

<p>Prepare</p>  <p>Connect with trusted communities to share information</p> <p>Cyber Against Humanity</p>	<p>Prepare</p>  <p>Implement a central log management system</p> <p>Cyber Against Humanity</p>	<p>Prepare</p>  <p>Implement event and alert management system for effective first triage</p> <p>Cyber Against Humanity</p>
<p>Prepare</p>  <p>Implement case management system for effective incident handling</p> <p>Cyber Against Humanity</p>	<p>Prepare</p>  <p>Implement automation and orchestration to support analysts during first triage and incident investigations</p> <p>Cyber Against Humanity</p>	<p>Prepare</p>  <p>Implement detection use cases to cover the required scope</p> <p>Cyber Against Humanity</p>
<p>Prepare</p>  <p>Build know-how for new threats and provide trainings to analysts</p> <p>Cyber Against Humanity</p>	<p>Prepare</p>  <p>Establish visibility into all critical assets and platform</p> <p>Cyber Against Humanity</p>	<p>Prepare</p>  <p>Ensure central log collection for relevant logs on systems in monitoring and incident response scope</p> <p>Cyber Against Humanity</p>

<p>Prepare</p>  <p>Deploy remote forensics software</p> <p>Cyber Against Humanity</p>	<p>Prepare</p>  <p>Deploy tools and capabilities for containment</p> <p>Cyber Against Humanity</p>	<p>Prepare</p>  <p>Prepare decision tree and establish processes for GDPR readiness</p> <p>Cyber Against Humanity</p>
<p>Prepare</p>  <p>Attend or organize internal and external exercises</p> <p>Cyber Against Humanity</p>	<p>Prepare</p>  <p>Prepare and build coordination and escalation team for major incidents</p> <p>Cyber Against Humanity</p>	<p>Prepare</p>  <p>Prepare and implement playbooks for assisting analysts</p> <p>Cyber Against Humanity</p>
<p>Prepare</p>  <p>Prepare a list of critical assets for prioritisation</p> <p>Cyber Against Humanity</p>	<p>Prepare</p>  <p>Ensure knowledge of all used operating systems in the team</p> <p>Cyber Against Humanity</p>	<p>Prepare</p>  <p>Establish different kinds of communication channel for various stakeholders</p> <p>Cyber Against Humanity</p>

<p>Prepare</p>  <p>Make a list of contact details for relevant peers</p> <p>Cyber Against Humanity</p>	<p>Prepare</p>  <p>Ensure and implement collaboration between SOC and CSIRT and clarify responsibilities during an incident</p> <p>Cyber Against Humanity</p>	<p>Prepare</p>  <p>Build backup infrastructure in case of emergency</p> <p>Cyber Against Humanity</p>
<p>Prepare</p>  <p>Search for threats through regular threat hunting</p> <p>Cyber Against Humanity</p>	<p>Prepare</p>  <p>Implement detection to find sensitive data which was indexed in a public search engine</p> <p>Cyber Against Humanity</p>	<p>Prepare</p>  <p>Joker - invent a new preparation step</p> <p>Cyber Against Humanity</p>
<p>Prepare</p>  <p>Joker - invent a new preparation step</p> <p>Cyber Against Humanity</p>	<p>Prepare</p>  <p>Joker - invent a new preparation step</p> <p>Cyber Against Humanity</p>	<p>Detect</p>  <p>Search for email attributes inside all of your mailboxes</p> <p>Cyber Against Humanity</p>

