MISP taxonomies and classification as machine tags
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Introduction

The MISP threat sharing platform is a free and open source software helping information sharing of threat intelligence including cyber security indicators, financial fraud or counter-terrorism information. The MISP project includes multiple sub-projects to support the operational requirements of analysts and improve the overall quality of information shared.

Taxonomies that can be used in MISP (2.4) and other information sharing tool and expressed in Machine Tags (Triple Tags). A machine tag is composed of a namespace (MUST), a predicate (MUST) and an (OPTIONAL) value. Machine tags are often called triple tag due to their format. The following document is generated from the machine-readable JSON describing the MISP taxonomies.
Funding and Support

The MISP project is financially and resource supported by CIRCL Computer Incident Response Center Luxembourg.

A CEF (Connecting Europe Facility) funding under CEF-TC-2016-3 - Cyber Security has been granted from 1st September 2017 until 31th August 2019 as Improving MISP as building blocks for next-generation information sharing.

Co-financed by the European Union
Connecting Europe Facility

If you are interested to co-fund projects around MISP, feel free to get in touch with us.
MISP taxonomies

CERT-XLM

CERT-XLM namespace available in JSON format at this location. The JSON format can be freely reused in your application or automatically enabled in MISP taxonomy.

CERT-XLM Security Incident Classification.

**abusive-content**

Abusive Content.

**CERT-XLM:abusive-content="spam"**

spam

Spam or ‘unsolicited bulk e-mail’, meaning that the recipient has not granted verifiable permission for the message to be sent and that the message is sent as part of a larger collection of messages, all having identical content.

**CERT-XLM:abusive-content="harmful-speech"**

Harmful Speech

Discretization or discrimination of somebody (e.g. cyber stalking, racism and threats against one or more individuals) May be found on a forum, email, tweet etc...

**CERT-XLM:abusive-content="violence"**

Child/Sexual/Violence/...

Any Child pornography, glorification of violence, may be found on a website, forum, email, tweet etc...

**malicious-code**

Software that is intentionally included or inserted in a system for a harmful purpose. A user interaction is normally necessary to activate the code.

**CERT-XLM:malicious-code="virus"**

Virus

Malicious code that replicate itself and infects the computer and files;
CERT-XLM:malicious-code="worm"

**Worm**

Malware that self-replicates and spread itself to other computers in the network without any user interaction;

CERT-XLM:malicious-code="ransomware"

**Ransomware**

Ransomware is a type of malicious software from cryptovirology that blocks access to the victim’s data or threatens to publish it until a ransom is paid.

CERT-XLM:malicious-code="trojan-malware"

**Trojan/Malware**

This category regroups many common malware types (Banking, POS, Mining malware).

CERT-XLM:malicious-code="spyware-rat"

**Spyware/Rat**

This category regroups malware types and tools that may have a bigger impact on the breached infrastructure and usually need further investigations (Common Spyware/Rat, State sponsored malwares, Stealers/Hacking tool).

CERT-XLM:malicious-code="dialer"

**Dialer**

Computer program used to identify the phone numbers that can successfully make a connection with a computer modem. Use this category to classify overpriced SMS sent by malicious mobile application.

CERT-XLM:malicious-code="rootkit"

**Rootkit**

Malware, which alter the standard functionality of an operating system in order to do its malicious actions in a stealthy way. In practice, Rootkits hijacks systems functions in order to alter the returning values to hide themselves from simple analysis tools.

**information-gathering**

This group is for the reconnaissance; generally, it is the step before attacking.
CERT-XLM:information-gathering="scanner"

Scanning

Attacks that send requests to a system to discover weak points. This also includes some kinds of testing processes to gather information about hosts, services and accounts. Examples: fingerd, DNS querying, ICMP, SMTP (EXPN, RCPT).

CERT-XLM:information-gathering="sniffing"

Sniffing

Observing and recording network traffic (wiretapping).

CERT-XLM:information-gathering="social-engineering"

Social Engineering

Gathering information from a human being in a non-technical way (eg, lies, tricks, bribes, or threats).

**intrusion-attempts**

This group is for attack detected/tried but without success.

CERT-XLM:intrusion-attempts="exploit-known-vuln"

Exploiting known vulnerabilities

An attempt to compromise a system or to disrupt any service by exploiting vulnerabilities with a standardised identifier such as CVE name (eg, buffer overflow, backdoors, cross side scripting, etc).

CERT-XLM:intrusion-attempts="login-attempts"

Login attempts

Multiple login attempts (guessing / cracking of passwords, brute force).

CERT-XLM:intrusion-attempts="new-attack-signature"

New attack signature

An attempt using an unknown exploit.

**intrusion**

This group is for successful unauthorized access to a system.
Privileged Account Compromise

A successful full compromise of a system or application (service). This can have been caused remotely by a known or new vulnerability, but also by an unauthorized local access.

Unprivileged Account Compromise

A successful compromise of a system or application (service). This can have been caused remotely by a known or new vulnerability, but also by an unauthorized local access. The intruded did not achieve to escalate his privileges locally.

Botnet member

The compromised asset is also being part of a botnet. This is reserved mainly for public web servers. See malicious code in priority for workstations or internal server’s compromise. For example, phpmailer, etc...

Domain Compromise

The whole domain is compromised; this is commonly used for active directory and detected by a “pass the ticket” attack or a discovery of “ad dumps” files.

Application Compromise

An application is compromised; the attacker possess an uncontrolled access to data, server, and assets used by this application (CMDB, DB, Backend services, etc.).

availability

By this kind of an attack a system is bombarded with so many packets that the operations are delayed or the system crashes.

DoS

An attacker attempts to prevent legitimate users from accessing information or services.
DDoS
Form of electronic attack involving multiple computers, which send repeated requests (HTTP requests, pings, TCP or UDP Flood) to a server to load it down and render the service inaccessible for a period of time.

Sabotage
Deliberate and malicious acts that result in the disruption of the normal processes and functions or the destruction or damage of equipment or information.

Outage (no malice)
Unavailability of the system but done with no malice.

Unauthorised access to information
Any access to unauthorized data. It may be access of data on improperly restricted server share or database exfiltered by using a SQLi.

Unauthorised modification of information
Unauthorized tampering of data on files, documents or database.

fraud
This group is for unauthorized use of resources using resources for unauthorized purposes including profit-making ventures (eg, the use of e-mail to participate in illegal profit chain letters or pyramid schemes).

Copyright
Selling or installing copies of unlicensed commercial software or other copyright protected materials (Warez).

**CERT-XLM:fraud="masquerade"**

Masquerade

Types of attacks in which one entity illegitimately assumes the identity of another in order to benefit from it. This attack may be used for president fraud requesting transactions.

**CERT-XLM:fraud="phishing"**

Phishing

Masquerading as another entity in order to persuade the user to reveal a private credential.

**vulnerable**

Vulnerable

**CERT-XLM:vulnerable="vulnerable-service"**

Open for abuse

Open resolvers, world readable printers, vulnerability apparent from Nessus etc scans, virus, signatures not up to date, etc. This includes for example default SNMP community or default password on any application.

**conformity**

This group is for catching breach about controls given by the company or externals entities.

**CERT-XLM:conformity="regulator"**

Regulator

All lack about regulator rules (CSSF, GDPR, etc.).

**CERT-XLM:conformity="standard"**

Standard

All lack about standards certification of the company (ISO27000, NIS, ISAE3402, etc.).

**CERT-XLM:conformity="security-policy"**

Security policy

All lack about the internal security policy of the company.
Other

All lack that do not fit in one of previous categories should be put on this class.

other

All incidents that do not fit in one of the given categories should be put into this class. If the number of incidents in this category increases, it is an indicator that the classification scheme must be revised.

test

Meant for testing.

DML

DML namespace available in JSON format at this location. The JSON format can be freely reused in your application or automatically enabled in MISP taxonomy.

The Detection Maturity Level (DML) model is a capability maturity model for referencing ones maturity in detecting cyber attacks. It's designed for organizations who perform intel-driven detection and response and who put an emphasis on having a mature detection program.

8

If the actor is part of a larger organized operation they may be receiving their goals from a higher level source or handler. Depending on how organized and sophisticated the adversary's campaigns are, these goals may not even be shared with the operator(s) themselves. In cases of non-targeted threat actors, this may be much less organized or distributed. Goals are nearly impossible to detect (directly) but they're almost always the toughest question C-level leaders ask about post-breach. "Who was it and why?" These kinds of questions can never truthfully be answered unless you're operating at Detection Maturity Level 8 against your adversary and can prove reliably that you know what their goals are. Short of that, it's guessing at what the adversary's true intentions were based on behavioral observations made at lower DMLs (e.g. data stolen, directories listed, employees or programs targeted, etc). I anticipate less than a handful of organizations truly operate at this level, consistently, against the threat actors they face because it's nearly impossible to detect based on goals alone.
Goals

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If the adversary's high level goal is to "replicate Acme Company's Super Awesome Product Foo in 2 years or less" their supporting strategies might include:
1. Implant physical persons into the companies that produce this technology, in positions with physical access to the information necessary to fulfill this goal.
2. Compromise these organizations via cyber attack, and exfiltrate data from the systems containing the information necessary to fulfill this goal.

For less targeted attacks, the strategy may be completely different, with shorter durations or different objectives. The important distinguishing factor about Goals (DML-8) and Strategy (DML-7) is that they are largely subjective in nature. They are very non-technical, and are often reflective of the adversary's (or their handler's) true intentions (and strategies for fulfilling those intentions). They represent what the adversary wants. For these reasons, they are not easily detectable via conventional cyber means for most private organizations. It's very common for DML-8 or DML-7 to not even be on the day-to-day radar of most Detection or Response specialists, and if they are it's typically in the context of having received a strategic intelligence report from an intelligence source about the adversary.

Strategy
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6

To successfully operate at DML-6, one must be able to reliably detect a tactic being employed regardless of the Technique or Procedure used by the adversary, the Tools they chose to use, or the Artifacts and Atomic Indicators left behind as a result of employing the tactic. While this may sound impossible on the surface, it absolutely is possible. In nearly all cases, tactics are not detected directly by a single indicator or artifact serving as the smoking gun, or a single detection signature or analytic technique. Tactics become known only after observation of multiple activities in aggregate, with respect to time and circumstance. As a result, detection of tactics are usually done by skilled analysts, rather than technical correlation or analytics systems.

DML:6

Tactics

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5

From a maturity perspective, being able to detect an adversary's techniques is superior to being able to detect their procedures. The primary difference being techniques are specific to an individual. So when respecting this distinction, the ability to detect a specific actor operating within your environment by technique exclusively is an advantage. The best analogy to this is a rifled
barrel, which leaves uniquely identifiable characteristics in the side of a bullet. Because of this, ballistics specialists can forensically match a spent round to the exact weapon from which it was fired with a high degree of certainty. Not just any weapon by calibur or model, but the exact weapon used to fire that specific round. Human beings are creatures of habit, and most adversaries aren't aware of the fact that every time they attack they're leaving evidence of their personal techniques behind for us to find. The same applies for the tool builders writing the tools these adversaries use. It's our obligation to find these distinctions and ensure we're looking for them. It's personal behavior and habits that are the hardest for humans to change, so put the hurt on your adversaries by finding creative ways to detect their behaviors and habits in your environment.

**DML:5**

**Techniques**

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**4**

Given today's detection technology, and readily available correlation and analytics techniques, it's amazing that more organizations haven't reached Detection Maturity Level 4 for most of their adversaries. Procedures are one of the most effective ways of detecting adversary activity and can really inflict the most pain against lesser experienced "B-teams". In it's most simple form, detecting a procedure is as simple as detecting a sequence of two or more of the individual steps employed by the actor. The goal here is to isolate activities that the adversary appears to perform methodically, two or more times during an incident.

**DML:4**

**Procedures**

Given today's detection technology, and readily available correlation and analytics techniques, it's amazing that more organizations haven't reached Detection Maturity Level 4 for most of their adversaries. Procedures are one of the most effective ways of detecting adversary activity and can really inflict the most pain against lesser experienced "B-teams". In it's most simple form, detecting a procedure is as simple as detecting a sequence of two or more of the individual steps employed by the actor. The goal here is to isolate activities that the adversary appears to perform methodically,
two or more times during an incident.

3

Being able to detect at DML-3 means you can reliably detect the adversary’s tools, regardless of minor functionality changes to the tool, or the Artifacts or Atomic Indicators it may leave behind. Detecting tools falls into two main areas. The first is detecting the transfer and presence of the tool. This includes being able to observe the tool being transferred over the network, being able to locate it sitting at rest on a file system, or being able to identify it loaded in memory. The second, and more important area of tool detection, is detecting the tool reliably by functionality. For example, let’s take a given webshell that has 25 functions. If we want to claim DML-3 level detection for this webshell we have to exercise each of those 25 functions and understand what each of them do. What do they look like at the host, network, and event log level when they are exercised? We then aim to build detections for as many of those 25 functions across those data domains as we possibly can, reliably, balancing false positives and other constraints. The reason behind this is simple, we want to be able to detect this version of the tool and as many future variants of the tool as we can by function that it performs. If the adversary decides to change up 5 of the 25 functions for which we have detections, we’re still detecting the entire tool. In order for the adversary to use this tool completely undetected in our environment, they’ll be forced to change every one of those functions; or at least the ones that we were able to reliably build detections against.

DML:3

Tools

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2

DML-2 is where most organizations spend too much of their resources; attempting to collect what they call "threat intelligence" in the form of Host & Network Artifacts. The reality is, these are merely just indicators that are observed either during or after the attack. They’re like symptoms of
the flu but not the flu itself. I often use the analogy "chasing the vapor trail" when I think of DML-2 because chasing after Host & Network Artifacts is much like chasing the vapor trail behind an aircraft. We know the enemy aircraft is up there in front of us somewhere, if we just keep chasing this vapor trail we'll eventually catch up to the aircraft and find our enemy right? Wrong. Having a mature detection and response program means your operating above DML-2 and you're actually locked onto the aircraft itself. You know how it operates, you know what it's capabilities are, you know the Tactics, Techniques, and Procedures of it's pilot and you can almost predict what it's next moves might be. This is precisely why good Cyber Intelligence Analysts will almost never attribute activity to a specific threat actor, group, or country based on just Host & Network Artifacts alone; they understand this DML concept and realize when they're likely just staring at the vapor trail. They understand that in reality the vapor trail (indicators) could be from any number of aircraft (tools), with any number of pilots (actors) behind the stick.

