

## Prepare



Connect with trusted communities to share information

Cyber Against Humanity

## Prepare



Implement a central log management system

Cyber Against Humanity

## Prepare



Implement event and alert management system for effective first triage

Cyber Against Humanity

## Prepare



Implement case management system for effective incident handling

Cyber Against Humanity

## Prepare



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

Cyber Against Humanity

## Prepare



Implement detection use cases to cover the required scope

Cyber Against Humanity

## Prepare



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

Cyber Against Humanity

## Prepare



Establish visibility into all critical assets and platform

Cyber Against Humanity

## Prepare



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

Cyber Against Humanity

## Prepare



Deploy remote forensics software

Cyber Against Humanity

## Prepare



Deploy tools and capabilities for containment

Cyber Against Humanity

## Prepare



Prepare decision tree and establish processes for GDPR readiness

Cyber Against Humanity

## Prepare



Attend or organize internal and external exercises

Cyber Against Humanity

## Prepare



Prepare and build coordination and escalation team for major incidents

Cyber Against Humanity

## Prepare



Prepare and implement playbooks for assisting analysts

Cyber Against Humanity

## Prepare



Prepare a list of critical assets for prioritisation

Cyber Against Humanity

## Prepare



Ensure knowledge of all used operating systems in the team

Cyber Against Humanity

## Prepare



Establish different kinds of communication channel for various stakeholders

Cyber Against Humanity

## Prepare



Make a list of contact details for relevant peers

Cyber Against Humanity

## Prepare



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

Cyber Against Humanity

## Prepare



Build backup infrastructure in case of emergency

Cyber Against Humanity

## Prepare



Search for threats through regular threat hunting

Cyber Against Humanity

## Prepare



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

Cyber Against Humanity

## Prepare



Joker - invent a new preparation step

Cyber Against Humanity

## Prepare



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Joker - invent a new preparation step