<p>Detect</p>  <p>Search for cron jobs on Linux server</p> <p>Cyber Against Humanity</p>	<p>Detect</p>  <p>Search for configuration settings on remote system</p> <p>Cyber Against Humanity</p>	<p>Detect</p>  <p>Search for malicious configuration changes on remote system</p> <p>Cyber Against Humanity</p>
<p>Detect</p>  <p>Search for processes on a remote host</p> <p>Cyber Against Humanity</p>	<p>Detect</p>  <p>Search for files on a remote host</p> <p>Cyber Against Humanity</p>	<p>Detect</p>  <p>Search for file hash on a remote host</p> <p>Cyber Against Humanity</p>
<p>Detect</p>  <p>Search for destination IPs in network logs</p> <p>Cyber Against Humanity</p>	<p>Detect</p>  <p>Search for source IPs in your network logs</p> <p>Cyber Against Humanity</p>	<p>Detect</p>  <p>Search for domains in your network logs</p> <p>Cyber Against Humanity</p>

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

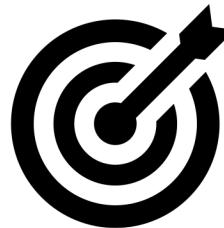
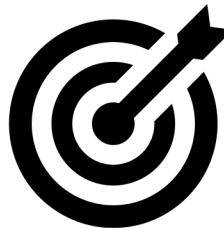
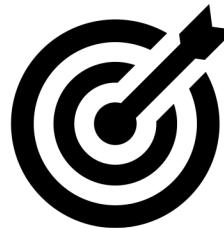
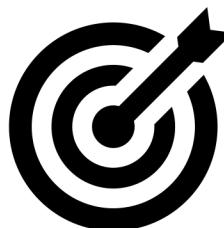
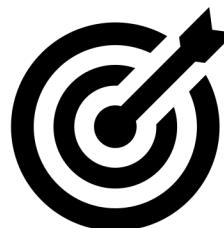


Detect lateral movement with local admin

Cyber Against Humanity

<p>Detect</p>  <p>Detect lateral movement with credential abuse</p> <p>Cyber Against Humanity</p>	<p>Detect</p>  <p>Detect malicious process injection</p> <p>Cyber Against Humanity</p>	<p>Detect</p>  <p>Detect leaked information through active cybercrime forum monitoring</p> <p>Cyber Against Humanity</p>
<p>Detect</p>  <p>Detect unauthorized access on remote system</p> <p>Cyber Against Humanity</p>	<p>Detect</p>  <p>Detect unknown domain administrator in your user management</p> <p>Cyber Against Humanity</p>	<p>Detect</p>  <p>Detect unknown local administrator account on compromised system</p> <p>Cyber Against Humanity</p>
<p>Detect</p>  <p>Detect in-memory malware on remote host</p> <p>Cyber Against Humanity</p>	<p>Detect</p>  <p>Check GDPR relevance</p> <p>Cyber Against Humanity</p>	<p>Detect</p>  <p>Find attacker through attacker's real IP which leaked because of bad opsec</p> <p>Cyber Against Humanity</p>

<p>Detect</p>  <p>Joker - invent a new detection method</p> <p>Cyber Against Humanity</p>	<p>Detect</p>  <p>Joker - invent a new detection method</p> <p>Cyber Against Humanity</p>	<p>Detect</p>  <p>Joker - invent a new detection method</p> <p>Cyber Against Humanity</p>
<p>Respond</p>  <p>Remove persistence mechanisms on compromised system</p> <p>Cyber Against Humanity</p>	<p>Respond</p>  <p>Remove malicious config settings on a compromised system</p> <p>Cyber Against Humanity</p>	<p>Respond</p>  <p>Remove malware on compromised system</p> <p>Cyber Against Humanity</p>
<p>Respond</p>  <p>Stop malicious process on compromised system</p> <p>Cyber Against Humanity</p>	<p>Respond</p>  <p>Stop data leakage on compromised system</p> <p>Cyber Against Humanity</p>	<p>Respond</p>  <p>Remove sensitive data on public accessible website</p> <p>Cyber Against Humanity</p>