**DML:2**

Host & Network Artifacts

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1

These are the atomic particles that make up Host & Network artifacts. If you're detecting at Detection Maturity Level 1, it means you are probably taking "feeds of intel" from various sharing organizations and vendors in the form of lists, like domains and IP addresses, and feeding them into your detection technologies. Let me be clear on my position here. There are a few, and I mean a very precious few, circumstances where this makes sense and can be done reliably. These are edge cases where specific atomic indicators have a high enough "shelf life" where it makes sense to go ahead and create detection capabilities from them. Examples of this include unique strings found inside a binary, or perhaps an adversary is foolish enough to sit on the same recon, delivery, C2, or exfiltration infrastructure allowing you to detect reliably on their domain names or IP addresses. These might be viable cases where detecting on atomic indicator alone makes sense. Unfortunately, for the remaining 99% of the time, attempting to detect on this kind of data is suboptimal, for a number of reasons.
DML:1

Atomic IOCs

These are the atomic particles that make up Host & Network artifacts. If you’re detecting at Detection Maturity Level 1, it means you are probably taking “feeds of intel” from various sharing organizations and vendors in the form of lists, like domains and IP addresses, and feeding them into your detection technologies. Let me be clear on my position here. There are a few, and I mean a very precious few, circumstances where this makes sense and can be done reliably. These are edge cases where specific atomic indicators have a high enough “shelf life” where it makes sense to go ahead and create detection capabilities from them. Examples of this include unique strings found inside a binary, or perhaps an adversary is foolish enough to sit on the same recon, delivery, C2, or exfiltration infrastructure allowing you to detect reliably on their domain names or IP addresses. These might be viable cases where detecting on atomic indicator alone makes sense. Unfortunately, for the remaining 99% of the time, attempting to detect on this kind of data is suboptimal, for a number of reasons.

0

For organizations who either don’t operate at DML-1 or higher, or they don’t even know where they operate on this scale, we have Detection Maturity Level - 0. Instead of pointing out all the negative things associated with this level, I’ll take the high road and lend a bit of positive encouragement. Congratulations, you are at ground zero. It can only get better from here.

DML:0

None or Unknown

For organizations who either don’t operate at DML-1 or higher, or they don’t even know where they operate on this scale, we have Detection Maturity Level - 0. Instead of pointing out all the negative things associated with this level, I’ll take the high road and lend a bit of positive encouragement. Congratulations, you are at ground zero. It can only get better from here.

PAP

PAP namespace available in JSON format at this location. The JSON format can be freely reused in your application or automatically enabled in MISP taxonomy.

The Permissible Actions Protocol - or short: PAP - was designed to indicate how the received information can be used.

RED

PAP:RED

(PAP:RED) Non-detectable actions only. Recipients may not use PAP:RED information on the network. Only passive actions on logs, that are not detectable from the outside.
AMBER

PAP:AMBER

(PAP:AMBER) Passive cross check. Recipients may use PAP:AMBER information for conducting online checks, like using services provided by third parties (e.g. VirusTotal), or set up a monitoring honeypot.

GREEN

PAP:GREEN

(PAP:GREEN) Active actions allowed. Recipients may use PAP:GREEN information to ping the target, block incoming/outgoing traffic from/to the target or specifically configure honeypots to interact with the target.

WHITE

PAP:WHITE

(PAP:WHITE) No restrictions in using this information.

access-method

access-method namespace available in JSON format at this location. The JSON format can be freely reused in your application or automatically enabled in MISP taxonomy.

The access method used to remotely access a system.

brute-force

Access was gained through systematic trial of credentials in bulk.

access-method:brute-force

Brute force

Access was gained through systematic trial of credentials in bulk.

password-guessing

Access was gained through guessing passwords through trial and error.
**access-method:** password-guessing

Password guessing

Access was gained through guessing passwords through trial and error.

---

**remote-desktop-application**

Access was gained through an application designed for remote access.

---

**access-method:** remote-desktop-application

Remote desktop application

Access was gained through an application designed for remote access.

---

**stolen-credentials**

Access was gained with stolen credentials.

---

**access-method:** stolen-credentials

Stolen credentials

Access was gained with stolen credentials.

---

**pass-the-hash**

Access was gained through use of an existing known hash.

---

**access-method:** pass-the-hash

Pass the hash

Access was gained through use of an existing known hash.

---

**default-credentials**

Access was gained through use of the system's default credentials.

---

**access-method:** default-credentials

Default credentials

Access was gained through use of the system's default credentials.
shell
Access was gained through the use of a shell.

access-method:shell
Shell
Access was gained through the use of a shell.

other
Access was gained through another method.

access-method:other
Other
Access was gained through another method.

accessnow
Access Now classification to classify an issue (such as security, human rights, youth rights).

anti-corruption-transparency
The organization campaigns, or takes other actions against corruption and transparency.

accessnow:anti-corruption-transparency
Anti-Corruption and transparency
The organization campaigns, or takes other actions against corruption and transparency.

anti-war-violence
The organization campaigns, or takes other actions against war

accessnow:anti-war-violence
Anti-War / Anti-Violence
The organization campaigns, or takes other actions against war
**culture**
The organization campaigns or acts to promote cultural events

**accessnow:culture**
Culture
The organization campaigns or acts to promote cultural events

**economic-change**
Issues of economic policy, wealth distribution, etc.

**accessnow:economic-change**
Economic Change
Issues of economic policy, wealth distribution, etc.

**education**
The organization is concerned with some form of education

**accessnow:education**
Education
The organization is concerned with some form of education

**election-monitoring**
The organization is an election monitor, or involved in election monitoring

**accessnow:election-monitoring**
Election Monitoring
The organization is an election monitor, or involved in election monitoring

**environment**
The organization campaigns or acts to protect the environment

**accessnow:environment**
Environment
The organization campaigns or acts to protect the environment

**freedom-expression**

The organization is concerned with freedom of speech issues

**accessnow:freedom-expression**

Freedom of Expression

The organization is concerned with freedom of speech issues

**freedom-tool-development**

The organization develops tools for use in defending or extending digital rights

**accessnow:freedom-tool-development**

Freedom Tool Development

The organization develops tools for use in defending or extending digital rights

**funding**

The organization is a funder of organizations or projects working with at risk users

**accessnow:funding**

Funding

The organization is a funder of organizations or projects working with at risk users

**health**

The organization prevents epidemic illness or acts on curing them

**accessnow:health**

Health Issues

The organization prevents epidemic illness or acts on curing them

**human-rights**

relating to the detection, recording, exposure, or challenging of abuses of human rights
**accessnow:human-rights**

Human Rights Issues

relating to the detection, recording, exposure, or challenging of abuses of human rights

**internet-telecom**

Issues of digital rights in electronic communications

**accessnow:internet-telecom**

Internet and Telecoms

Issues of digital rights in electronic communications

**lgbt-gender-sexuality**

Issues relating to the Lesbian, Gay, Bi, Transgender community

**accessnow:lgbt-gender-sexuality**

LGBT / Gender / Sexuality

Issues relating to the Lesbian, Gay, Bi, Transgender community

**policy**

The organization is a policy think-tank, or policy advocate

**accessnow:policy**

Policy

The organization is a policy think-tank, or policy advocate

**politics**

The organization takes a strong political view or is a political entity

**accessnow:politics**

Politics

The organization takes a strong political view or is a political entity
privacy
Issues relating to the individual’s reasonable right to privacy

accessnow:privacy
Privacy
Issues relating to the individual’s reasonable right to privacy

rapid-response
The organization provides rapid response type capability for civil society

accessnow:rapid-response
Rapid Response
The organization provides rapid response type capability for civil society

refugees
Issues relating to displaced people

accessnow:refugees
Refugees
Issues relating to displaced people

security
Issues relating to physical or information security

accessnow:security
Security
Issues relating to physical or information security

womens-right
Issues pertaining to inequality between men and women, or issues of particular relevance to women

accessnow:womens-right
Women’s Rights
Issues pertaining to inequality between men and women, or issues of particular relevance to women

**youth-rights**

Issues of particular relevance to youth

**accessnow:youth-rights**

Youth Rights

Issues of particular relevance to youth

**action-taken**

Action taken namespace available in JSON format at [this location](#). The JSON format can be freely reused in your application or automatically enabled in MISP taxonomy.

Action taken in the case of a security incident (CSIRT perspective).

**informed ISP/Hosting Service Provider**

**action-taken:informed ISP/Hosting Service Provider**

Informed ISP/Hosting Service Provider

**informed Registrar**

**action-taken:informed Registrar**

Informed Registrar

**informed Registrant**

**action-taken:informed Registrant**

Informed Registrant

**informed abuse-contact (domain)**

**action-taken:informed abuse-contact (domain)**

Informed abuse-contact (domain)
The Admiralty Scale or Ranking (also called the NATO System) is used to rank the reliability of a source and the credibility of an information. Reference based on FM 2-22.3 (FM 34-52) HUMAN INTELLIGENCE COLLECTOR OPERATIONS and NATO documents.

**source-reliability**

**admiralty-scale:source-reliability="a"**

 Completely reliable

No doubt of authenticity, trustworthiness, or competency; has a history of complete reliability

Associated numerical value="100"

**admiralty-scale:source-reliability="b"**

 Usually reliable

Minor doubt about authenticity, trustworthiness, or competency; has a history of valid information most of the time

Associated numerical value="75"

**admiralty-scale:source-reliability="c"**

 Fairly reliable

Doubt of authenticity, trustworthiness, or competency but has provided valid information in the past
admiralty-scale:source-reliability="d"
Not usually reliable
Significant doubt about authenticity, trustworthiness, or competency but has provided valid information in the past

admiralty-scale:source-reliability="e"
Unreliable
Lacking in authenticity, trustworthiness, and competency; history of invalid information

admiralty-scale:source-reliability="f"
Reliability cannot be judged
No basis exists for evaluating the reliability of the source

admiralty-scale:source-reliability="g"
Deliberately deceptive

information-credibility
admiralty-scale:information-credibility="1"
Confirmed by other sources
Confirmed by other independent sources; logical in itself; Consistent with other information on the subject

admiralty-scale:information-credibility="2"
Probably true
Not confirmed; logical in itself; consistent with other information on the subject
Possibly true
Not confirmed; reasonably logical in itself; agrees with some other information on the subject
Associated numerical value="50"

Doubtful
Not confirmed; possible but not logical; no other information on the subject
Associated numerical value="25"

Improbable
Not confirmed; not logical in itself; contradicted by other information on the subject

Truth cannot be judged
No basis exists for evaluating the validity of the information
Associated numerical value="50"

An overview and description of the adversary infrastructure

Infrastructure ownership and status is unknown
Infrastructure compromised by or in the benefit of the adversary
Infrastructure own and operated by the adversary

**infrastructure-action**

_adversary:infrastructure-action="passive-only"

Only passive requests shall be performed to avoid detection by the adversary

_adversary:infrastructure-action="take-down"

Take down requests can be performed in order to deactivate the adversary infrastructure

_adversary:infrastructure-action="monitoring-active"

Monitoring requests are ongoing on the adversary infrastructure

_adversary:infrastructure-action="pending-law-enforcement-request"

Law enforcement requests are ongoing on the adversary infrastructure

**infrastructure-state**

_adversary:infrastructure-state="unknown"

Infrastructure state is unknown or cannot be evaluated

_adversary:infrastructure-state="active"

Infrastructure state is active and actively used by the adversary

_adversary:infrastructure-state="down"

Infrastructure state is known to be down

**infrastructure-type**

_adversary:infrastructure-type="unknown"

Infrastructure usage by the adversary is unknown

_adversary:infrastructure-type="proxy"

Infrastructure used as proxy between the target and the adversary
adversary:infrastructure-type="drop-zone"
Infrastructure used by the adversary to store information related to his campaigns

adversary:infrastructure-type="exploit-distribution-point"
Infrastructure used to distribute exploit towards target(s)

adversary:infrastructure-type="vpn"
Infrastructure used by the adversary as Virtual Private Network to hide activities and reduce the traffic analysis surface

adversary:infrastructure-type="panel"
Panel used by the adversary to control or maintain his infrastructure

adversary:infrastructure-type="tds"
Traffic Distribution Systems including exploit delivery or/and web monetization channels

ais-marking

| ais-marking namespace available in JSON format at this location. The JSON format can be freely reused in your application or automatically enabled in MISP taxonomy. |

The AIS Marking Schema implementation is maintained by the National Cybersecurity and Communication Integration Center (NCCIC) of the U.S. Department of Homeland Security (DHS)

TLPMarking

ais-marking:TLPMarking="WHITE"
WHITE

ais-marking:TLPMarking="GREEN"
GREEN

ais-marking:TLPMarking="AMBER"
AMBER

AISConsent
analyst-assessment

analyst-assessment namespace available in JSON format at this location. The JSON format can be freely reused in your application or automatically enabled in MISP taxonomy.

A series of assessment predicates describing the analyst capabilities to perform analysis. These assessment can be assigned by the analyst him/herself or by another party evaluating the analyst.

experience

The analyst experience expressed in years range in the field tagged. The year range is based on a standard 40-hour work week.
Less than 1 year
Associated numerical value=1

Between 1 and 5 years
Associated numerical value=2

Between 5 and 10 years
Associated numerical value=3

Between 10 and 20 years
Associated numerical value=4

More than 20 years
Associated numerical value=5

Architecture that the analyst has experience with.

x86-32 & x86-64

ARM & ARM-64

mips & mips-64

PowerPC
binary-reversing-experience

The analyst experience in reversing expressed in years range in the field tagged. The year range is based on a standard 40-hour work week.

analyst-assessment:binary-reversing-experience="less-than-1-year"

Less than 1 year
Associated numerical value="1"

analyst-assessment:binary-reversing-experience="between-1-and-5-years"

Between 1 and 5 years
Associated numerical value="2"

analyst-assessment:binary-reversing-experience="between-5-and-10-years"

Between 5 and 10 years
Associated numerical value="3"

analyst-assessment:binary-reversing-experience="between-10-and-20-years"

Between 10 and 20 years
Associated numerical value="4"

analyst-assessment:binary-reversing-experience="more-than-20-years"

More than 20 years
Associated numerical value="5"

OS

Operating System that the analyst has experience with.

analyst-assessment:os="windows"

Current Microsoft Windows system

analyst-assessment:os="linux"

GNU/linux derivative OS
Current IOS

Current Apple OS

Current Android OS

BSD

**web**

Web application vulnerabilities and technique that the analyst has experience with.

Inter-protocol exploitations

Common vulnerabilities as SQL injections, CSRF, XSS, CSP bypasses, etc.

De-obfuscation of Javascript payloads

**web-experience**

The analyst experience expressed to web application security in years range in the field tagged.

Less than 1 year

Associated numerical value="1"

Between 1 and 5 years

Associated numerical value="2"
analyst-assessment:web-experience="between-5-and-10-years"
Between 5 and 10 years
Associated numerical value="3"

analyst-assessment:web-experience="between-10-and-20-years"
Between 10 and 20 years
Associated numerical value="4"

analyst-assessment:web-experience="more-than-20-years"
More than 20 years
Associated numerical value="5"

crypto-experience
The analyst experience related to cryptography expressed in years range in the field tagged.

analyst-assessment:crypto-experience="less-than-1-year"
Less than 1 year
Associated numerical value="1"

analyst-assessment:crypto-experience="between-1-and-5-years"
Between 1 and 5 years
Associated numerical value="2"

analyst-assessment:crypto-experience="between-5-and-10-years"
Between 5 and 10 years
Associated numerical value="3"

analyst-assessment:crypto-experience="between-10-and-20-years"
Between 10 and 20 years
Associated numerical value="4"

analyst-assessment:crypto-experience="more-than-20-years"
More than 20 years
approved-category-of-action

approved-category-of-action namespace available in JSON format at this location. The JSON format can be freely reused in your application or automatically enabled in MISP taxonomy.