Cyber Against Humanity

## Detect



Search for email attributes inside all of your mailboxes

Cyber Against Humanity

## Detect



Search for cron jobs on Linux server

Cyber Against Humanity

## Detect



Search for configuration settings on remote system

Cyber Against Humanity

## Detect



Search for malicious configuration changes on remote system

Cyber Against Humanity

## Detect



Search for processes on a remote host

Cyber Against Humanity

## Detect



Search for files on a remote host

Cyber Against Humanity

## Detect



Search for file hash on a remote host

Cyber Against Humanity

## Detect



Search for destination IPs in network logs

Cyber Against Humanity

## Detect



Search for source IPs in your network logs

Cyber Against Humanity

## Detect



Search for domains in your network logs

Cyber Against Humanity

## Detect



Search for referrer in your network logs

Cyber Against Humanity

## Detect



Search for user agent in your network logs

Cyber Against Humanity

## Detect



Search for URL in your network logs

Cyber Against Humanity

## Detect



Search for leaked data in public search engines and paste sites

Cyber Against Humanity

## Detect



Detect credential abuse by looking at login anomalies

Cyber Against Humanity

## Detect



Detect credential leakage through monitoring external paste sites

Cyber Against Humanity

## Detect



Detect leaked sensitive information on public source code repository

Cyber Against Humanity

## Detect



Detect lateral movement with pipes

Cyber Against Humanity

## Detect



Detect lateral movement with local admin

Cyber Against Humanity

## Detect



Detect lateral movement with credential abuse

Cyber Against Humanity

## Detect



Detect malicious process injection

Cyber Against Humanity

## Detect



Detect leaked information through active cybercrime forum monitoring

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## Detect



Detect unauthorized access on remote system

Cyber Against Humanity

## Detect



Detect unknown domain administrator in your user management

Cyber Against Humanity

## Detect



Detect unknown local administrator account on compromised system

Cyber Against Humanity

## Detect



Detect in-memory malware on remote host

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## Detect



Check GDPR relevance

Cyber Against Humanity

## Detect



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

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## Detect



Joker - invent a new detection method

## Detect



Joker - invent a new detection method

## Detect



Joker - invent a new detection method

## Respond



Remove persistence mechanisms on compromised system

## Respond



Remove malicious config settings on a compromised system

## Respond



Remove malware on compromised system

## Respond



Stop malicious process on compromised system

## Respond



Stop data leakage on compromised system

## Respond



Remove sensitive data on public accessible website

## Respond



Start first response to gather volatile data

Cyber Against Humanity

## Respond



Collect and analyse logs from compromised system

Cyber Against Humanity

## Respond



Collect evidence from compromised system

Cyber Against Humanity

## Respond



Collect files from compromised system

Cyber Against Humanity

## Respond



Collect the list of local accounts from compromised system

Cyber Against Humanity

## Respond



Create and collect disk image for a compromised system

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## Respond



Create file system timeline for a disk image

Cyber Against Humanity

## 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

Cyber Against Humanity

## Respond



Block URLs

Cyber Against Humanity

## Respond



Block access to API

Cyber Against Humanity

## Respond



Block employee account

Cyber Against Humanity

## Respond



Isolate system

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## Respond



Take remote system offline

Cyber Against Humanity

## Respond



Disable network connectivity on  
remote system

Cyber Against Humanity

## Respond



Delete malicious emails in employees mailboxes

Cyber Against Humanity

## Respond



Sinkhole C2 server

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## Respond



Capture traffic to C2 server

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## Respond



Force password reset

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## Respond



Add evidence to long time storage

Cyber Against Humanity

## Respond



Mitigate a DDoS attack

Cyber Against Humanity

## Respond



Initiate hot patching or immediate fix of exploited vulnerability

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## Respond



Create a GDPR notification

Cyber Against Humanity

## Respond



Document indicators of attack and indicators of compromise centrally.

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## Respond



Share indicators of attack and of compromise with the community

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## Respond



Joker - invent a new respond action

Cyber Against Humanity

## Respond



Joker - invent a new respond action

Cyber Against Humanity

## Respond



Joker - invent a new respond action

Cyber Against Humanity

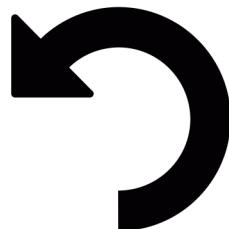
## Respond



Joker - invent a new respond action

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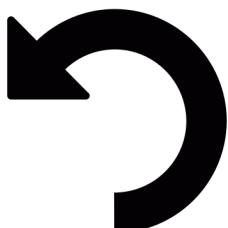
## Recover



Initiate fresh installation of compromised system from trusted install sources

Cyber Against Humanity

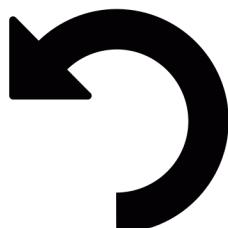
## Recover



Initiate the patching of a critical vulnerability

Cyber Against Humanity

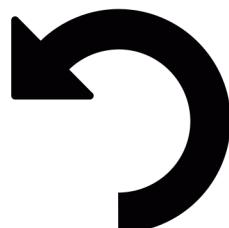
## Recover



Initiate an audit on a platform

Cyber Against Humanity

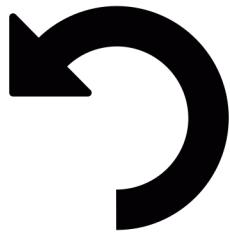
## Recover



Restore backup

Cyber Against Humanity

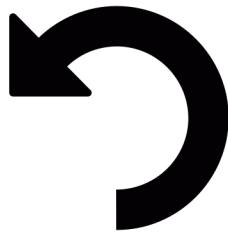
## Recover



Bring the service online which you took offline during the incident

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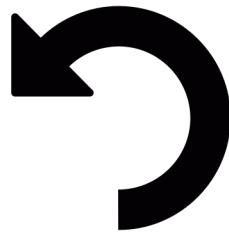
## Recover



Rotate API keys for a compromised account

Cyber Against Humanity

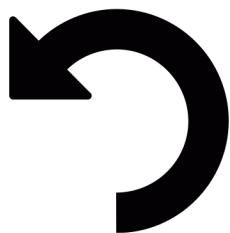
## Recover



Change credentials for a compromised service account which was disabled during the incident

Cyber Against Humanity

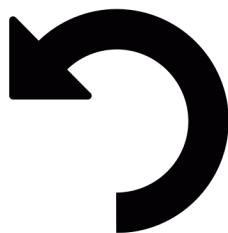
## Recover



Implement long term monitoring through new security monitoring use cases and incident response processes