<p>Respond</p>  <p>Start first response to gather volatile data</p> <p>Cyber Against Humanity</p>	<p>Respond</p>  <p>Collect and analyse logs from compromised system</p> <p>Cyber Against Humanity</p>	<p>Respond</p>  <p>Collect evidence from compromised system</p> <p>Cyber Against Humanity</p>
<p>Respond</p>  <p>Collect files from compromised system</p> <p>Cyber Against Humanity</p>	<p>Respond</p>  <p>Collect the list of local accounts from compromised system</p> <p>Cyber Against Humanity</p>	<p>Respond</p>  <p>Create and collect disk image for a compromised system</p> <p>Cyber Against Humanity</p>
<p>Respond</p>  <p>Create file system timeline for a disk image</p> <p>Cyber Against Humanity</p>	<p>Respond</p>  <p>Extract C2 IPs from a malware sample</p> <p>Cyber Against Humanity</p>	<p>Respond</p>  <p>Search for found C2 servers</p> <p>Cyber Against Humanity</p>

Respond



Search for other affected systems
after initial compromise

Cyber Against Humanity

Respond



Block domain names

Cyber Against Humanity

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

Cyber Against Humanity

Respond



Take remote system offline

Cyber Against Humanity

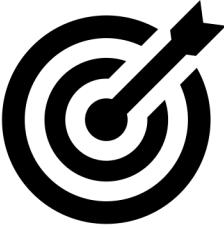
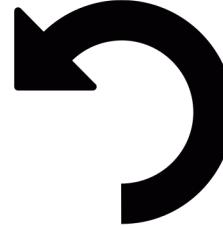
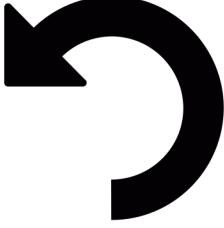
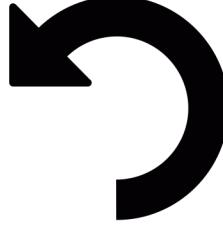
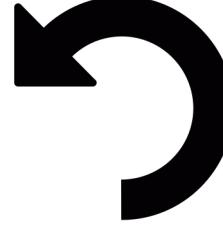
Respond

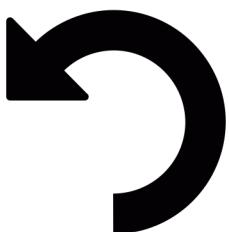
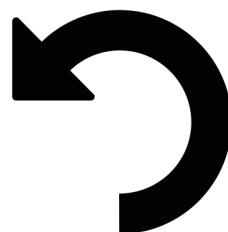
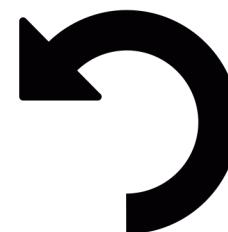
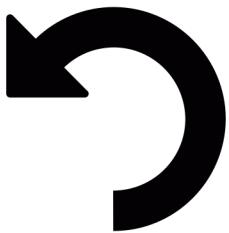
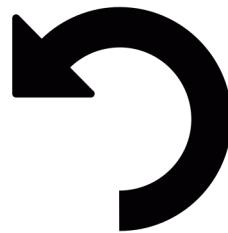
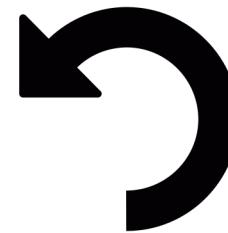
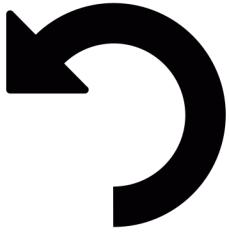
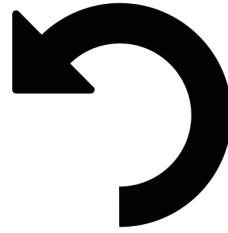
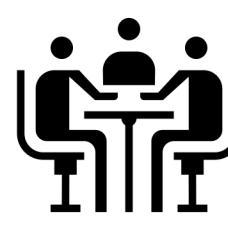