A pre-approved category of action for indicators being shared with partners (MIMIC).

Cat1

Minimal Exposure - Passive Collection: CAT 1 actions provide the least exposure of an indicator, either through adversary observation or disclosure. Usage of the indicator is restricted to passive monitoring on Government or Cleared Partner networks, or through a classified passive capability or Operation. CAT 1 actions do not interact with or affect malicious network traffic.

Cat2

Moderate Exposure - Government or Cleared Partner Internal Active Collection: CAT 2 actions expose the usage of an indicator through non-disruptive collection techniques which require interactions with an adversary, within Government or Cleared Partner networks. While it is not the intent to disrupt the adversary it is possible that an adversary may discover they are subject to such techniques.
Cat3

Moderate Exposure - Government or Cleared Partner Internal Countermeasures: CAT 3 actions expose the usage of an indicator through inward-facing countermeasures. Malicious network traffic is affected in some manner, however the results are not directly observable to the adversary or external parties and is, therefore, more difficult to attribute as a deliberate action. Usage of the indicator is restricted to Government and Cleared Partner networks, or a classified capability or Operation. This implies a lower likelihood for non-approved disclosures.

approved-category-of-action:cat3

Cat4

Moderate Exposure - Government Actions on External Networks: CAT 4 actions expose the usage of an indicator through actions which occur on internet accessible networks, without the authorization of the network or information owner. Such actions are conducted as classified Operations under the auspices of national legislative and compliance provisions. Action consequences are observable to the adversary and other, public parties and it is possible they may be attributed as Government sanctioned actions.

approved-category-of-action:cat4

Cat5

High Exposure - Public Actions Which Enable Internal Countermeasures: CAT 5 actions expose the usage of an indicator through the public release of information which enables internal actions on networks not owned and controlled by the Government (i.e. industry, commercial or foreign governments). These actions are official public releases and are attributable as Government sanctioned actions.
Cat5

High Exposure - Public Actions Which Enable Internal Countermeasures: CAT 5 actions expose the usage of an indicator through the public release of information which enables internal actions on networks not owned and controlled by the Government (i.e. industry, commercial or foreign governments). These actions are official public releases and are attributable as Government sanctioned actions.

Cat6

High Exposure - Actions on Adversary Infrastructure: CAT 6 actions expose the usage of an indicator through actions which occur on adversary owned networks, without the authorization of the network or information owner. Such actions are conducted as classified Operations under the auspices of national legislative and compliance provisions. Action consequences are observable to the adversary, and possibly other public parties, and it is possible they may deduce this as FVEY action.

Approved Category of Action: Cat6

Cat6

High Exposure - Actions on Adversary Infrastructure: CAT 6 actions expose the usage of an indicator through actions which occur on adversary owned networks, without the authorization of the network or information owner. Such actions are conducted as classified Operations under the auspices of national legislative and compliance provisions. Action consequences are observable to the adversary, and possibly other public parties, and it is possible they may deduce this as FVEY action.

Binary-Class

Binary-class namespace available in JSON format at this location. The JSON format can be freely reused in your application or automatically enabled in MISP taxonomy.

Custom taxonomy for types of binary file.

Type

Binary-class:type="good"

Known Good/Safe

Binary-class:type="malicious"

Known Bad/Malicious
Not yet known

**CCCS**

cccs namespace available in JSON format at [this location](#). The JSON format can be freely reused in your application or automatically enabled in MISP taxonomy.

Internal taxonomy for CCCS.

**event**

Type of event associated to the internal reference

**cccs:event="beacon"**

Beacon

A host infected with malware is connecting to threat actor owned infrastructure.

**cccs:event="browser-based-exploitation"**

Browser based exploitation

A browser component is being exploited in order to infect a host.

**cccs:event="dos"**

Dos

An attack in which the goal is to disrupt access to a host or resource.

**cccs:event="email"**

Email

Malicious emails sent to a department (baiting, content delivery, phishing).

**cccs:event="exfiltration"**

Exfiltration

Unauthorized transfer of data from a target's network to a location a threat actor controls.

**cccs:event="generic-event"**

Generic event
Represents a collection of virtually identical events within a range of time.

**cccs:event="improper-usage"**

Improper usage

Technology used in a way that compromises security or violates policy.

**cccs:event="malware-artifacts"**

Malware artifacts

Signs of the presence of malware observed on a host.

**cccs:event="malware-download"**

Malware download

Malware was transferred (downloaded/uploaded) to a host.

**cccs:event="phishing"**

Phishing

Information or credentials disclosed to a threat actor.

**cccs:event="remote-access"**

Remote access

A threat actor is attempting to or succeeding in remotely logging in to a host.

**cccs:event="remote-exploitation"**

Remote exploitation

A threat actor is attempting to exploit vulnerabilities remotely.

**cccs:event="scan"**

Scan

A threat actor is scanning the network.

**cccs:event="scraping"**

Scraping

Represents a collection of virtually identical scraping events within a range of time.
Traffic interception

Represents a collection of virtually identical traffic interception events within a range of time.

disclosure-type

Type of information being disclosed.

cccs:disclosure-type="goc-credential-disclosure"

Goc credential disclosure

Credentials for a GoC system or user were disclosed.

cccs:disclosure-type="personal-credential-disclosure"

Personal credential disclosure

Credentials not related to a GoC system or user were disclosed.

cccs:disclosure-type="personal-information-disclosure"

Personal information disclosure

Information about a person or persons was disclosed.

cccs:disclosure-type="none"

None

No information was disclosed.

cccs:disclosure-type="other"

Other

Information other than credentials and personal information was disclosed.

domain-category

The Domain Category.

cccs:domain-category="c2"

C2

Domain is being used as command-and-control infrastructure.
Proxy
Domain is being used as a proxy.

Seeded
Domain has been seeded with malware or other malicious code.

Wateringhole
Domain is being used as a wateringhole.

Cloud infrastructure
Domain is hosted on cloud infrastructure.

Name server
Domain is a name server.

Sinkholed
Domain is being re-directed to a sinkhole.

type of email event.

Spam
Unsolicited or junk email named after a Monty Python sketch.

Content delivery attack
Content delivery attack
Email contained malicious content or attachments.

cccs:email-type="phishing"

Phishing
Email designed to trick the recipient into providing sensitive information.

cccs:email-type="baiting"

Baiting
Email designed to trick the recipient into providing sensitive information.

cccs:email-type="unknown"

Unknown
Type of email was unknown.

exploitation-technique
The technique used to remotely exploit a GoC system.

cccs:exploitation-technique="sql-injection"

Sql injection
Exploitation occurred due to malicious SQL queries being executed against a database.

cccs:exploitation-technique="directory-traversal"

Directory traversal
Exploitation occurred through a directory traversal attack allowing access to a restricted directory.

cccs:exploitation-technique="remote-file-inclusion"

Remote file inclusion
Exploitation occurred due to vulnerabilities allowing malicious files to be sent.

cccs:exploitation-technique="code-injection"

Code injection
Exploitation occurred due to malicious code being injected.
Other

Other.

**ip-category**

The IP Category.

**cccs:ip-category="c2"**

C2

IP address is a command-and-control server.

**cccs:ip-category="proxy"**

Proxy

IP address is a proxy server.

**cccs:ip-category="seeded"**

Seeded

IP address has been seeded with malware or other malicious code.

**cccs:ip-category="wateringhole"**

Wateringhole

IP address is a wateringhole.

**cccs:ip-category="cloud-infrastructure"**

Cloud infrastructure

IP address is part of cloud infrastructure.

**cccs:ip-category="network-gateway"**

Network gateway

IP address is a network gateway.

**cccs:ip-category="server"**

Server
IP address is a server of some type.

**cccs:ip-category="dns-server"**

Dns server

IP address is a DNS server.

**cccs:ip-category="smtp-server"**

Smtp server

IP address is a mail server.

**cccs:ip-category="web-server"**

Web server

IP address is a web server.

**cccs:ip-category="file-server"**

File server

IP address is a file server.

**cccs:ip-category="database-server"**

Database server

IP address is a database server.

**cccs:ip-category="security-appliance"**

Security appliance

IP address is a security appliance of some type.

**cccs:ip-category="tor-node"**

Tor node

IP address is a node of the TOR anonymization system.

**cccs:ip-category="sinkhole"**

Sinkhole

IP address is a sinkhole.
Router
IP address is a router device.

**maliciousness**
Level of maliciousness.

**cccs:maliciousness**="non-malicious"
Non-malicious
Non-malicious is not malicious or suspicious.

**cccs:maliciousness**="suspicious"
Suspicious
Suspicious is not non-malicious and not malicious.

**cccs:maliciousness**="malicious"
Malicious
Malicious is not non-malicious or suspicious.

**malware-category**
The Malware Category.

**cccs:malware-category**="exploit-kit"
Exploit kit
Toolkit used to attack vulnerabilities in systems.

**cccs:malware-category**="first-stage"
First stage
Malware used in the initial phase of an attack and commonly used to retrieve a second stage.

**cccs:malware-category**="second-stage"
Second stage
Typical more complex malware retrieved by first stage malware.
Scanner
Malware used to look for common vulnerabilities or running software.

Downloader
Malware used to retrieve additional malware or tools.

Proxy
Malware used to proxy traffic on an infected host.

Reverse proxy
If you choose this option please provide a description of what it is to the ALFRED PO.

Webshell
Malware uploaded to a web server allowing remote access to an attacker.

Ransomware
Malware used to hold infected host’s data hostage, typically through encryption until a payment is made to the attackers.

Adware
Malware used to display ads to the infected host.

Spyware
Malware used to collect information from the infected host, such as credentials.
**Virus**
Malware that propagates by inserting a copy of itself into another program.

**Worm**
Standalone malware that propagates by copying itself.

**Trojan**
Malware that looks like legitimate software but hides malicious code.

**Rootkit**
Malware that can hide the existence of other malware by modifying operating system functions.

**Keylogger**
Malware that runs in the background, capturing keystrokes from a user unknowingly for exfiltration.

**Browser Hijacker**
Malware that re-directs or otherwise intercepts Internet browsing by the user.

**Unauthorized Usage**
Usage of the system or resource was without appropriate permission or authorization.

**Misconfiguration**
Misconfiguration
System or resource is misconfigured.

cccs:misusage-type="lack-of-encryption"
Lack of encryption
System or resources has insufficient encryption or no encryption.

cccs:misusage-type="vulnerable-software"
Vulnerable software
System or resource has software with known vulnerabilities.

cccs:misusage-type="privilege-escalation"
Privilege escalation
System or resource was exploited to gain higher privilege level.

cccs:misusage-type="other"
Other
Other.

mitigation-type
The type of mitigation.

cccs:mitigation-type="anti-virus"
Anti-virus
Anti-Virus

cccs:mitigation-type="content-filtering-system"
Content filtering system
Content Filtering System

cccs:mitigation-type="dynamic-defense"
Dynamic defense
Dynamic Defense
Insufficient privileges

Intrusion Detection System

Sink hole / take down by third party

No mitigation was required because the system was not vulnerable to the attack.

Other

Unknown

User
User

**origin**
Where the request originated from.

```
cccs:origin="subscriber"
```
Subscriber

```
cccs:origin="internet"
```
Internet

**originating-organization**
Origin of a signature.

```
cccs:originating-organization="cse"
```
Cse
Communications Security Establishment.

```
cccs:originating-organization="nsa"
```
Nsa
National Security Agency.

```
cccs:originating-organization="gchq"
```
Gchq
Government Communications Headquarters.

```
cccs:originating-organization="asd"
```
Asd
Australian Signals Directorate.

```
cccs:originating-organization="gcsb"
```
Gcsb

**cccs:originating-organization="open-source"**

Open source

Originated from publically available information.

**cccs:originating-organization="3rd-party"**

3rd party

Originated from a 3rd party organization.

**cccs:originating-organization="other"**

Other

Other.

**scan-type**

The type of scan event.

**cccs:scan-type="open-port"**

Open port

Scan was looking for open ports corresponding to common applications or protocols.

**cccs:scan-type="icmp"**

Icmp

Scan was attempting to enumerate devices through the ICMP protocol.

**cccs:scan-type="os-fingerprinting"**

Os fingerprinting

Scan was looking for operating system information through unique characteristics in responses.

**cccs:scan-type="web"**

Web

Scan was enumerating or otherwise traversing web hosts.
severity

Severity of the event.

cccs:severity="reconnaissance"

Reconnaissance

An actor attempted or succeeded in gaining information that may be used to identify and/or compromise systems or data.

cccs:severity="attempted-compromise"

Attempted compromise

An actor attempted affecting the confidentiality, integrity or availability of a system.

cccs:severity="exploited"

Exploited

A vulnerability was successfully exploited.

threat-vector

Specifies how the threat actor gained or attempted to gain initial access to the target GoC host.

cccs:threat-vector="application:cms"

Application:cms

Content Management System.

cccs:threat-vector="application:bash"

Application:bash

BASH script.

cccs:threat-vector="application:acrobat-reader"

Application:acrobat reader

Adobe Acrobat Reader.
Application:ms excel
Microsoft Excel.

Application:other
Other Application.

Language:sql
Structured Query Language.

Language:php
PHP: Hypertext Preprocessor.

Language:javascript
JavaScript.

Language:other
Other Language.

Protocol:dns
Domain Name System.

Protocol:ftp
File Transfer Protocol.

Protocol:http
Hyper Text Transfer Protocol.

`cccs:threat-vector="protocol:icmp"`
Protocol:icmp
Internet Control Message Protocol.

`cccs:threat-vector="protocol:ntp"`
Protocol:ntp
Network Time Protocol.

`cccs:threat-vector="protocol:rdp"`
Protocol:rdp
Remote Desktop Protocol.

`cccs:threat-vector="protocol:smb"`
Protocol:smb
Server Message Block.

`cccs:threat-vector="protocol:snmp"`
Protocol:snmp

`cccs:threat-vector="protocol:ssl"`
Protocol:ssl
Secure Sockets Layer.

`cccs:threat-vector="protocol:telnet"`
Protocol:telnet
Network Virtual Terminal Protocol.

`cccs:threat-vector="protocol:sip"`
Protocol:telnet
Session Initiation Protocol.
circl namespace available in JSON format at this location. The JSON format can be freely reused in your application or automatically enabled in MISP taxonomy.

CIRCL Taxonomy - Schemes of Classification in Incident Response and Detection

incident-classification

```xml
<circl:
incident-classification="spam"
Spam

<circl:
incident-classification="system-compromise"
System compromise

<circl:
incident-classification="scan"
Scan

<circl:
incident-classification="denial-of-service"
Denial of Service

<circl:
incident-classification="copyright-issue"
Copyright issue

<circl:
incident-classification="phishing"
Phishing

<circl:
incident-classification="malware"
Malware

<circl:
incident-classification="XSS"
XSS

<circl:
incident-classification="vulnerability"
Vulnerability
```
Fastflux
SQL Injection
Information leak
Scam
Cryptojacking
Locker
Screenlocker
Wiper
sextortion

Finance
ICT
collaborative-intelligence namespace available in JSON format at this location. The JSON format can be freely reused in your application or automatically enabled in MISP taxonomy.