Cyber Against Humanity

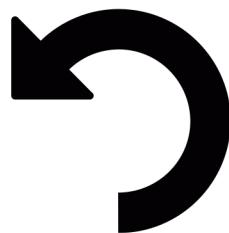
## Recover



Add a security deficit to the policy framework

Cyber Against Humanity

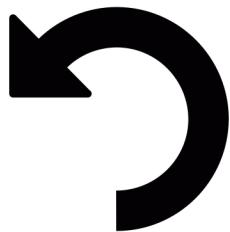
## Recover



Joker - invent a new recover action

Cyber Against Humanity

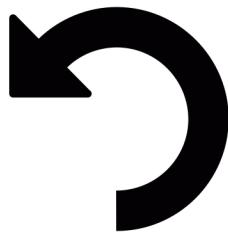
## Recover



Joker - invent a new recover action

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## Recover



Joker - invent a new recover action

Cyber Against Humanity

## Lessons Learned



Organize and perform lessons learned meeting

Cyber Against Humanity

## Lessons Learned



Define technical debts and report them accordingly

Cyber Against Humanity

## Lessons Learned



Document results and new knowledge for the team and company

Cyber Against Humanity

## Lessons Learned



Improve incident response processes

Cyber Against Humanity

## Lessons Learned



Improve incident detection capabilities

Cyber Against Humanity

## Lessons Learned



Add new detection rule to internal and external repositories

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## Lessons Learned



Joker - invent a new lessons learned step

Cyber Against Humanity

## Lessons Learned



Joker - invent a new lessons learned step

Cyber Against Humanity

## Lessons Learned



Joker - invent a new lessons learned step

Cyber Against Humanity

## Lessons Learned



Joker - invent a new lessons learned step

Cyber Against Humanity

## Communication



Publish external news article

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## Communication



Inform public relations department about possible questions from outside

## Communication



Communicate findings to management

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## Communication



Create an incident report

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## Communication



Write answer to request made on external platform

Cyber Against Humanity

## Communication



Joker - invent a new communication way

Cyber Against Humanity

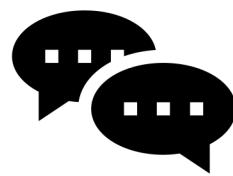
## Communication



Joker - invent a new communication way

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## Communication



Joker - invent a new communication way

## 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.

Cyber Against Humanity

## 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.

Cyber Against Humanity

## Scenario



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

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## Scenario



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

Cyber Against Humanity

## 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.

Cyber Against Humanity

## 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.

Cyber Against Humanity

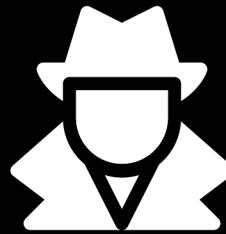
## Scenario



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.

Cyber Against Humanity

## Scenario



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

Cyber Against Humanity

## Scenario



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

Cyber Against Humanity

## Scenario



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

Cyber Against Humanity

## Scenario



Every night new corporate accounts are abused for sending spam.

Cyber Against Humanity

## Scenario



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

Cyber Against Humanity

## Scenario



Attackers got domain admin in your environment. What should you scary more? Backdoor accounts or the sudden activation of disk encryption software?

Cyber Against Humanity

## Scenario



An adversary has access to your Jenkins server.

Cyber Against Humanity

## Scenario



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

Cyber Against Humanity

## Scenario



Someone is impersonating you to customer support.

Cyber Against Humanity

## Scenario



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

Cyber Against Humanity

## Scenario



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

Cyber Against Humanity

## Scenario



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

Cyber Against Humanity

## Scenario



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

Cyber Against Humanity

## 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.

Cyber Against Humanity

## Scenario



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

Cyber Against Humanity

## Scenario



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

Cyber Against Humanity

## 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.)

Cyber Against Humanity

## 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.)

Cyber Against Humanity

## 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.)

Cyber Against Humanity

## 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.

Cyber Against Humanity

## 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

Cyber Against Humanity

## Scenario



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

Cyber Against Humanity

## Scenario



Your build imports from an employee's personal NPM package. They quit, and vandalize the package, causing a public incident.

Cyber Against Humanity

## Scenario



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

Cyber Against Humanity

## Scenario



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

Cyber Against Humanity

## Scenario



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

Cyber Against Humanity

## Scenario



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

Cyber Against Humanity

## 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.

Cyber Against Humanity

## 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.

Cyber Against Humanity

## 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.

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