Disable network connectivity on
remote system

Cyber Against Humanity

<p>Respond</p>  <p>Delete malicious emails in employees mailboxes</p> <p>Cyber Against Humanity</p>	<p>Respond</p>  <p>Sinkhole C2 server</p> <p>Cyber Against Humanity</p>	<p>Respond</p>  <p>Capture traffic to C2 server</p> <p>Cyber Against Humanity</p>
<p>Respond</p>  <p>Force password reset</p> <p>Cyber Against Humanity</p>	<p>Respond</p>  <p>Add evidence to long time storage</p> <p>Cyber Against Humanity</p>	<p>Respond</p>  <p>Mitigate a DDoS attack</p> <p>Cyber Against Humanity</p>
<p>Respond</p>  <p>Initiate hot patching or immediate fix of exploited vulnerability</p> <p>Cyber Against Humanity</p>	<p>Respond</p>  <p>Create a GDPR notification</p> <p>Cyber Against Humanity</p>	<p>Respond</p>  <p>Document indicators of attack and indicators of compromise centrally.</p> <p>Cyber Against Humanity</p>

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

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

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

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

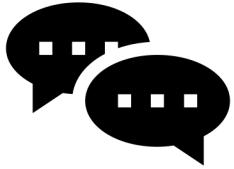
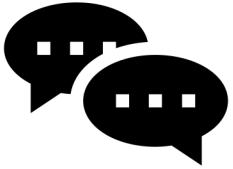
Cyber Against Humanity

Lessons Learned

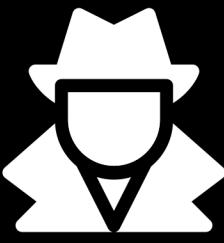
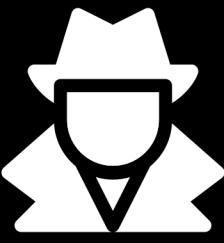
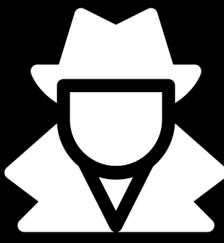
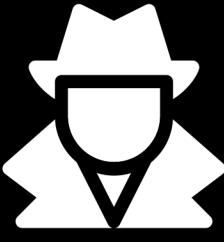
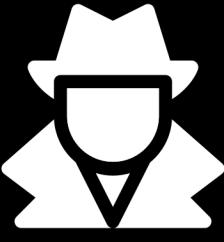
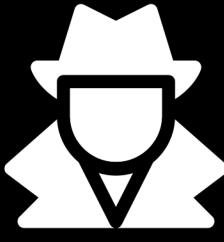
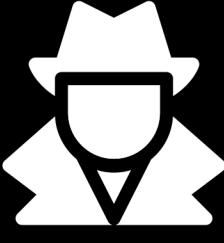
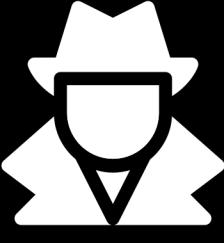
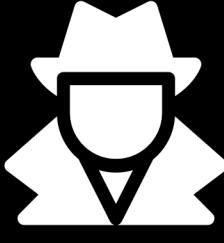