Collaborative intelligence support language is a common language to support analysts to perform their analysis to get crowdsourced support when using threat intelligence sharing platform like MISP. The objective of this language is to advance collaborative analysis and to share earlier than later.

request

Request predicate covers all the requests which can be done by analysts or organisations willing to get additional information to support their analysis.

collaborative-intelligence:request="sample"

Request a binary sample

collaborative-intelligence:request="deobfuscated-sample"

Request a deobfuscated sample of the shared sample

collaborative-intelligence:request="more-samples"

Request additional samples compared to the original analysis to build a competitive analysis on the
reversing aspect

collaborative-intelligence:request="related-samples"
Request related samples required for further analysis

collaborative-intelligence:request="static-analysis"
Request additional static analysis or reversing on the information shared

collaborative-intelligence:request="detection-signature"
Request detection signature from

collaborative-intelligence:request="context"
Request more contextual information

collaborative-intelligence:request="abuse-contact"
Request an abuse contact to report to

collaborative-intelligence:request="historical-information"
Request more historical information from

collaborative-intelligence:request="complementary-validation"
Request complementary validation

collaborative-intelligence:request="target-information"
Request about the target(s) including field of activities or companies

collaborative-intelligence:request="request-analysis"
Request further technical or tactical analysis

collaborative-intelligence:request="more-information"
Request for generic additional information

common-taxonomy

common-taxonomy namespace available in JSON format at this location. The JSON format can be freely reused in your application or automatically enabled in MISP taxonomy.
Common Taxonomy for Law enforcement and CSIRTs

**malware**

Infection of one or various systems with a specific type of malware / Connection performed by/from/to (a) suspicious system(s)

**common-taxonomy:malware="infection"**

Infection

Malware detected in a system.

**common-taxonomy:malware="distribution"**

Distribution

Malware attached to a message or email message containing link to malicious URL or IP.

**common-taxonomy:malware="command-and-control"**

Command & Control (C&C)

System used as a command-and-control point by a botnet. Also included in this field are systems serving as a point for gathering information stolen by botnets.

**common-taxonomy:malware="malicious-connection"**

Malicious connection

System attempting to gain access to a port normally linked to a specific type of malware / System attempting to gain access to an IP address or URL normally linked to a specific type of malware, e.g. C&C or a distribution page for components linked to a specific botnet.

**availability**

Disruption of the processing and response capacity of systems and networks in order to render them inoperative / Premeditated action to damage a system, interrupt a process, change or delete information, etc.

**common-taxonomy:availability="dos-ddos"**

Denial of Service (DoS) / Distributed Denial of Service (DDoS)

Single source using specially designed software to affect the normal functioning of a specific service, by exploiting vulnerability / Mass mailing of requests (network packets, emails, etc.) from one single source to a specific service, aimed at affecting its normal functioning.
Sabotage

Logical and physical activities which – although they are not aimed at causing damage to information or at preventing its transmission among systems – have this effect.

information-gathering

Active and passive gathering of information on systems or networks / Unauthorised monitoring and reading of network traffic / Attempt to gather information on a user or a system through phishing methods.

Scanning

Single system scan searching for open ports or services using these ports for responding / Scanning a network aimed at identifying systems which are active in the same network / Transfer of a specific DNS zone.

Sniffing

Logical or physical interception of communications.

Phishing

Mass emailing aimed at collecting data for phishing purposes with regard to the victims / Hosting web sites for phishing purposes.

intrusion-attempt

Attempt to intrude by exploiting vulnerability in a system, component or network / Attempt to log in to services or authentication/access control mechanisms.

Exploitation of vulnerability attempt

Unsuccessful use of a tool exploiting a specific vulnerability of the system / Unsuccessful attempt to manipulate or read the information of a database by using the SQL injection technique / Unsuccessful attempts to perform attacks by using cross-site scripting techniques / Unsuccessful attempt to include files in the system under attack by using file inclusion techniques / Unauthorised access to a system or component by bypassing an access control system in place.
Login attempt

Unsuccessful login by using sequential credentials for gaining access to the system / Unsuccessful acquisition of access credentials by breaking the protective cryptographic keys / Unsuccessful login by using system access credentials previously loaded into a dictionary.

intrusion

Actual intrusion by exploiting vulnerability in the system, component or network / Actual intrusion in a system, component or network by compromising a user or administrator account.

(common-taxonomy:intrusion="vulnerability-exploitation")

(Successful) Exploitation of vulnerability

Unauthorised use of a tool exploiting a specific vulnerability of the system / Unauthorised manipulation or reading of information contained in a database by using the SQL injection technique / Attack performed with the use of cross-site scripting techniques / Unauthorised inclusion of files into a system under attack with the use of file inclusion techniques / Unauthorised access to a system or component by bypassing an access control system in place.

(common-taxonomy:intrusion="account-compromise")

Compromising an account

Unauthorised access to a system or component by using stolen access credentials.

information-security

Unauthorised access to a particular set of information / Unauthorised change or elimination of a particular set of information.

(common-taxonomy:information-security="unauthorised-access")

Unauthorised access

Unauthorised access to a system or component / Unauthorised access to a set of information / Unauthorised access to and sharing of a specific set of information.

(common-taxonomy:information-security="unauthorised-modification-or-deletion")

Unauthorised modification / deletion

Unauthorised changes to a specific set of information / Unauthorised deleting of a specific set of information.
fraud
Loss of property caused with fraudulent or dishonest intent of procuring, without right, an economic benefit for oneself or for another person.

common-taxonomy:fraud="resources-misuse"
Misuse or unauthorised use of resources
Use of institutional resources for purposes other than those intended.

common-taxonomy:fraud="false-representation"
False representation
Unauthorised use of the name of an institution.

abusive-content
Sending SPAM messages / Distribution and sharing of copyright protected content / Dissemination of content forbidden by law.

common-taxonomy:abusive-content="spam"
SPAM
Sending an unusually large quantity of email messages / Unsolicited or unwanted email message sent to the recipient.

common-taxonomy:abusive-content="copyright"
Copyright
Unauthorised distribution or sharing of content protected by Copyright and related rights.

common-taxonomy:abusive-content="cse-racism-violence-incitement"
Child Sexual Exploitation, racism or incitement to violence
Distribution or sharing of illegal content such as child sexual exploitation material, racism, xenophobia, etc.

other
Incidents not classified in the existing classification.

common-taxonomy:other="unclassified-incident"
Unclassified incident
Incidents which do not fit the existing classification, acting as an indicator for the classification’s update.

**common-taxonomy:other="undetermined-incident"**

Undetermined incident

Unprocessed incidents which have remained undetermined from the beginning.

**copine-scale**

Copine-scale namespace available in JSON format at [this location](#). The JSON format can be freely reused in your application or automatically enabled in MISP taxonomy.

The COPINE Scale is a rating system created in Ireland and used in the United Kingdom to categorise the severity of images of child sex abuse. The scale was developed by staff at the COPINE (Combating Paedophile Information Networks in Europe) project. The COPINE Project was founded in 1997, and is based in the Department of Applied Psychology, University College Cork, Ireland.

- **level-10**

**copine-scale:level-10**

Sadistic/bestiality: (a) Pictures showing a child being tied, bound, beaten, whipped, or otherwise subjected to something that implies pain; (b) Pictures where an animal is involved in some form of sexual behavior with a child

- **level-9**

**copine-scale:level-9**

Gross assault: Grossly obscene pictures of sexual assault, involving penetrative sex, masturbation, or oral sex involving an adult

- **level-8**

**copine-scale:level-8**

Assault: Pictures of children being subjected to a sexual assault, involving digital touching, involving an adult
Explicit sexual activity: Involves touching, mutual and self-masturbation, oral sex, and intercourse by child, not involving an adult

Explicit erotic posing: Emphasizing genital areas where the child is posing either naked, partially clothed, or fully clothed

Erotic posing: Deliberately posed pictures of fully or partially clothed or naked children in sexualized or provocative poses

Posing: Deliberately posed pictures of children fully or partially clothed or naked (where the amount, context, and organization suggests sexual interest)

Erotica: Surreptitiously taken photographs of children in play areas or other safe environments showing either underwear or varying degrees of nakedness

Nudist: Pictures of naked or seminaked children in appropriate nudist settings, and from legitimate sources
Indicative: Nonerotic and nonsexualized pictures showing children in their underwear, swimming costumes, and so on, from either commercial sources or family albums; pictures of children playing in normal settings, in which the context or organization of pictures by the collector indicates inappropriateness.

**cryptocurrency-threat**

Cryptocurrency-threat namespace available in JSON format at [this location](#). The JSON format can be freely reused in your application or automatically enabled in MISP taxonomy.

Threats targeting cryptocurrency, based on CipherTrace report.

**SIM Swapping**

**cryptocurrency-threat:**SIM Swapping

An identity theft technique that takes over a victim’s mobile device to steal credentials and break into wallets or exchange accounts to steal cryptocurrency.

**Crypto Dusting**

**cryptocurrency-threat:**Crypto Dusting

A new form of blockchain spam that erodes the recipient’s reputation by sending cryptocurrency from known money mixers.

**Sanction Evasion**

**cryptocurrency-threat:**Sanction Evasion

Nation states using cryptocurrencies has been promoted by the Iranian and Venezuelan governments.

**Next-Generation Crypto Mixers**

**cryptocurrency-threat:**Next-Generation Crypto Mixers

Money laundering services that promise to exchange tainted tokens for freshly mined crypto, but in reality, cleanse cryptocurrency through exchanges.
Shadow Money Service Businesses

Unlicensed Money Service Businesses (MSBs) banking cryptocurrency without the knowledge of host financial institutions, and thus exposing banks to unknown risk.

Datacenter-Scale Crypto Jacking:

Takeover attacks that mine for cryptocurrency at a massive scale have been discovered in datacenters, including AWS.

Lightning Network Transactions

Enable anonymous bitcoin transactions by going "off-chain," and can now scale to $2,150,000.

Decentralized Stable Coins

Stabilized tokens that can be designed for use as private coins.

Email Extortion and Bomb Threats

Cyber-extortionists stepped up mass-customized phishing emails campaigns using old passwords and spouse names in 2018. Bomb threat extortion scams demanding bitcoin spiked in December.

Crypto Robbing Ransomware

Cyber-extortionists began distributing new malware that empties cryptocurrency wallets and steals private keys while holding user data hostage.
It is critical that the CSIRT provide consistent and timely response to the customer, and that sensitive information is handled appropriately. This document provides the guidelines needed for CSIRT Incident Managers (IM) to classify the case category, criticality level, and sensitivity level for each CSIRT case. This information will be entered into the Incident Tracking System (ITS) when a case is created. Consistent case classification is required for the CSIRT to provide accurate reporting to management on a regular basis. In addition, the classifications will provide CSIRT IM’s with proper case handling procedures and will form the basis of SLA’s between the CSIRT and other Company departments.

**incident-category**

**csirt_case_classification:incident-category="DOS"**
Denial of service / Distributed Denial of service

**csirt_case_classification:incident-category="forensics"**
Forensics work

**csirt_case_classification:incident-category="compromised-information"**
Attempted or successful destruction, corruption, or disclosure of sensitive corporate information or Intellectual Property

**csirt_case_classification:incident-category="compromised-asset"**
Compromised host (root account, Trojan, rootkit), network device, application, user account.

**csirt_case_classification:incident-category="unlawful-activity"**
Theft / Fraud / Human Safety / Child Porn

**csirt_case_classification:incident-category="internal-hacking"**
Reconnaissance or Suspicious activity originating from inside the Company corporate network, excluding malware

**csirt_case_classification:incident-category="external-hacking"**
Reconnaissance or Suspicious Activity originating from outside the Company corporate network (partner network, Internet), excluding malware.
A virus or worm typically affecting multiple corporate devices. This does not include compromised hosts that are being actively controlled by an attacker via a backdoor or Trojan.

Spoofed email, SPAM, and other email security-related events.

Security consulting unrelated to any confirmed incident

Violation of various policies

Incident affecting critical systems or information with potential to be revenue or customer impacting.

Incident affecting non-critical systems or information, not revenue or customer impacting. Employee investigations that are time sensitive should typically be classified at this level.

Possible incident, non-critical systems. Incident or employee investigations that are not time sensitive. Long-term investigations involving extensive research and/or detailed forensic work.

Extremely Sensitive

Sensitive

Not Sensitive
The CSSA agreed sharing taxonomy.

**sharing-class**

**cssa:sharing-class="high_profile"**

Generated within the company during incident/case related investigations or forensic analysis or via malware reversing, validated by humans and highly contextualized.

**cssa:sharing-class="vetted"**

Generated within the company, validated by a human prior to sharing, data points have been contextualized (to a degree) e.g. IPs are related to C2 or drop site.

**cssa:sharing-class="unvetted"**

Generated within the company by automated means without human interaction e.g., by malware sandbox, honeypots, IDS, etc.

**origin**

**cssa:origin="manual_investigation"**

Information gathered by an analyst/incident responder/forensic expert/etc.

**cssa:origin="honeypot"**

Information coming out of honeypots.

**cssa:origin="sandbox"**

Information coming out of sandboxes.

**cssa:origin="email"**

Information coming out of email infrastructure.

**cssa:origin="3rd-party"**

Information from outside the company.
analyse

cyber-threat-framework

cyber-threat-framework namespace available in JSON format at this location. The JSON format can be freely reused in your application or automatically enabled in MISP taxonomy.

Cyber Threat Framework was developed by the US Government to enable consistent characterization and categorization of cyber threat events, and to identify trends or changes in the activities of cyber adversaries. https://www.dni.gov/index.php/cyber-threat-framework

Preparation

cyber-threat-framework:Preparation="plan-activity"

Plan activity

Associated numerical value="10"

cyber-threat-framework:Preparation="conduct-research-and-analysis"

Conduct research & analysis

Associated numerical value="11"

cyber-threat-framework:Preparation="develop-resource-and-capabilities"

Develop resources & capabilities

Associated numerical value="12"

cyber-threat-framework:Preparation="acquire-victim-and-specific-knowledge"

Acquire victim & specific knowledge

Associated numerical value="13"
cyber-threat-framework:Preparation="complete-preparations"
Complete preparations
Associated numerical value="14"

Engagement

cyber-threat-framework:Engagement="deploy-capability"
Deploy capability
Associated numerical value="20"

cyber-threat-framework:Engagement="interact-with-intended-victim"
Interact with intended victim
Associated numerical value="21"

cyber-threat-framework:Engagement="exploit-vulnerabilities"
Exploit vulnerabilities
Associated numerical value="22"

cyber-threat-framework:Engagement="deliver-malicious-capabilities"
Deliver malicious capabilities
Associated numerical value="23"

Presence

cyber-threat-framework:Presence="establish-controlled-access"
Establish controlled access
Associated numerical value="30"

cyber-threat-framework:Presence="hide"
Hide
Associated numerical value="31"

cyber-threat-framework:Presence="expand-presence"
Expand presence
Associated numerical value="32"

cyber-threat-framework:Presence="refine-focus-of-activity"
Refine focus of activity

Associated numerical value="33"

cyber-threat-framework:Presence="establish-persistence"
Establish persistence

Associated numerical value="34"

**Effect/Consequence**

**cyber-threat-framework:Effect/Consequence="enable-other-operations"**
Enable other operations

Associated numerical value="40"

**cyber-threat-framework:Effect/Consequence="deny-access"**
Deny access

Associated numerical value="41"

**cyber-threat-framework:Effect/Consequence="extract-data"**
Extract data

Associated numerical value="42"

**cyber-threat-framework:Effect/Consequence="alter-data-and-or-computer-network-or-system-behavior"**
Alter data and/or computer, network or system behavior

Associated numerical value="43"

**cyber-threat-framework:Effect/Consequence="destroy-hardware-software-or-data"**
Destroy HW/SW/data

Associated numerical value="44"
dark-web

dark-web namespace available in JSON format at this location. The JSON format can be freely reused in your application or automatically enabled in MISP taxonomy.

