO

Albuquerque
FBI 505.224.2000/505.224.2276
415 Silver Avenue SW, Suite 300
Albuquerque, NM 87102
USB 505.248.5290/505.248.5296
505 Marquette Street NW
Albuquerque, NM 87102

TRENTON

USB 609.989.2008/609.989.2174
402 East State Street, Suite 3000
Trenton, NJ 08608

NEW MEXICO

Albuquerque
FBI 505.224.2000/505.224.2276
415 Silver Avenue SW, Suite 300
Albuquerque, NM 87102
USB 505.248.5290/505.248.5296
505 Marquette Street NW
Albuquerque, NM 87102

NEVADA

Las Vegas
FBI 702.385.1281/702.385.1281
John Lawrence Bailey Building
700 East Charleston Boulevard
Las Vegas, NV 89104-1545
USB 702.388.6571/702.388.6668
600 Las Vegas Boulevard South,
Suite 600
Las Vegas, NV 89101

Reno
USB 775.784.5354/775.784.5991
100 West Liberty Street, Suite 500
Reno, NV 89511
## RHODE ISLAND

**Providence**  
USSS 401.331.6456/401.528.4394  
The Federal Center  
300 Westminster Street, Suite 343  
Providence, RI 02903

## SOUTH CAROLINA

**Charleston**  
USSS 843.747.7242/843.747.7787  
990 Core Avenue, Suite 500  
North Charleston, SC 29406

**Columbia**  
FBI 803.551.4200/803.551.4324  
151 Westpark Boulevard  
Columbia, SC 29210-3857

**Greenville**  
USSS 864.233.1490/864.235.6237  
NCNB Plaza  
7 Laurens Street, Suite 508  
Greenville, SC 29601

## SOUTH DAKOTA

**Sioux Falls**  
USSS 605.330.4565/605.330.4523  
230 South Phillips Avenue, Suite 405  
Sioux Falls, SD 57104

## TENNESSEE

**Chattanooga**  
USSS 423.752.5125/423.752.5130  
Post Office Building  
800 Georgia Avenue, Room 204  
Chattanooga, TN 37402

**Knoxville**  
FBI 865.546.0751/865.544.3590  
John J. Duncan Federal Office Building  
710 Locust Street, Suite 600  
Knoxville, TN 37902-2537

**Memphis**  
FBI 901.747.4300/901.747.9621  
1 Eagle Crest Building  
225 North Humphreys Boulevard, Suite 300  
Memphis, TN 38120-2107

**Nashville**  
USSS 615.736.5841/615.736.5848  
615 U.S. Courthouse  
801 Broadway Street  
Nashville, TN 37203

## TEXAS

**Austin**  
USSS 512.916.5103/512.916.5365  
Federal Office Building  
300 E. 8th Street  
Austin, TX 78701

**Dallas**  
FBI 214.720.2200/214.922.7459  
1801 North Lamar, Suite 300  
Dallas, TX 75202-1795

**El Paso**  
FBI 915.832.5000/915.832.5259  
660 S. Mesa Hills Drive  
El Paso, TX 79912

**Houston**  
FBI 713.693.5000/713.693.3999  
2500 East TC Jester  
Houston, TX 77008-1300

**Lubbock**  
USSS 806.472.7347/806.472.7542  
1205 Texas Avenue, Room 613  
Lubbock, TX 79401

**McAllen**  
USSS 956.630.5811/956.630.5838  
200 S. 10th Street, Suite 1107  
McAllen, TX 78501

**San Antonio**  
FBI 210.225.6741/210.978.5380  
U.S. Post Office Building  
615 East Houston Street, Suite 200  
San Antonio, TX 78205-9998

**Tyler**  
USSS 903.534.2933  
903.581.9569  
6101 South Broadway, Suite 335  
Tyler, TX 75703

## UTAH

**Salt Lake City**  
FBI 801.579.1400/801.579.4500  
257 Towers Building  
257 East 200 South, Suite 1200  
Salt Lake City, UT 84111-2048

**VERMONT

**

**

## VIRGINIA

**Norfolk**  
FBI 757.455.0100/757.455.2647  
150 Corporate Boulevard  
Norfolk, VA 23522-4999

**Richmond**  
FBI 804.261.1044/804.627.4494  
1970 East Parham Road  
Richmond, VA 23228

**Roanoke**  
USSS 540.345.4301/540.857.2151  
105 Franklin Road SW, Suite 2  
Roanoke, VA 24011

## WASHINGTON

**Seattle**  
FBI 206.622.0460/206.262.2587  
1110 Third Avenue  
Seattle, WA 98101

**Spokane**  
USSS 509.353.2532/509.353.2871  
601 N. Riverside Avenue, Suite 1340  
Spokane, WA 99201

## WEST VIRGINIA

**Charleston**  
USSS 304.347.5188/304.347.5187  
990 Core Avenue, Suite 500  
North Charleston, SC 29406

## WISCONSIN

**Madison**  
USSS 608.264.5191/608.264.5592  
131 W. Wilson Street, Suite 303  
Madison, WI 53703

**Milwaukee**  
FBI 414.276.4684/414.276.6560  
330 East Kilbourn Avenue  
Milwaukee, WI 53202

## WYOMING

**Cheyenne**  
USSS 307.772.2380/307.772.2387  
2120 Capitol Avenue, Suite 3026  
Cheyenne, WY 82001
## Upcoming SANS Training

Click Here for a full list of all Upcoming SANS Events by Location

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<td>Oct 01, 2018 - Oct 07, 2018</td>
<td>Live Event</td>
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<td>SANS Cyber Defence Bangalore 2018</td>
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<td>Jul 16, 2018 - Jul 28, 2018</td>
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<td>SANS OnDemand</td>
<td>Books &amp; MP3s OnlyUS</td>
<td>Anytime</td>
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