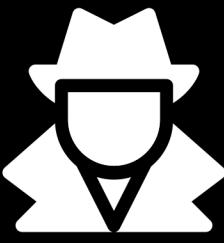
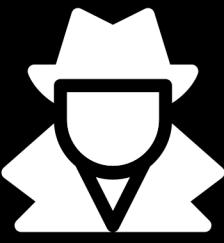
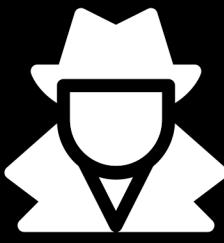
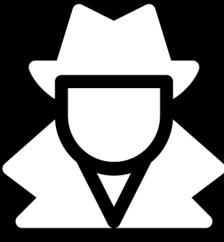
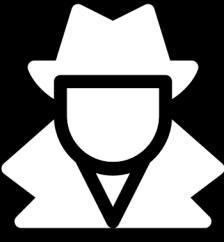
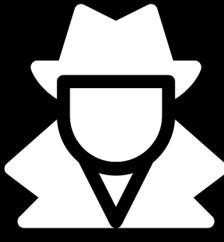
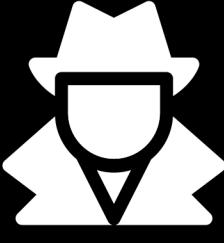
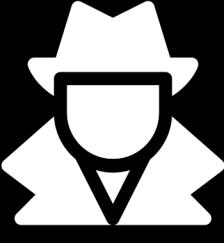
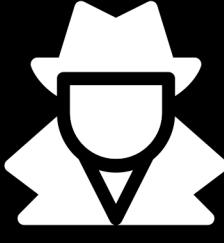
Joker - invent a new lessons learned step

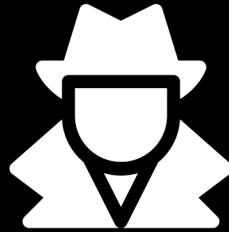
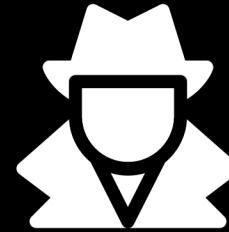
Cyber Against Humanity

<p>Communication</p>  <p>Publish external news article</p> <p>Cyber Against Humanity</p>	<p>Communication</p>  <p>Inform public relations department about possible questions from outside</p> <p>Cyber Against Humanity</p>	<p>Communication</p>  <p>Communicate findings to management</p> <p>Cyber Against Humanity</p>
<p>Communication</p>  <p>Create an incident report</p> <p>Cyber Against Humanity</p>	<p>Communication</p>  <p>Write answer to request made on external platform</p> <p>Cyber Against Humanity</p>	<p>Communication</p>  <p>Joker - invent a new communication way</p> <p>Cyber Against Humanity</p>
<p>Communication</p>  <p>Joker - invent a new communication way</p> <p>Cyber Against Humanity</p>	<p>Communication</p>  <p>Joker - invent a new communication way</p> <p>Cyber Against Humanity</p>	<p>Scenario</p>  <p>A supplier of your HRM software was targeted and a backdoored version was distributed. You may already upgraded. Indicators of compromise were published.</p> <p>Cyber Against Humanity</p>

<h3>Scenario</h3>  <p>Your national CERT has published some indicators of compromise for your country and specifically for your industrial sector. Report back if you found hits.</p> <p>Cyber Against Humanity</p>	<h3>Scenario</h3>  <p>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.</p> <p>Cyber Against Humanity</p>	<h3>Scenario</h3>  <p>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.</p> <p>Cyber Against Humanity</p>
<h3>Scenario</h3>  <p>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.</p> <p>Cyber Against Humanity</p>	<h3>Scenario</h3>  <p>Spear phishing attack against an employee and employee reports login in into a similar looking company portal.</p> <p>Cyber Against Humanity</p>	<h3>Scenario</h3>  <p>Spear phishing attack against an employee using a malicious document which after it was opened executed code on the computer.</p> <p>Cyber Against Humanity</p>
<h3>Scenario</h3>  <p>Employee downloads a malware through a fake software package which connects back to command and control servers using DNS.</p> <p>Cyber Against Humanity</p>	<h3>Scenario</h3>  <p>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.</p> <p>Cyber Against Humanity</p>	<h3>Scenario</h3>  <p>A database with customer data was exposed to the Internet through a misconfigured firewall and someone on Twitter is leaking data from that database.</p> <p>Cyber Against Humanity</p>