Criminal motivation on the dark web: A categorisation model for law enforcement. ref: Janis Dalins, Campbell Wilson, Mark Carman. Taxonomy updated by MISP Project

**topic**

Topic associated with the materials tagged

**dark-web:topic="drugs-narcotics"**

Drugs/Narcotics

Illegal drugs/chemical compounds for consumption/ingestion - either via blanket unlawfulness (e.g. proscribed drugs) or via unlawful access (e.g. prescription-only/restricted medications sold without lawful accessibility).

**dark-web:topic="extremism"**

Extremism

Illegal or ‘of concern’ levels of extremist ideology. Note this does not provide blanket coverage of fundamentalist ideologies and dogma - only those associated with illegal acts. Socialist/anarchist/religious materials (for example) will not be included unless inclusive or indicative of associated illegal conduct, such as hate crimes.

**dark-web:topic="finance"**

Finance

Any monetary/currency/exchangeable materials. Includes carding, Bitcoin, Litecoin etc.

**dark-web:topic="cash-in"**

Cash-in

–

**dark-web:topic="cash-out"**

Cash-out

–
**Hacking**

Materials relating to the illegal access to or alteration of data and/or electronic services.

**Identification/Credentials**

Materials used for providing/establishing identification with third parties. Examples include passports, driver licenses and login credentials.

**Intellectual Property/Copyright Materials**

Otherwise lawful materials stored, transferred or made available without consent of their legal rights holders.

**Pornography - Adult**

Lawful, ethical pornography (i.e. involving only consenting adults).

**Pornography - Child (Child Exploitation)**

Child abuse materials (aka child pornography), including ‘fantasy’ fiction materials, CGI. Also includes the provision/offering of child abuse materials and/or activities.

**Pornography - Illicit or Illegal**

Illegal pornography NOT including children/child abuse. Includes bestiality, stolen/revenge porn, hidden cameras etc.

**Search Engine/Index**

Site providing links/references to other sites/services. Referred to as a ‘nexus’ by (Moore and Rid, 2016)

**Unclear**

Unclear
Unable to completely establish topic of material.

**dark-web:topic="violence"**

Violence

Materials relating to violence against persons or property.

**dark-web:topic="weapons"**

Weapons

Materials specifically associated with materials and/or items for use in violent acts against persons or property. Examples include firearms and bomb-making ingredients.

**dark-web:topic="credit-card"**

Credit-Card

Credit cards and payments materials

**dark-web:topic="counterfeit-materials"**

Counterfeit materials

Fake identification papers.

**dark-web:topic="gambling"**

Gambling

Games involving money

**dark-web:topic="library"**

Library

Library or list of books

**dark-web:topic="other-not-illegal"**

Other not illegal

Material not of interest to law enforcement - e.g. personal sites, Facebook mirrors.

**dark-web:topic="legitimate"**

Legitimate

Legitimate websites
**dark-web:topic="chat"**

Chats platforms

Chats space or equivalent, which are not forums

**dark-web:topic="mixer"**

-
-

**motivation**

Motivation with the materials tagged

**dark-web:motivation="education-training"**

Education & Training

Materials providing instruction - e.g. ‘how to’ guides

**dark-web:motivation="file-sharing"**

File Sharing

General file sharing, typically (but not limited to) movie/image sharing

**dark-web:motivation="forum"**

Forum

Sites specifically designed for multiple users to communicate as peers

**dark-web:motivation="wiki"**

Wiki

Wiki pages and information display

**dark-web:motivation="hosting"**

Hosting

Hosting providers

**dark-web:motivation="general"**

General
Materials not covered by the other motivations. Typically, materials of a nature not of interest to law enforcement. For example, personal biography sites.

**dark-web:motivation="information-sharing-reportage"**

Information Sharing/Reportage

Journalism/reporting on topics. Can include biased coverage, but obvious propaganda materials are covered by Recruitment/Advocacy.

**dark-web:motivation="marketplace-for-sale"**

Marketplace/For Sale

Services/goods for sale, regardless of means of payment.

**dark-web:motivation="recruitment-advocacy"**

Recruitment/Advocacy

Propaganda

**dark-web:motivation="system-placeholder"**

System/Placeholder

Automatically generated content, not designed for any identifiable purpose other than diagnostics - e.g. “It Works” message provided by default by Apache2

**structure**

Structure of the materials tagged

**dark-web:structure="incomplete"**

Incomplete websites or information

Websites and pages that are unable to load completely properly

**dark-web:structure="captcha"**

Captcha and Solvers

Captcha and solvers elements

**dark-web:structure="LoginForms"**

Logins forms and gates

Authentification pages, login page, login forms that block access to an internal part of a website.
Police Notice

Closed websites, with police-equivalent banners

data-classification

Data classification namespace available in JSON format at this location. The JSON format can be freely reused in your application or automatically enabled in MISP taxonomy.

Data classification for data potentially at risk of exfiltration based on table 2.1 of Solving Cyber Risk book.

regulated-data

Data which is regulated under a specific regulation or law such as PII, SPD, PCI or PHI.

data-classification:regulated-data

Regulated data

Data which is regulated under a specific regulation or law such as PII, SPD, PCI or PHI.

commercially-confidential-information

Data which represents a specific commercial value and is confidential to an organisation such as trade secrets, customer accounts.

data-classification:commercially-confidential-information

Commercially confidential information (CCI)

Data which represents a specific commercial value and is confidential to an organisation such as trade secrets, customer accounts.

financially-sensitive-information

Data which represents a specific financial value to an organisation such as payroll, investment information.
Financially sensitive information (FSI)

Data which represents a specific financial value to an organisation such as payroll, investment information.

Valuation sensitive information (VSI)

Data which is sensitive to the valuation of an organisation such as inside information (as defined by a Financial Services Authority).

Sensitive information

Data which is sensitive such as email or letters.

dcso-sharing

 hesitate namespace available in JSON format at this location. The JSON format can be freely reused in your application or automatically enabled in MISP taxonomy.

Taxonomy defined in the DCSO MISP Event Guide. It provides guidance for the creation and consumption of MISP events in a way that minimises the extra effort for the sending party, while enhancing the usefulness for receiving parties.

event-type

dcso-sharing:event-type="Observation"

This event describes traits and indicators closely related to a single entity, like an email campaign or sighting of a reference sample on VirusTotal. Events of this type are typically created by CSOC staff and may be verified by analysts. Observed and verified indicators would be consumed by automated filtering systems in order to support near-time threat prevention. In retrospect,
observations could be correlated with reports and analysis events in order to help understand the motivation for an attack and to reassess the associated risk.

**dcso-sharing:event-type="Incident"**

This event describes traits and indicators related to a security incident. As such, the event may refer to multiple entities like organizations, bank account numbers, files, and URLs. Events of this type contain first-hand information, that is, the reporting organization took part in the analysis of the incident. Use event type "Report" for second-hand information. Events of this type are typically created and consumed by analysts.

**dcso-sharing:event-type="Report"**

Traceability of indicators can be essential to document compliance of processes with legal obligations or company regulations. This event preserves a report to document the origin and context of indicators. Events of this type need to be checked by a human to ensure correct reproduction of indicators and context. Intended consumers are automated processes. Events may also serve as a basis for analysis reports or to justify preventive measures. If your organization is or was directly involved in an incident and you want to provide a first-hand account, then please use event type "Incident" instead.

**dcso-sharing:event-type="Analysis"**

This event builds on "observation", "incident", and "report" events; adds enrichments; and provides context. Events of this type will be created by analysts with support by automated tools. Analysts are also the main consumers.

**dcso-sharing:event-type="Collection"**

This event collects unrelated IoCs. For example, an event could combine all network IoCs that were learned of during a day or a week from events of other types.

ddos

ddos namespace available in JSON format at this location. The JSON format can be freely reused in your application or automatically enabled in MISP taxonomy.

Distributed Denial of Service - or short: DDoS - taxonomy supports the description of Denial of Service attacks and especially the types they belong too.

**type**

Types and techniques described the way that the attack is performed to launch the Denial of Service attacks. A combination of type values can be used to explain combined techniques and methods.
Amplification attack

Reflected and Spoofed attack

Slow Read attack

Flooding attack

Large POST HTTP attack

de-vs namespace available in JSON format at this location. The JSON format can be freely reused in your application or automatically enabled in MISP taxonomy.

German (DE) Government classification markings (VS).

Einstufung

STRENG GEHEIM

KENNTNISNAHME DURCH UNBEFUGTE KANN DEN BESTAND ODER LEBENSWICHTIGE INTERESSEN DER BUNDESPREVIDIKT DEUTSCHLAND ODER EINES IHRER LÄNDER GEFAHRDEN.

GEHEIM

KENNTNISNAHME DURCH UNBEFUGTE KANN DIE SICHERHEIT DER BUNDESPREVIDIKT DEUTSCHLAND ODER EINES IHRER LÄNDER GEFAHRDEN ODER IHREN INTERESSEN SCHWEREN SCHADEN ZUFÜGEN.

VS-VERTRAULICH

KENNTNISNAHME DURCH UNBEFUGTE KANN FÜR DIE INTERESSEN DER BUNDESPREVIDIKT DEUTSCHLAND ODER
eines ihrer Länder schädlich sein.

**de-vs:Einstufung="VS-NfD"**

VS-NUR FÜR DEN DIENSTGEBRAUCH

Kenntnisnahme durch Unbefugte kann für die Interessen der Bundesrepublik Deutschland oder eines ihrer Länder nachteilig sein.

**Schutzwort**

**de-vs:Schutzwort="Dummy"**

Dummy

Platzhalter.

**dhs-ciip-sectors**

| dhs-ciip-sectors namespace available in JSON format at [this location](https://www.dhs.gov/critical-infrastructure-sectors). The JSON format can be freely reused in your application or automatically enabled in MISP taxonomy. |

DHS critical sectors as in [https://www.dhs.gov/critical-infrastructure-sectors](https://www.dhs.gov/critical-infrastructure-sectors)

**DHS-critical-sectors**

- **dhs-ciip-sectors:DHS-critical-sectors="chemical"**
  
  Chemical

- **dhs-ciip-sectors:DHS-critical-sectors="commercial-facilities"**
  
  Commercial Facilities

- **dhs-ciip-sectors:DHS-critical-sectors="communications"**
  
  Communications

- **dhs-ciip-sectors:DHS-critical-sectors="critical-manufacturing"**
  
  Critical Manufacturing

- **dhs-ciip-sectors:DHS-critical-sectors="dams"**
  
  Dams
Defense Industrial Base

Emergency services

energy

Financial Services

Food and Agriculture

Government Facilities

Healthcare and Public Health

Information Technology

Nuclear

Transportation Systems

Water and water systems

sector
The Diamond Model for Intrusion Analysis, a phase-based model developed by Lockheed Martin, aims to help categorize and identify the stage of an attack.

### Adversary

**diamond-model:Adversary**

An adversary is the actor/organization responsible for utilizing a capability against the victim to achieve their intent.

### Capability

**diamond-model:Capability**

The capability describes the tools and/or techniques of the adversary used in the event. It includes all means to affect the victim from the most manual “unsophisticated” methods (e.g., manual password guessing) to the most sophisticated automated techniques.

### Infrastructure

**diamond-model:Infrastructure**

The infrastructure feature describes the physical and/or logical communication structures the adversary uses to deliver a capability, maintain control of capabilities (e.g., command-and-control/C2), and effect results from the victim (e.g., exfiltrate data). As with the other features, the infrastructure can be as specific or broad as necessary. Examples include: Internet Protocol (IP) addresses, domain names, e-mail addresses, Morse code flashes from a phone’s voice-mail light watched from across a street, USB devices found in a parking lot and inserted into a workstation, or the compromising emanations from hardware (e.g., Van Eck Phreaking) being collected by a nearby listening post.

### Victim

**diamond-model:Victim**

A victim is the target of the adversary and against whom vulnerabilities and exposures are exploited and capabilities used. A victim can be described in whichever way necessary and appropriate: organization, person, target email address, IP address, domain, etc. However, it is useful to define the victim persona and their assets separately as they serve different analytic
functions. Victim personae are useful in non-technical analysis such as cyber-victimology and social-political centered approaches whereas victim assets are associated with common technical approaches such as vulnerability analysis.

**dni-ism**

dni-ism namespace available in JSON format at [this location](#). The JSON format can be freely reused in your application or automatically enabled in MISP taxonomy.

