

## Prepare



Connect with trusted communities to share information

Defensomania

## Prepare



Implement a central log management system

Defensomania

## Prepare



Implement event and alert management system for effective first triage

Defensomania

## Prepare



Implement case management system for effective incident handling

Defensomania

## Prepare



Implement automation and orchestration to support analysts during first triage and incident investigations

Defensomania

## Prepare



Implement detection use cases to cover the required scope

Defensomania

## Prepare



Build know-how for new threats and provide trainings to analysts

Defensomania

## Prepare



Establish visibility into all critical assets and platform

Defensomania

## Prepare



Ensure central log collection for relevant logs on systems in monitoring and incident response scope

Defensomania

## Prepare



Deploy remote forensics software

Defensomania

## Prepare



Deploy tools and capabilities for containment

Defensomania

## Prepare



Prepare decision tree and establish processes for GDPR readiness

Defensomania

## Prepare



Attend or organize internal and external exercises

Defensomania

## Prepare



Prepare and build coordination and escalation team for major incidents

Defensomania

## Prepare



Prepare and implement playbooks for assisting analysts

Defensomania

## Prepare



Prepare a list of critical assets for prioritisation

Defensomania

## Prepare



Ensure knowledge of all used operating systems in the team

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## Prepare



Establish different kinds of communication channel for various stakeholders

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## Prepare



Make a list of contact details for relevant peers

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## Prepare



Ensure and implement collaboration between SOC and CSIRT and clarify responsibilities during an incident

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## Prepare



Build backup infrastructure in case of emergency

Defensomania

## Prepare



Search for threats through regular threat hunting

Defensomania

## Prepare



Implement detection to find sensitive data which was indexed in a public search engine