<p>Scenario</p>  <p>A public git repository leaked internal credentials and it's unclear whether the credentials were already abused.</p> <p>Cyber Against Humanity</p>	<p>Scenario</p>  <p>Servers from your main online service were targeted by a DDoS and are unavailable.</p> <p>Cyber Against Humanity</p>	<p>Scenario</p>  <p>Malicious code was distributed to your endpoints during the routine update of a signed application.</p> <p>Cyber Against Humanity</p>
<p>Scenario</p>  <p>A domain admin has run a malicious attachment after loudly proclaiming how dumb their users are for doing the same.</p> <p>Cyber Against Humanity</p>	<p>Scenario</p>  <p>Security company has released an APT group PDF at BH USA. The list of IOCs includes a host in your ASN.</p> <p>Cyber Against Humanity</p>	<p>Scenario</p>  <p>Every night new corporate accounts are abused for sending spam.</p> <p>Cyber Against Humanity</p>
<p>Scenario</p>  <p>Email infrastructure got compromised. Attackers have full access to your mailboxes.</p> <p>Cyber Against Humanity</p>	<p>Scenario</p>  <p>Attackers got domain admin in your environment. What should you scary more? Backdoor accounts or the sudden activation of disk encryption software?</p> <p>Cyber Against Humanity</p>	<p>Scenario</p>  <p>An adversary has access to your Jenkins server.</p> <p>Cyber Against Humanity</p>

<p>Scenario</p>  <p>An adversary has access to your vulnerable Jenkins server. Jenkins jobs with credentials are visible to everyone.</p> <p>Cyber Against Humanity</p>	<p>Scenario</p>  <p>Someone is impersonating you to customer support.</p> <p>Cyber Against Humanity</p>	<p>Scenario</p>  <p>Your DNS was modified to respond with an attacker's DKIM key.</p> <p>Cyber Against Humanity</p>
<p>Scenario</p>  <p>Due to a botched CI/CD script, complete source code exposure on production.</p> <p>Cyber Against Humanity</p>	<p>Scenario</p>  <p>A bug in your webapp has allowed every record to be accessed via URL enumeration and IDOR.</p> <p>Cyber Against Humanity</p>	<p>Scenario</p>  <p>Your subscription database is hacked. Thousands of new accounts are added and hard to distinguish from old.</p> <p>Cyber Against Humanity</p>
<p>Scenario</p>  <p>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.</p> <p>Cyber Against Humanity</p>	<p>Scenario</p>  <p>Your reception software has leaked all of your visitor logs. They are available via torrent.</p> <p>Cyber Against Humanity</p>	<p>Scenario</p>  <p>A script has been logging exported variables containing full user registration objects. This logging method is full of plaintext passwords.</p> <p>Cyber Against Humanity</p>

<h3>Scenario</h3>  <p>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.)</p> <p>Cyber Against Humanity</p>	<h3>Scenario</h3>  <p>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.)</p> <p>Cyber Against Humanity</p>	<h3>Scenario</h3>  <p>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.)</p> <p>Cyber Against Humanity</p>
<h3>Scenario</h3>  <p>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.</p> <p>Cyber Against Humanity</p>	<h3>Scenario</h3>  <p>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</p> <p>Cyber Against Humanity</p>	<h3>Scenario</h3>  <p>A malicious browser extension was installed on different corporate computers. It injects keyloggers into websites.</p> <p>Cyber Against Humanity</p>
<h3>Scenario</h3>  <p>Your build imports from an employee's personal NPM package. They quit, and vandalize the package, causing a public incident.</p> <p>Cyber Against Humanity</p>	<h3>Scenario</h3>  <p>An adversary takes control of your MDM service account. Your MDM support team cannot be reached for account recovery.</p> <p>Cyber Against Humanity</p>	<h3>Scenario</h3>  <p>Your DNS was modified to respond with an attacker's DKIM key. Spearphishes will be signed by your domain in 30 minutes.</p> <p>Cyber Against Humanity</p>

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.

Cyber Against Humanity