A subset of Information Security Marking Metadata ISM as required by Executive Order (EO) 13526. As described by DNI.gov as Data Encoding Specifications for Information Security Marking Metadata in Controlled Vocabulary Enumeration Values for ISM

**classification:all**

- **dni-ism:classification:all="R"**  
  RESTRICTED

- **dni-ism:classification:all="C"**  
  CONFIDENTIAL

- **dni-ism:classification:all="S"**  
  SECRET

- **dni-ism:classification:all="TS"**  
  TOP SECRET

- **dni-ism:classification:all="U"**  
  UNCLASSIFIED

**classification:us**

- **dni-ism:classification:us="C"**  
  CONFIDENTIAL

- **dni-ism:classification:us="S"**  
  SECRET
dni-ism:scicontrols="KDK-KAND"
KDK KANDIK

dni-ism:scicontrols="RSV"
RESERVE

dni-ism:scicontrols="SI"
SPECIAL INTELLIGENCE

dni-ism:scicontrols="SI-G"
SI-GAMMA

dni-ism:scicontrols="TK"
TALENT KEYHOLE

complies:with

dni-ism:complies:with="USGov"
Document claims compliance with all rules encoded in ISM for documents produced by the US Federal Government. This is the minimum set of rules for US documents to adhere to, and all US documents should claim compliance with USGov.

dni-ism:complies:with="USIC"
Document claims compliance with all rules encoded in ISM for documents produced by the US Intelligence Community. Documents that claim compliance with USIC MUST also claim compliance with USGov.

dni-ism:complies:with="USDOD"
Document claims compliance with all rules encoded in ISM for documents produced by the US Department of Defense. Documents that claim compliance with USDOD MUST also claim compliance with USGov.

dni-ism:complies:with="OtherAuthority"
Document claims compliance with an authority other than the USGov, USIC, or USDOD.

atomicenergymarkings
dni-ism:atomicenergymarkings="RD"
RESTRICTED DATA

dni-ism:atomicenergymarkings="RD-CNWDI"
RD-CRITICAL NUCLEAR WEAPON DESIGN INFORMATION

dni-ism:atomicenergymarkings="FRD"
FORMERLY RESTRICTED DATA

dni-ism:atomicenergymarkings="DCNI"
DoD CONTROLLED NUCLEAR INFORMATION

dni-ism:atomicenergymarkings="UCNI"
DoE CONTROLLED NUCLEAR INFORMATION

dni-ism:atomicenergymarkings="TFNI"
TRANSCLASSIFIED FOREIGN NUCLEAR INFORMATION

notice

dni-ism:notice="FISA"
FISA Warning statement

dni-ism:notice="IMC"
IMCON Warning statement

dni-ism:notice="CNWDI"
Controlled Nuclear Weapon Design Information Warning statement

dni-ism:notice="RD"
RD Warning statement

dni-ism:notice="FRD"
FRD Warning statement
dni-ism:notice="DS"
LIMDIS caveat

dni-ism:notice="LES"
LES Notice

dni-ism:notice="LES-NF"
LES-NF Notice

dni-ism:notice="DSEN"
DSEN Notice

dni-ism:notice="DoD-Dist-A"
DoD Distribution statement A from DoD Directive 5230.24

dni-ism:notice="DoD-Dist-B"
DoD Distribution statement B from DoD Directive 5230.24

dni-ism:notice="DoD-Dist-C"
DoD Distribution statement C from DoD Directive 5230.24

dni-ism:notice="DoD-Dist-D"
DoD Distribution statement D from DoD Directive 5230.24

dni-ism:notice="DoD-Dist-E"
DoD Distribution statement E from DoD Directive 5230.24

dni-ism:notice="DoD-Dist-F"
DoD Distribution statement F from DoD Directive 5230.24

dni-ism:notice="DoD-Dist-X"
DoD Distribution statement X from DoD Directive 5230.24

dni-ism:notice="US-Person"
US Person info Notice
dni-ism:notice="pre13526ORCON"
Indicates that an instance document must abide by rules pertaining to ORIGINATOR CONTROLLED data issued prior to Executive Order 13526.

dni-ism:notice="POC"
Indicates that the contents of this notice specify the contact information for a required point-of-contact.

dni-ism:notice="COMSEC"
COMSEC Notice

nonic

dni-ism:nonic="NNPI"
NAVAL NUCLEAR PROPULSION INFORMATION

dni-ism:nonic="DS"
LIMITED DISTRIBUTION

dni-ism:nonic="XD"
EXCLUSIVE DISTRIBUTION

dni-ism:nonic="ND"
NO DISTRIBUTION

dni-ism:nonic="SBU"
SENSITIVE BUT UNCLASSIFIED

dni-ism:nonic="SBU-NF"
SENSITIVE BUT UNCLASSIFIED NOFORN

dni-ism:nonic="LES"
LAW ENFORCEMENT SENSITIVE

dni-ism:nonic="LES-NF"
LAW ENFORCEMENT SENSITIVE NOFORN
SENSITIVE SECURITY INFORMATION

nonuscontrols

dni-ism:nonuscontrols="ATOMAL"
NATO Atomal mark


dni-ism:nonuscontrols="BOHEMIA"
NATO Bohemia mark


dni-ism:nonuscontrols="BALK"
NATO Balk mark

dissem


dni-ism:dissem="RS"
RISK SENSITIVE


dni-ism:dissem="FOUO"
FOR OFFICIAL USE ONLY


dni-ism:dissem="OC"
ORIGINATOR CONTROLLED


dni-ism:dissem="OC-USGOV"
ORIGINATOR CONTROLLED US GOVERNMENT


dni-ism:dissem="IMC"
CONTROLLED IMAGERY


dni-ism:dissem="NF"
NOT RELEASABLE TO FOREIGN NATIONALS


dni-ism:dissem="PR"
CAUTION-PROPRIETARY INFORMATION INVOLVED
domain-abuse namespace available in JSON format at this location. The JSON format can be freely reused in your application or automatically enabled in MISP taxonomy.

Domain Name Abuse - taxonomy to tag domain names used for cybercrime. Use europol-incident to tag abuse-activity

domain-status

Domain status - describes the registration status of the domain name

domain-abuse:domain-status="active"

Registered & active

Domain name is registered and DNS is delegated

domain-abuse:domain-status="inactive"

Registered & inactive

Domain name is registered and DNS is not delegated

domain-abuse:domain-status="suspended"

Registered & suspended
Domain name is registered & DNS delegation is temporarily removed by the registry

domain-abuse:domain-status="not-registered"

Not registered

Domain name is not registered and open for registration

domain-abuse:domain-status="not-registrable"

Not registrable

Domain is not registered and cannot be registered

domain-abuse:domain-status="grace-period"

Grace period

Domain is deleted and still reserved for previous owner

domain-access-method

Domain Access - describes how the adversary has gained access to the domain name

domain-abuse:domain-access-method="criminal-registration"

Criminal registration

Domain name is registered for criminal purposes

domain-abuse:domain-access-method="compromised-webserver"

Compromised webserver

Webserver is compromised for criminal purposes

domain-abuse:domain-access-method="compromised-dns"

Compromised DNS

Compromised authoritative DNS or compromised delegation

domain-abuse:domain-access-method="sinkhole"

Sinkhole

Domain Name is sinkholed for research, detection, LE
Drugs namespace available in JSON format at this location. The JSON format can be freely reused in your application or automatically enabled in MISP taxonomy.

A taxonomy based on the superclass and class of drugs. Based on https://www.drugbank.ca/releases/latest.

**alkaloids-and-derivatives**

**drugs:alkaloids-and-derivatives**="ajmaline-sarpagine-alkaloids"

Ajmaline-sarpagine alkaloids

**drugs:alkaloids-and-derivatives**=" allocolchicine-alkaloids"

Allocolchicine alkaloids

**drugs:alkaloids-and-derivatives**=" Amaryllidaceae alkaloids"

Amaryllidaceae alkaloids

**drugs:alkaloids-and-derivatives**="aporphines"

Aporphines

**drugs:alkaloids-and-derivatives**="camptothecins"

Camptothecins

**drugs:alkaloids-and-derivatives**="cephalotaxus-alkaloids"

Cephalotaxus alkaloids

**drugs:alkaloids-and-derivatives**="cinchona-alkaloids"

Cinchona alkaloids

**drugs:alkaloids-and-derivatives**="eburnan-type-alkaloids"

Eburnan-type alkaloids

**drugs:alkaloids-and-derivatives**="epibatidine-analogues"

Epibatidine analogues
Ergoline and derivatives

Harmala alkaloids

Ibogan-type alkaloids

Lupin alkaloids

Morphinans

Phthalide isoquinolines

Protoberberine alkaloids and derivatives

Tropane alkaloids

Vinca alkaloids

Yohimbine alkaloids

Anthracenes
Benzene and substituted derivatives

Dibenzocycloheptenes

Fluorenes

Indanes

Indenes and isoindenes

Naphthacenes

Phenanthrenes and derivatives

Phenol esters

Phenol ethers

Phenols

Pyrenes

Tetralins
Triphenyl compounds

**homogeneous-metal-compounds**

Homogeneous actinide compounds

Homogeneous alkali metal compounds

Homogeneous alkaline earth metal compounds

Homogeneous lanthanide compounds

Homogeneous metalloid compounds

Homogeneous post-transition metal compounds

Homogeneous transition metal compounds

**homogeneous-non-metal-compounds**

Halogen organides
Homogeneous halogens

Homogeneous noble gases

Homogeneous other non-metal compounds

Non-metal oxoanionic compounds

Other non-metal halides

Other non-metal organides

Polycyclic hydrocarbons

Tropones

Aryltetralin lignans
Dibenzybutane lignans

Flavonolignans

Furanoid lignans

Lignan lactones

**lipids-and-lipid-like-molecules**

Fatty Acyls

Glycero-3-dithiophosphocholines

Glycerolipids

Glycerophospholipids

Prenol lipids

Saccharolipids

S-alkyl-CoAs
Sphingolipids

Steroids and steroid derivatives

**mixed-metal/non-metal-compounds**

Alkali metal organides

Alkali metal oxoanionic compounds

Alkali metal salts

Alkaline earth metal organides

Alkaline earth metal oxoanionic compounds

Alkaline earth metal salts

Metalloid organides

Metalloid oxoanionic compounds
Miscellaneous mixed metal/non-metals

Other mixed metal/non-metal oxoanionic compounds

Post-transition metal organides

Post-transition metal oxoanionic compounds

Post-transition metal salts

Transition metal organides

Transition metal oxoanionic compounds

Transition metal salts

nucleosides,-nucleotides,-and-analogues

2',3'-dideoxy-3'-thionucleoside monophosphates
2',5'-dideoxyribonucleosides

(3'->5')-dinucleotides and analogues

5'-deoxyribonucleosides

(5'->5')-dinucleotides

Benzimidazole ribonucleosides and ribonucleotides

Flavin nucleotides

Glycinamide ribonucleotides

Imidazole[4,5-c]pyridine ribonucleosides and ribonucleotides

Imidazole ribonucleosides and ribonucleotides

Molybdopterin dinucleotides
Nucleoside and nucleotide analogues

Purine nucleosides

Pyrazolo[3,4-d]pyrimidine glycosides

Pyridine nucleotides

Pyrimidine nucleosides

Pyrimidine nucleotides

Pyrrolopyrimidine nucleosides and nucleotides

Ribonucleoside 3'-phosphates

Triazole ribonucleosides and ribonucleotides

Organic-1,3-dipolar-compounds

Allyl-type 1,3-dipolar organic compounds
organic-acids-and-derivatives

drugs:organic-acids-and-derivatives="boronic-acid-derivatives"

Boronic acid derivatives


Carboximidic acids and derivatives


Carboxylic acids and derivatives


Hydroxy acids and derivatives


Keto acids and derivatives


Organic carbonic acids and derivatives


Organic phosphonic acids and derivatives


Organic phosphoric acids and derivatives


Organic sulfonic acids and derivatives


Organic sulfuric acids and derivatives
Organic thiophosphoric acids and derivatives

Orthocarboxylic acid derivatives

Peptidomimetics

Thiosulfinic acid esters

Carboxylic Acids and Derivatives

Organonitrogen compounds

Organic oxides

Organic oxoanionic compounds

Organooxygen compounds

Organic polymers
**drugs:organic-polymers="phosphorothioate-polynucleotides"**

Phosphorothioate polynucleotides

**drugs:organic-polymers="polypeptides"**

Polypeptides

**drugs:organic-polymers="polysaccharides"**

Polysaccharides

**organic-salts**

**drugs:organic-salts="organic-metal-salts"**

Organic metal salts

**organohalogen-compounds**

**drugs:organohalogen-compounds="acyl-halides"**

Acyl halides

**drugs:organohalogen-compounds="alkyl-halides"**

Alkyl halides

**drugs:organohalogen-compounds="aryl-halides"**

Aryl halides

**drugs:organohalogen-compounds="halohydrins"**

Halohydrins

**drugs:organohalogen-compounds="organochlorides"**

Organochlorides

**drugs:organohalogen-compounds="organofluorides"**

Organofluorides

**drugs:organohalogen-compounds="sulfonyl-halides"**

Sulfonyl halides
drugs:organohalogen-compounds="vinyl-halides"

Vinyl halides

**organoheterocyclic-compounds**

**drugs:organoheterocyclic-compounds="azaspirodecane-derivatives"

Azaspirodecane derivatives

**drugs:organoheterocyclic-compounds="azepanes"

Azepanes

**drugs:organoheterocyclic-compounds="azobenzenes"

Azobenzenes

**drugs:organoheterocyclic-compounds="azoles"

Azoles

**drugs:organoheterocyclic-compounds="azolidines"

Azolidines

**drugs:organoheterocyclic-compounds="azolines"

Azolines

**drugs:organoheterocyclic-compounds="benzazepines"

Benzazepines

**drugs:organoheterocyclic-compounds="benzimidazoles"

Benzimidazoles

**drugs:organoheterocyclic-compounds="benzisoaxozoles"

Benzisoaxozoles

**drugs:organoheterocyclic-compounds="benzocycloheptapyridines"

Benzocycloheptapyridines
Benzodiazepines

Benzodioxanes

Benzodioxoles

Benzofurans

Benzopyrans

Benzopyrazoles

Benzothiadiazoles

Benzothiazepines

Benzothiazines

Benzothiazoles

Benzothiepins

Benzothiophenes
drugs:organoheterocyclic-compounds="benzothiopyrans"
Benzothiopyrans

drugs:organoheterocyclic-compounds="benzotriazoles"
Benzotriazoles

drugs:organoheterocyclic-compounds="benzoxadiazoles"
Benzoxadiazoles

drugs:organoheterocyclic-compounds="benzoxazepines"
Benzoxazepines

drugs:organoheterocyclic-compounds="benzoxazines"
Benzoxazines

drugs:organoheterocyclic-compounds="benzoxazoles"
Benzoxazoles

drugs:organoheterocyclic-compounds="benzoxepines"
Benzoxepines

drugs:organoheterocyclic-compounds="bi—and-oligothiophenes"
Bi- and oligothiophenes

drugs:organoheterocyclic-compounds="biotin-and-derivatives"
Biotin and derivatives

drugs:organoheterocyclic-compounds="coumarans"
Coumarans

drugs:organoheterocyclic-compounds="cycloheptapyrans"
Cycloheptapyrans

drugs:organoheterocyclic-compounds="cycloheptathiophenes"
Cycloheptathiophenes
Diazanaphthalenes

Diazepanes

Diazinanes

Diazines

Dihydrofurans

Dihydroisoquinolines

Dihydrothiophenes

Dioxaborolanes

Dioxanes

Dioxolopyrans

Dithianes

Dithiolanes
drugs:organoheterocyclic-compounds="epoxides"
Epoxides

drugs:organoheterocyclic-compounds="furans"
Furans

drugs:organoheterocyclic-compounds="furofurans"
Furofurans

drugs:organoheterocyclic-compounds="furopyrans"
Furopyrans

drugs:organoheterocyclic-compounds="furopyridines"
Furopyridines

drugs:organoheterocyclic-compounds="furopyrroles"
Furopyrroles

drugs:organoheterocyclic-compounds="heteroaromatic-compounds"
Heteroaromatic compounds

drugs:organoheterocyclic-compounds="imidazo[1,5-a]pyrazines"
Imidazo[1,5-a]pyrazines

drugs:organoheterocyclic-compounds="imidazodiazepines"
Imidazodiazepines

drugs:organoheterocyclic-compounds="imidazopyrazines"
Imidazopyrazines

drugs:organoheterocyclic-compounds="imidazopyridines"
Imidazopyridines

drugs:organoheterocyclic-compounds="imidazopyrimidines"
Imidazopyrimidines
drugs:organoheterocyclic-compounds="imidazotetrazines"

Imidazotetrazines

drugs:organoheterocyclic-compounds="imidazothiazoles"

Imidazothiazoles

drugs:organoheterocyclic-compounds="indoles-and-derivatives"

Indoles and derivatives

drugs:organoheterocyclic-compounds="indolizidines"