Defensomania

## Prepare



Joker - invent a new preparation step

Defensomania

## Prepare



Joker - invent a new preparation step

Defensomania

## Prepare



Joker - invent a new preparation step

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## Detect



Search for email attributes inside all of your mailboxes

Defensomania

## Detect



Search for cron jobs on Linux server

Defensomania

## Detect



Search for configuration settings on remote system

Defensomania

## Detect



Search for malicious configuration changes on remote system

Defensomania

## Detect



Search for processes on a remote host

Defensomania

## Detect



Search for files on a remote host

Defensomania

## Detect



Search for file hash on a remote host

Defensomania

## Detect



Search for destination IPs in network logs

Defensomania

## Detect



Search for source IPs in your network logs

Defensomania

## Detect



Search for domains in your network logs

Defensomania

## Detect



Search for referrer in your network logs

Defensomania

## Detect



Search for user agent in your network logs

Defensomania

## Detect



Search for URL in your network logs

Defensomania

## Detect



Search for leaked data in public search engines and paste sites

Defensomania

## Detect



Detect credential abuse by looking at login anomalies

Defensomania

## Detect



Detect credential leakage through monitoring external paste sites

Defensomania

## Detect



Detect leaked sensitive information on public source code repository

Defensomania

## Detect



Detect lateral movement with pipes

Defensomania

## Detect



Detect lateral movement with local admin

Defensomania

## Detect



Detect lateral movement with credential abuse

Defensomania

## Detect



Detect malicious process injection

Defensomania

## Detect



Detect leaked information through active cybercrime forum monitoring

Defensomania

## Detect



Detect unauthorized access on remote system

Defensomania

## Detect



Detect unknown domain administrator in your user management

Defensomania

## Detect



Detect unknown local administrator account on compromised system

Defensomania

## Detect



Detect in-memory malware on remote host

Defensomania

## Detect



Check GDPR relevance

Defensomania

## Detect



Find attacker through attacker's real IP which leaked because of bad opsec

Defensomania

## Detect



Joker - invent a new detection method

Defensomania

## Detect



Joker - invent a new detection method

Defensomania

## Detect



Joker - invent a new detection method

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## Respond



Remove persistence mechanisms on compromised system

Defensomania

## Respond



Remove malicious config settings on a compromised system

Defensomania

## Respond



Remove malware on compromised system

Defensomania

## Respond



Stop malicious process on compromised system

Defensomania

## Respond



Stop data leakage on compromised system

Defensomania

## Respond



Remove sensitive data on public accessible website

Defensomania

## Respond



Start first response to gather volatile data

Defensomania

## Respond



Collect and analyse logs from compromised system

Defensomania

## Respond



Collect evidence from compromised system

Defensomania

## Respond



Collect files from compromised system

Defensomania

## Respond



Collect the list of local accounts from compromised system

Defensomania

## Respond



Create and collect disk image for a compromised system

Defensomania

## Respond



Create file system timeline for a disk image

Defensomania

## Respond



Extract C2 IPs from a malware sample

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## Respond



Search for found C2 servers

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**Respond**



Search for other affected systems  
after initial compromise

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**Respond**



Block domain names

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**Respond**



Block IPs

Defensomania

**Respond**



Block URLs

Defensomania

**Respond**



Block access to API

Defensomania

**Respond**



Block employee account

Defensomania

**Respond**



Isolate system

Defensomania

**Respond**



Take remote system offline

Defensomania

**Respond**



Disable network connectivity on  
remote system

Defensomania

## Respond



Delete malicious emails in employees mailboxes

Defensomania

## Respond



Sinkhole C2 server

## Respond



Capture traffic to C2 server

Defensomania

## Respond



Force password reset

Defensomania

## Respond



Add evidence to long time storage

Defensomania

## Respond



Mitigate a DDoS attack

Defensomania

## Respond



Initiate hot patching or immediate fix of exploited vulnerability

Defensomania

## Respond



Create a GDPR notification

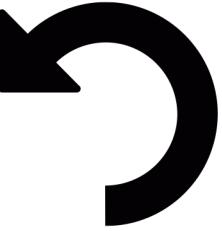
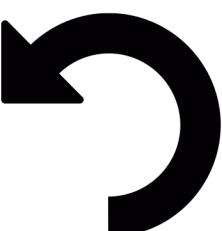
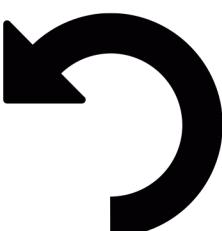
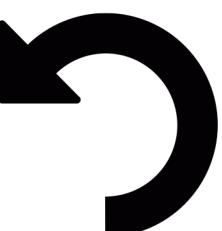
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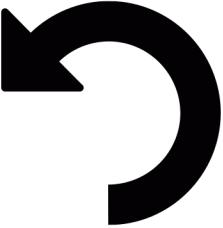
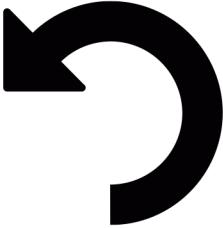
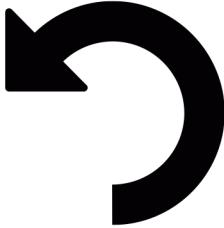
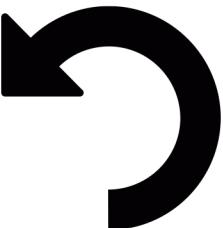
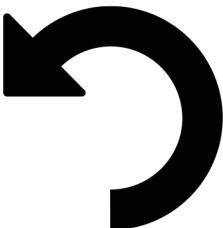
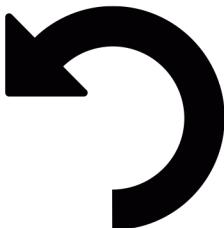
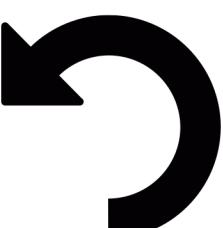
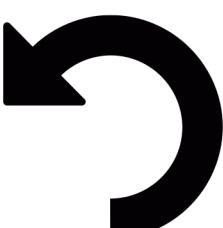
## Respond



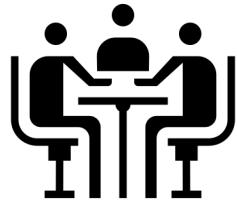
Document indicators of attack and indicators of compromise centrally.