Indolizidines

drugs:organoheterocyclic-compounds="isocoumarans"

Isocoumarans

drugs:organoheterocyclic-compounds="isoindoles-and-derivatives"

Isoindoles and derivatives

drugs:organoheterocyclic-compounds="isoquinolines-and-derivatives"

Isoquinolines and derivatives

drugs:organoheterocyclic-compounds="isoxazolopyridines"

Isoxazolopyridines

drugs:organoheterocyclic-compounds="lactams"

Lactams

drugs:organoheterocyclic-compounds="lactones"

Lactones

drugs:organoheterocyclic-compounds="metalloheterocyclic-compounds"

Metalloheterocyclic compounds

drugs:organoheterocyclic-compounds="naphthofurans"

Naphthofurans
Naphthopyrans

Oxanes

Oxazaphosphinanes

Oxazinanes

Oxepanes

Phenan throlines

Piperazinoazepines

Piperidines

Pteridines and derivatives

Pyranodioxins

Pyranopyridines

Pyranopyrimidines
drugs:organoheterocyclic-compounds="pyrans"
Pyrans

drugs:organoheterocyclic-compounds="pyrazolopyridines"
Pyrazolopyridines

drugs:organoheterocyclic-compounds="pyrazolopyrimidines"
Pyrazolopyrimidines

drugs:organoheterocyclic-compounds="pyrazolotriazines"
Pyrazolotriazines

drugs:organoheterocyclic-compounds="pyridines-and-derivatives"
Pyridines and derivatives

drugs:organoheterocyclic-compounds="pyridopyrimidines"
Pyridopyrimidines

drugs:organoheterocyclic-compounds="pyrroles"
Pyrroles

drugs:organoheterocyclic-compounds="pyrrolidines"
Pyrrolidines

drugs:organoheterocyclic-compounds="pyrrolines"
Pyrrolines

drugs:organoheterocyclic-compounds="pyrrolizines"
Pyrrolizines

drugs:organoheterocyclic-compounds="pyrroloazepines"
Pyrroloazepines

drugs:organoheterocyclic-compounds="pyrrolopyrazines"
Pyrrolopyrazines
drugs:organoheterocyclic-compounds="pyrrolopyrazoles"
Pyrrolopyrazoles

drugs:organoheterocyclic-compounds="pyrrolopyridines"
Pyrrolopyridines

drugs:organoheterocyclic-compounds="pyrrolopyrimidines"
Pyrrolopyrimidines

drugs:organoheterocyclic-compounds="pyrrolotriazines"
Pyrrolotriazines

drugs:organoheterocyclic-compounds="quinolines-and-derivatives"
Quinolines and derivatives

drugs:organoheterocyclic-compounds="quinuclidines"
Quinuclidines

drugs:organoheterocyclic-compounds="selenazoles"
Selenazoles

drugs:organoheterocyclic-compounds="tetrahydrofurans"
Tetrahydrofurans

drugs:organoheterocyclic-compounds="tetrahydroisoquinolines"
Tetrahydroisoquinolines

drugs:organoheterocyclic-compounds="tetrpyrroles-and-derivatives"
Tetrapyrroles and derivatives

drugs:organoheterocyclic-compounds="thiadiazinanes"
Thiadiazinanes

drugs:organoheterocyclic-compounds="thiadiazines"
Thiadiazines
drugs:organoheterocyclic-compounds="thianes"
Thianes

drugs:organoheterocyclic-compounds="thiazepines"
Thiazepines

drugs:organoheterocyclic-compounds="thiazinanes"
Thiazinanes

drugs:organoheterocyclic-compounds="thiazines"
Thiazines

drugs:organoheterocyclic-compounds="thienodiazepines"
Thienodiazepines

drugs:organoheterocyclic-compounds="thienoimidazolidines"
Thienoimidazolidines

drugs:organoheterocyclic-compounds="thienopyridines"
Thienopyridines

drugs:organoheterocyclic-compounds="thienopyrimidines"
Thienopyrimidines

drugs:organoheterocyclic-compounds="thienopyrroles"
Thienopyrroles

drugs:organoheterocyclic-compounds="thienothiazines"
Thienothiazines

drugs:organoheterocyclic-compounds="thiochromanones"
Thiochromanones

drugs:organoheterocyclic-compounds="thiochromenes"
Thiochromenes
Thiolanes

Thiophenes

Triazinanes

Triazines

Triazolopyrazines

Triazolopyridines

Triazolopyrimidines

Trioxanes

Organometalloid compounds

Organo-post-transition metal compounds

Organophosphorus compounds
Organophosphorus compounds

Organophosphorus compounds

Organophosphinic acids and derivatives

Organophosphinic acids and derivatives

Organophosphorus compounds

Organophosphorus compounds

Organothiophosphorus compounds

Organothiophosphorus compounds

Organosulfur compounds

Isothioureas

Isothioureas

Organic disulfides

Organic disulfides

Sulfonyls

Sulfonyls

Sulfoxides

Sulfoxides

Thiocarbonyl compounds

Thiocarbonyl compounds

Thioethers

Thioethers

Thiols

Thiols

Thioureas

Thioureas
phenylpropanoids-and-polyketides

2-arylbenzofuran flavonoids

Anthracyclines

Aurone flavonoids

Cinnamic acids and derivatives

Cinnamyl alcohols

Coumarins and derivatives

Depsidones and depsidones

Diarylheptanoids

Flavonoids

Isochromanequinones

Isocoumarins and derivatives
Isoflavonoids

Linear 1,3-diarylpropanoids

Macrolactams

Macrolide lactams

Macrolides and analogues

Neoflavonoids

Phenylpropanoic acids

Saxitoxins, gonyautoxins, and derivatives

Stilbenes

Tannins

Tetracyclines

economical-impact
Economical impact namespace available in JSON format at this location. The JSON format can be freely reused in your application or automatically enabled in MISP taxonomy.

Economical impact is a taxonomy to describe the financial impact as positive or negative gain to the tagged information (e.g. data exfiltration loss, a positive gain for an adversary).

### loss

A financial impact evaluated as a casualty.

**economical-impact:loss="none"**

No loss

**economical-impact:loss="less-than-25k-eur"**

Less than 25K EUR

**economical-impact:loss="less-than-50k-euro"**

Less than 50K EUR

**economical-impact:loss="less-than-100k-euro"**

Less than 100K EUR

**economical-impact:loss="less-than-1M-euro"**

Less than 1 million EUR

**economical-impact:loss="less-than-10M-euro"**

Less than 10 million EUR

**economical-impact:loss="less-than-100M-euro"**

Less than 100 million EUR

**economical-impact:loss="less-than-1B-euro"**

Less than 1 billion EUR

**economical-impact:loss="more-than-1B-euro"**

More than 1 billion EUR
gain
A financial impact evaluated as a benefit.

economical-impact:gain="none"
No gain

economical-impact:gain="less-than-25k-eur"
Less than 25K EUR

economical-impact:gain="less-than-50k-euro"
Less than 50K EUR

economical-impact:gain="less-than-100k-euro"
Less than 100K EUR

economical-impact:gain="less-than-1M-euro"
Less than 1 million EUR

economical-impact:gain="less-than-10M-euro"
Less than 10 million EUR

economical-impact:gain="less-than-100M-euro"
Less than 100 million EUR

economical-impact:gain="less-than-1B-euro"
Less than 1 billion EUR

economical-impact:gain="more-than-1B-euro"
More than 1 billion EUR

ecsirt
ecsirt namespace available in JSON format at this location. The JSON format can be freely reused in your application or automatically enabled in MISP taxonomy.

Incident Classification by the ecsirt.net version mkVI of 31 March 2015 enriched with IntelMQ taxonomy-type mapping.
**abusive-content**

Abusive Content.

**ecsirt:abusive-content="spam"**

spam

Or 'Unsolicited Bulk Email', this means that the recipient has not granted verifiable permission for the message to be sent and that the message is sent as part of a larger collection of messages, all having a functionally comparable content.

**ecsirt:abusive-content="harmful-speech"**

Harmful Speech

Discreditation or discrimination of somebody e.g. cyber stalking, racism and threats against one or more individuals).

**ecsirt:abusive-content="violence"**

Child/Sexual/Violence...

Child Pornography, glorification of violence, ...

**malicious-code**

Software that is intentionally included or inserted in a system for a harmful purpose. A user interaction is normally necessary to activate the code.

**ecsirt:malicious-code="virus"**

Virus

**ecsirt:malicious-code="worm"**

Worm

**ecsirt:malicious-code="trojan"**

Trojan

**ecsirt:malicious-code="spyware"**

Spyware

**ecsirt:malicious-code="dialer"**

Dialer
Rootkit

Malware

Botnet drone

Ransomware

Malware configuration

C&C

Information Gathering.

Scanning

Attacks that send requests to a system to discover weak points. This includes also some kind of testing processes to gather information about hosts, services and accounts. Examples: fingerd, DNS querying, ICMP, SMTP (EXPN, RCPT, ...), port scanning.

Sniffing

Observing and recording of network traffic (wiretapping).

Social Engineering

Gathering information from a human being in a non-technical way (e.g. lies, tricks, bribes, or threats).
**intrusion-attempts**

Intrusion Attempts.

**ecsirt:intrusion-attempts="ids-alert"**

Exploiting of known Vulnerabilities

An attempt to compromise a system or to disrupt any service by exploiting vulnerabilities with a standardised identifier such as CVE name (e.g. buffer overflow, backdoor, cross site scripting, etc.)

**ecsirt:intrusion-attempts="brute-force"**

Login attempts

Multiple login attempts (Guessing / cracking of passwords, brute force).

**ecsirt:intrusion-attempts="exploit"**

New attack signature

An attempt using an unknown exploit.

**intrusions**

A successful compromise of a system or application (service). This can have been caused remotely by a known or new vulnerability, but also by an unauthorized local access. Also includes being part of a botnet.

**ecsirt:intrusions="privileged-account-compromise"**

Privileged Account Compromise

**ecsirt:intrusions="unprivileged-account-compromise"**

Unprivileged Account Compromise

**ecsirt:intrusions="application-compromise"**

Application Compromise

**ecsirt:intrusions="bot"**

Bot

**ecsirt:intrusions="defacement"**

defacement
compromised

backdoor

availability

By this kind of an attack a system is bombarded with so many packets that the operations are delayed or the system crashes. DoS examples are ICMP and SYN floods, Teardrop attacks and mail-bombing. DDoS often is based on DoS attacks originating from botnets, but also other scenarios exist like DNS Amplification attacks. However, the availability also can be affected by local actions (destruction, disruption of power supply, etc.) – or by Act of God, spontaneous failures or human error, without malice or gross neglect being involved.

DoS

Denial of Service.

DDoS

Distributed Denial of Service.

Sabotage

Sabotage.

Outage (no malice)

Outage (no malice).

information-content-security

Besides a local abuse of data and systems the information security can be endangered by a successful account or application compromise. Furthermore attacks are possible that intercept and access information during transmission (wiretapping, spoofing or hijacking). Human/configuration/software error can also be the cause.
Unauthorised access to information

Unauthorised modification of information

dropzone

Fraud

 Unauthorized use of resources

Using resources for unauthorized purposes including profit-making ventures (e.g. the use of e-mail to participate in illegal profit chain letters or pyramid schemes).

Copyright

Offering or Installing copies of unlicensed commercial software or other copyright protected materials (Warez).

Masquerade

Type of attacks in which one entity illegitimately assumes the identity of another in order to benefit from it.

Phishing

Masquerading as another entity in order to persuade the user to reveal a private credential.

Vulnerable

Open resolvers, world readable printers, vulnerability apparent from Nessus etc scans, virus signatures not up-to-date, etc
Open for abuse

other

All incidents which don't fit in one of the given categories should be put into this class. If the number of incidents in this category increases, it is an indicator that the classification scheme must be revised

blacklist

unknown

other

test

Meant for testing.

test

Test

enisa

enisa namespace available in JSON format at this location. The JSON format can be freely reused in your application or automatically enabled in MISP taxonomy.

The present threat taxonomy is an initial version that has been developed on the basis of available ENISA material. This material has been used as an ENISA-internal structuring aid for information collection and threat consolidation purposes. It emerged in the time period 2012-2015.

physical-attack

Threats of intentional, hostile human actions.

fraud
Fraud committed by humans.

**enisa:physical-attack="fraud-by-employees"**

Fraud committed by employees

Fraud committed by employees or others that are in relation with entities, who have access to entities' information and IT assets.

**enisa:physical-attack="sabotage"**

Sabotage

Intentional actions (non-fulfilment or defective fulfilment of personal duties) aimed to cause disruption or damage to IT assets.

**enisa:physical-attack="vandalism"**

Vandalism

Act of physically damaging IT assets.

**enisa:physical-attack="theft"**

Theft (of devices, storage media and documents)

Stealing information or IT assets. Robbery.

**enisa:physical-attack="theft-of-mobile-devices"**

Theft of mobile devices (smartphones/ tablets)

Taking away another person's property in the form of mobile devices, for example smartphones, tablets.

**enisa:physical-attack="theft-of-fixed-hardware"**

Theft of fixed hardware

Taking away another person’s hardware property (except mobile devices), which often contains business-sensitive data.

**enisa:physical-attack="theft-of-documents"**

Theft of documents

Stealing documents from private/company archives, often for the purpose of re-sale or to achieve personal benefits.
Theft of backups

Stealing media devices, on which copies of essential information are kept.

Information leak / sharing

Sharing information with unauthorised entities. Loss of information confidentiality due to intentional human actions (e.g., information leak may occur due to loss of paper copies of confidential information).

Unauthorized physical access / Unauthorised entry to premises

Unapproved access to facility.

Coercion, extortion or corruption

Actions following acts of coercion, extortion or corruption.

Damage from the warfare

Threats of direct impact of warfare activities.

Terrorist attack

Threats from terrorists.

Information leak / sharing due to human error

Information leak / sharing caused by humans, due to their mistakes.
Accidental leaks/sharing of data by employees

Unintentional distribution of private or sensitive data to an unauthorized entity by a staff member.

Leaks of data via mobile applications

Threat of leaking private data (a result of using applications for mobile devices).

Leaks of data via Web applications

Threat of leaking important information using web applications.

Leaks of information transferred by network

Threat of eavesdropping of unsecured network traffic.

Erroneous use or administration of devices and systems

Information leak / sharing / damage caused by misuse of IT assets (lack of awareness of application features) or wrong / improper IT assets configuration or management.

Loss of information due to maintenance errors / operators' errors

Threat of loss of information by incorrectly performed maintenance of devices or systems or other operator activities.

Loss of information due to configuration/ installation error

Threat of loss of information due to errors in installation or system configuration.
Increasing recovery time

Threat of unavailability of information due to errors in the use of backup media and increasing information recovery time.

Loss of information due to user errors

Threat of unavailability of information or damage to IT assets caused by user errors (using IT infrastructure) or IT software recovery time.

Using information from an unreliable source

Bad decisions based on unreliable sources of information or unchecked information.

Unintentional change of data in an information system

Loss of information integrity due to human error (information system user mistake).