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<p><b>Respond</b></p>  <p>Share indicators of attack and of compromise with the community</p> <p>Defensomania</p>	<p><b>Respond</b></p>  <p>Joker - invent a new respond action</p> <p>Defensomania</p>	<p><b>Respond</b></p>  <p>Joker - invent a new respond action</p> <p>Defensomania</p>
<p><b>Respond</b></p>  <p>Joker - invent a new respond action</p> <p>Defensomania</p>	<p><b>Respond</b></p>  <p>Joker - invent a new respond action</p> <p>Defensomania</p>	<p><b>Recover</b></p>  <p>Initiate fresh installation of compromised system from trusted install sources</p> <p>Defensomania</p>
<p><b>Recover</b></p>  <p>Initiate the patching of a critical vulnerability</p> <p>Defensomania</p>	<p><b>Recover</b></p>  <p>Initiate an audit on a platform</p> <p>Defensomania</p>	<p><b>Recover</b></p>  <p>Restore backup</p> <p>Defensomania</p>

<p><b>Recover</b></p>  <p>Bring the service online which you took offline during the incident</p> <p>Defensomania</p>	<p><b>Recover</b></p>  <p>Rotate API keys for a compromised account</p> <p>Defensomania</p>	<p><b>Recover</b></p>  <p>Change credentials for a compromised service account which was disabled during the incident</p> <p>Defensomania</p>
<p><b>Recover</b></p>  <p>Implement long term monitoring through new security monitoring use cases and incident response processes</p> <p>Defensomania</p>	<p><b>Recover</b></p>  <p>Add a security deficit to the policy framework</p> <p>Defensomania</p>	<p><b>Recover</b></p>  <p>Joker - invent a new recover action</p> <p>Defensomania</p>
<p><b>Recover</b></p>  <p>Joker - invent a new recover action</p> <p>Defensomania</p>	<p><b>Recover</b></p>  <p>Joker - invent a new recover action</p> <p>Defensomania</p>	<p><b>Lessons Learned</b></p>  <p>Organize and perform lessons learned meeting</p> <p>Defensomania</p>

## Lessons Learned



Define technical debts and report them accordingly

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## Lessons Learned



Document results and new knowledge for the team and company

Defensomania

## Lessons Learned



Improve incident response processes

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## Lessons Learned



Improve incident detection capabilities

Defensomania

## Lessons Learned



Add new detection rule to internal and external repositories

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## Lessons Learned



Joker - invent a new lessons learned step

Defensomania

## Lessons Learned



Joker - invent a new lessons learned step

Defensomania

## Lessons Learned



Joker - invent a new lessons learned step

Defensomania

## Lessons Learned



Joker - invent a new lessons learned step

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## Communication



Publish external news article

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## Communication



Inform public relations department about possible questions from outside

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## Communication



Communicate findings to management

Defensomania

## Communication



Create an incident report

Defensomania

## Communication



Write answer to request made on external platform

Defensomania

## Communication



Joker - invent a new communication way

Defensomania

## Communication



Joker - invent a new communication way

Defensomania

## Communication



Joker - invent a new communication way

Defensomania

## Scenario



A supplier of your HRM software was targeted and a backdoored version was distributed. You may already upgraded. Indicators of compromise were published.

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## Scenario



Your national CERT has published some indicators of compromise for your country and specifically for your industrial sector. Report back if you found hits.

Defensomania

## Scenario



Different employee accounts were abused for further attacks against your customers. During initial analysis, you found that all of them visited a typo domain of your corporate portal.

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## Scenario



An employee's workstation was infected with a banking Trojan which not only changed network settings but also installed email monitoring software. It is related to a recent malvertising campaign.

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## Scenario



You are notified that one of your ticketing systems is compromised and malware was placed on that server. It connects to other systems reachable from the ticketing server.

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## Scenario



Spear phishing attack against an employee and employee reports login in into a similar looking company portal.

Defensomania

## Scenario



Spear phishing attack against an employee using a malicious document which after it was opened executed code on the computer.

Defensomania

## Scenario



Employee downloads a malware through a fake software package which connects back to command and control servers using DNS.

Defensomania

## Scenario



Vulnerability was exploited on one of your servers and an attacker had access to the database with customer data. A increased bandwidth was registered on the network device.

Defensomania

## Scenario



A database with customer data was exposed to the Internet through a misconfigured firewall and someone on Twitter is leaking data from that database.

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## Scenario



A public git repository leaked internal credentials and it's unclear whether the credentials were already abused.

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## Scenario



Servers from your main online service were targeted by a DDoS and are unavailable.

Defensomania

## Scenario



Malicious code was distributed to your endpoints during the routine update of a signed application.

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## Scenario



A domain admin has run a malicious attachment after loudly proclaiming how dumb their users are for doing the same.

Defensomania

## Scenario



Security company has released an APT group PDF at BH USA. The list of IOCs includes a host in your ASN.

Defensomania

## Scenario



Every night new corporate accounts are abused for sending spam.

Defensomania

## Scenario



Email infrastructure got compromised. Attackers have full access to your mailboxes.

Defensomania

## Scenario



Attackers got domain admin in your environment. Backdoor accounts were created and disk encryption software was activated?

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## Scenario



An adversary has access to your Jenkins server.

Defensomania

## Scenario



An adversary has access to your vulnerable Jenkins server. Jenkins jobs with credentials are visible to everyone.

Defensomania

## Scenario



Someone is impersonating you to customer support at one of your service provider.

Defensomania

## Scenario



Your DNS was modified to respond with an attacker's DKIM key.

Defensomania

## Scenario



Due to a botched CI/CD script, complete source code exposure on production.

Defensomania

## Scenario



A bug in your webapp has allowed every record to be accessed via URL enumeration and IDOR.

Defensomania

## Scenario



Your subscription database is hacked. Thousands of new accounts are added and hard to distinguish from old.

Defensomania

## Scenario



New paste on a public paste site was found with password hashes and emails from your customer DB from 3 years ago. More recent hashes are missing.

Defensomania

## Scenario



Your reception software has leaked all of your visitor logs. They are available via torrent.

Defensomania

## Scenario



A script has been logging exported variables containing full user registration objects. This logging method is full of plaintext passwords.

Defensomania

## Scenario



Joker - be evil and invent a new nightmare and worst case scenario.  
What scenario will get your team struggling? (If you want to get crazy then contribute your scary scenario for the sake of humanity.)

Defensomania

## Scenario



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Defensomania

## Scenario



Joker - be evil and invent a new nightmare and worst case scenario.  
What scenario will get your team struggling? (If you want to get crazy then contribute your scary scenario for the sake of humanity.)

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## Scenario



A developer has just typo'd an upstream package installation to their laptop. There was a malicious package waiting for that typo and post-installation code is exfiltrating data.

Defensomania

## Scenario



An engineer has typo'd a package they are adding to a product repository. It is malicious. The CI/CD and prod environment variables are exfiltrated to a C&C

Defensomania

## Scenario



A malicious browser extension was installed on different corporate computers. It injects keyloggers into websites.

Defensomania

## Scenario



Your software build imports from an employee's personal NPM package. The employee quits and vandalizes the package, causing a public incident.

Defensomania

## Scenario



An adversary takes control of your MDM service account. Your MDM support team cannot be reached for account recovery.

Defensomania

## Scenario



Your DNS was modified to respond with an attacker's DKIM key. Spearphishes will be signed by your domain in 30 minutes.

Defensomania

## Scenario



The certificates involved with your primary code signing process have been compromised and used to sign malicious apps.

Defensomania

## Scenario



An employee has left a firewall rule wide open after several hours of troubleshooting a network issue.

Defensomania

## Scenario



An employee has left a firewall rule wide open after a faulty change request was implemented. Bruteforcing attempts were registered on previously protected servers.

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## Scenario



You allow customers to upload sensitive information to your platform to share them with others. However, the data was left unprotected and anyone could access and download the content.

Defensomania

## Scenario



You were informed that one of your website directories used to share files with external parties were accessible and writable by any anonymous user. Suspicious files were found.

Defensomania

## Scenario



You were informed that your MDM solution was compromised and over 75% of your employee's mobile devices are infected with malware.

Defensomania

## Scenario



You were informed that your firewalls were compromised and malware was executed on these devices to steal information.

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