Inadequate design and planning or improper adaptation

Threats caused by improper IT assets or business processes design (inadequate specifications of IT products, inadequate usability, insecure interfaces, policy/procedure flows, design errors).

Damage caused by a third party

Threats of damage to IT assets caused by third party.

Security failure caused by third party

Threats of damage to IT assets caused by breach of security regulations by third party.
Damages resulting from penetration testing
Threats to information systems caused by conducting IT penetration tests inappropriately.

Loss of information in the cloud
Threats of losing information or data stored in the cloud.

Loss of (integrity of) sensitive information
Threats of losing information or data, or changing information classified as sensitive.

Loss of integrity of certificates
Threat of losing integrity of certificates used for authorisation services

Loss of devices, storage media and documents
Threats of unavailability (losing) of IT assets and documents.

Loss of devices/ mobile devices
Threat of losing mobile devices.

Loss of storage media
Threat of losing data-storage media.

Loss of documentation of IT Infrastructure
Threat of losing important documentation.
Destruction of records

Threats of unavailability (destruction) of data and records (information) stored in devices and storage media.

Infection of removable media

Threat of loss of important data due to using removable media, web or mail infection.

Abuse of storage

Threat of loss of records by improper/unauthorised use of storage devices.

disaster

Threats of damage to information assets caused by natural or environmental factors.

Disaster (natural earthquakes, floods, landslides, tsunamis, heavy rains, heavy snowfalls, heavy winds)

Large scale natural disasters.

Fire

Threat of fire.

Pollution, dust, corrosion

Threat of disruption of work of IT systems (hardware) due to pollution, dust or corrosion (arising from the air).

Thunderstrike

Threat of damage to IT hardware caused by thunder strike (overvoltage).
enisa:disaster="water"

Water

Threat of damage to IT hardware caused by water.

enisa:disaster="explosion"

Explosion

Threat of damage to IT hardware caused by explosion.

enisa:disaster="dangerous-radiation-leak"

Dangerous radiation leak

Threat of damage to IT hardware caused by radiation leak.

enisa:disaster="unfavourable-climatic-conditions"

Unfavourable climatic conditions

Threat of disruption of work of IT systems due to climatic conditions that have a negative effect on hardware.

enisa:disaster="loss-of-data-or-accessibility-of-IT-infrastructure-as-a-result-of-heightened-humidity"

Loss of data or accessibility of IT infrastructure as a result of heightened humidity

Threat of disruption of work of IT systems due to high humidity.

enisa:disaster="lost-of-data-or-accessibility-of-IT-infrastructure-as-a-result-of-very-high-temperature"

Lost of data or accessibility of IT infrastructure as a result of very high temperature

Threat of disruption of work of IT systems due to high or low temperature.

enisa:disaster="threats-from-space-or-electromagnetic-storm"

Threats from space / Electromagnetic storm

Threats of the negative impact of solar radiation to satellites and radio wave communication systems - electromagnetic storm.

enisa:disaster="wildlife"

Wildlife
Threat of destruction of IT assets caused by animals: mice, rats, birds.

**failures-malfunction**

Threat of failure/malfunction of IT supporting infrastructure (i.e. degradation of quality, improper working parameters, jamming). The cause of a failure is mostly an internal issue (e.g. overload of the power grid in a building).

*enisa:failures-malfunction*="failure-of-devices-or-systems"

Failure of devices or systems

Threat of failure of IT hardware and/or software assets or its parts.

*enisa:failures-malfunction*="failure-of-data-media"

Failure of data media

Threat of failure of data media.

*enisa:failures-malfunction*="hardware-failure"

Hardware failure

Threat of failure of IT hardware.

*enisa:failures-malfunction*="failure-of-applications-and-services"

Failure of applications and services

Threat of failure of software/applications or services.

*enisa:failures-malfunction*="failure-of-parts-of-devices-connectors-plug-ins"

Failure of parts of devices (connectors, plug-ins)

Threat of failure of IT equipment or its part.

*enisa:failures-malfunction*="failure-or-disruption-of-communication-links-communication-networks"

Failure or disruption of communication links (communication networks)

Threat of failure or malfunction of communications links.

*enisa:failures-malfunction*="failure-of-cable-networks"

Failure of cable networks
Threat of failure of communications links due to problems with cable network.

**enisa:failures-malfunction="failure-of-wireless-networks"**

Failure of wireless networks

Threat of failure of communications links due to problems with wireless networks.

**enisa:failures-malfunction="failure-of-mobile-networks"**

Failure of mobile networks

Threat of failure of communications links due to problems with mobile networks.

**enisa:failures-malfunction="failure-or-disruption-of-main-supply"**

Failure or disruption of main supply

Threat of failure or disruption of supply required for information systems.

**enisa:failures-malfunction="failure-or-disruption-of-power-supply"**

Failure or disruption of power supply

Threat of failure or malfunction of power supply.

**enisa:failures-malfunction="failure-of-cooling-infrastructure"**

Failure of cooling infrastructure

Threat of failure of IT assets due to improper work of cooling infrastructure.

**enisa:failures-malfunction="failure-or-disruption-of-service-providers-supply-chain"**

Failure or disruption of service providers (supply chain)

Threat of failure or disruption of third party services required for proper operation of information systems.

**enisa:failures-malfunction="malfunction-of-equipment-devices-or-systems"**

Malfunction of equipment (devices or systems)

Threat of malfunction of IT hardware and/or software assets or its parts (i.e. improper working parameters, jamming, rebooting).

**outages**

Threat of complete lack or loss of resources necessary for IT infrastructure. The cause of an outage
is mostly an external issue (i.e electricity blackout in the whole city).

**enisa:outages="absence-of-personnel"**

Absence of personnel

Unavailability of key personnel and their competences.

**enisa:outages="strike"**

Strike

Unavailability of staff due to a strike (large scale absence of personnel).

**enisa:outages="loss-of-support-services"**

Loss of support services

Unavailability of support services required for proper operation of the information system.

**enisa:outages="internet-outage"**

Internet outage

Unavailability of the Internet connection.

**enisa:outages="network-outage"**

Network outage

Unavailability of communication links.

**enisa:outages="outage-of-cable-networks"**

Outage of cable networks

Threat of lack of communications links due to problems with cable network.

**enisa:outages="Outage-of-short-range-wireless-networks"**

Outage of short-range wireless networks

Threat of lack of communications links due to problems with wireless networks (802.11 networks, Bluetooth, NFC etc.).

**enisa:outages="outages-of-long-range-wireless-networks"**

Outages of long-range wireless networks

Threat of lack of communications links due to problems with mobile networks like cellular network (3G, LTE, GSM etc.) or satellite links.
eavesdropping-interception-hijacking

Threats that alter communication between two parties. These attacks do not have to install additional tools/software on a victim's site.

enisa:eavesdropping-interception-hijacking="war-driving"

War driving

Threat of locating and possibly exploiting connection to the wireless network.

enisa:eavesdropping-interception-hijacking="intercepting-compromising-emissions"

Intercepting compromising emissions

Threat of disclosure of transmitted information using interception and analysis of compromising emission.

enisa:eavesdropping-interception-hijacking="interception-of-information"

Interception of information

Threat of interception of information which is improperly secured in transmission or by improper actions of staff.

enisa:eavesdropping-interception-hijacking="corporate-espionage"

Corporate espionage

Threat of obtaining information secrets by dishonest means.

enisa:eavesdropping-interception-hijacking="nation-state-espionage"

Nation state espionage

Threats of stealing information by nation state espionage (e.g. China based governmental espionage, NSA from USA).

enisa:eavesdropping-interception-hijacking="information-leakage-due-to-unsecured-wi-fi-like-rogue-access-points"

Information leakage due to unsecured Wi-Fi, rogue access points

Threat of obtaining important information by insecure network rogue access points etc.

enisa:eavesdropping-interception-hijacking="interfering-radiation"

Interfering radiation
Threat of failure of IT hardware or transmission connection due to electromagnetic induction or electromagnetic radiation emitted by an outside source.

**Replay of messages**

Threat in which valid data transmission is maliciously or fraudulently repeated or delayed.

**Network Reconnaissance, Network traffic manipulation and Information gathering**

Threat of identifying information about a network to find security weaknesses.

**Man in the middle/ Session hijacking**

Threats that relay or alter communication between two parties.

**legal**

Threat of financial or legal penalty or loss of trust of customers and collaborators due to legislation.

**Violation of rules and regulations / Breach of legislation**

Threat of financial or legal penalty or loss of trust of customers and collaborators due to violation of law or regulations.

**Failure to meet contractual requirements**

Threat of financial penalty or loss of trust of customers and collaborators due to failure to meet contractual requirements.

**Failure to meet contractual requirements by third party**

Threat of financial penalty or loss of trust of customers and collaborators due to a third party’s failure to meet contractual requirements.
Unauthorized use of IPR protected resources

Threat of financial or legal penalty or loss of trust of customers and collaborators due to improper/illegal use of IPR protected material (IPR- Intellectual Property Rights).

Illegal usage of File Sharing services

Threat of financial or legal penalty or loss of trust of customers and collaborators due to improper/illegal use of file sharing services.

Abuse of personal data

Threat of illegal use of personal data.

Judiciary decisions/court order

Threat of financial or legal penalty or loss of trust of customers and collaborators due to judiciary decisions/court order.

Threats of nefarious activities that require use of tools by the attacker. These attacks require installation of additional tools/software or performing additional steps on the victim’s IT infrastructure/software.

Identity theft (Identity Fraud/ Account)

Threat of identity theft action.

Credentials-stealing trojans

Threat of identity theft action by malware computer programs.

Receiving unsolicited E-mail

Threat of receiving unsolicited email which affects information security and efficiency.
**enisa:nefarious-activity-abuse="spam"**

SPAM

Threat of receiving unsolicited, undesired, or illegal email messages.

**enisa:nefarious-activity-abuse="unsolicited-infected-e-mails"**

Unsolicited infected e-mails

Threat emanating from unwanted emails that may contain infected attachments or links to malicious/infected web sites.

**enisa:nefarious-activity-abuse="denial-of-service"**

Denial of service

Threat of service unavailability due to massive requests for services.

**enisa:nefarious-activity-abuse="distributed-denial-of-network-service-network-layer-attack"**

Distributed denial of network service (DDoS) (network layer attack i.e. Protocol exploitation / Malformed packets / Flooding / Spoofing)

Threat of service unavailability due to a massive number of requests for access to network services from malicious clients.

**enisa:nefarious-activity-abuse="distributed-denial-of-network-service-application-layer-attack"**

Distributed denial of application service (DDoS) (application layer attack i.e. Ping of Death / XDoS / WinNuke / HTTP Floods)

Threat of service unavailability due to massive requests sent by multiple malicious clients.

**enisa:nefarious-activity-abuse="distributed-denial-of-network-service-amplification-reflection-attack"**

Distributed DoS (DDoS) to both network and application services (amplification/reflection methods i.e. NTP/ DNS /.../ BitTorrent)

Threat of creating a massive number of requests, using multiplication/amplification methods.

**enisa:nefarious-activity-abuse="malicious-code-software-activity"**

Malicious code/software/activity
Search Engine Poisoning

Threat of deliberate manipulation of search engine indexes.

Exploitation of fake trust of social media

Threat of malicious activities making use of trusted social media.

Worms/ Trojans

Threat of malware computer programs (trojans/worms).

Rootkits

Threat of stealthy types of malware software.

Mobile malware

Threat of mobile malware programs.

Infected trusted mobile apps

Threat of using mobile malware software that is recognised as trusted one.

Elevation of privileges

Threat of exploiting bugs, design flaws or configuration oversights in an operating system or software application to gain elevated access to resources.

Web application attacks / injection attacks (Code injection: SQL, XSS)

Threat of utilizing custom web applications embedded within social media sites, which can lead to installation of malicious code onto computers to be used to gain unauthorized access.
Spyware or deceptive adware
Threat of using software that aims to gather information about a person or organization without their knowledge.

Viruses
Threat of infection by viruses.

Rogue security software/ Rogueware / Scareware
Threat of internet fraud or malicious software that mislead users into believing there is a virus on their computer, and manipulates them to pay money for fake removal tool.

Ransomware
Threat of infection of computer system or device by malware that restricts access to it and demands that the user pay a ransom to remove the restriction.

Exploits/Exploit Kits
Threat to IT assets due to the use of web available exploits or exploits software.

Social Engineering
Threat of social engineering type attacks (target: manipulation of personnel behaviour).

Phishing attacks
Threat of an email fraud method in which the perpetrator sends out legitimate-looking email in an attempt to gather personal and financial information from recipients. Typically, the messages appear to come from well-known and trustworthy websites.
Spear phishing attacks

Spear-phishing is a targeted e-mail message that has been crafted to create fake trust and thus lure the victim to unveil some business or personal secrets that can be abused by the adversary.

Abuse of Information Leakage

Threat of leaking important information.

Leakage affecting mobile privacy and mobile applications

Threat of leaking important information due to using malware mobile applications.

Leakage affecting web privacy and web applications

Threat of leakage important information due to using malware web applications.

Leakage affecting network traffic

Threat of leaking important information in network traffic.

Leakage affecting cloud computing

Threat of leaking important information in cloud computing.

Generation and use of rogue certificates

Threat of use of rogue certificates.

Loss of (integrity of) sensitive information

Threat of loss of sensitive information due to loss of integrity.
Man in the middle / Session hijacking
Threat of attack consisting in the exploitation of the web session control mechanism, which is normally managed by a session token.

Social Engineering / signed malware
Threat of install fake trust signed software (malware) e.g. fake OS updates.

Fake SSL certificates
Threat of attack due to malware application signed by a certificate that is typically inherently trusted by an endpoint.

Manipulation of hardware and software
Threat of unauthorised manipulation of hardware and software.

Anonymous proxies
Threat of unauthorised manipulation by anonymous proxies.

Abuse of computing power of cloud to launch attacks (cybercrime as a service)
Threat of using large computing powers to generate attacks on demand.

Abuse of vulnerabilities, 0-day vulnerabilities
Threat of attacks using 0-day or known IT assets vulnerabilities.

Access of web sites through chains of HTTP Proxies (Obfuscation)
Threat of bypassing the security mechanism using HTTP proxies (bypassing the website blacklist).

**enisa:nefarious-activity-abuse="access-to-device-software"**

Access to device software

Threat of unauthorised manipulation by access to device software.

**enisa:nefarious-activity-abuse="alternation-of-software"**

Alternation of software

Threat of unauthorized modifications to code or data, attacking its integrity.

**enisa:nefarious-activity-abuse="rogue-hardware"**

Rogue hardware

Threat of manipulation due to unauthorized access to hardware.

**enisa:nefarious-activity-abuse="manipulation-of-information"**

Manipulation of information

Threat of intentional data manipulation to mislead information systems or somebody or to cover other nefarious activities (loss of integrity of information).

**enisa:nefarious-activity-abuse="repudiation-of-actions"**

Repudiation of actions

Threat of intentional data manipulation to repudiate action.

**enisa:nefarious-activity-abuse="address-space-hijacking-IP-prefixes"**

Address space hijacking (IP prefixes)

Threat of the illegitimate takeover of groups of IP addresses.

**enisa:nefarious-activity-abuse="routing-table-manipulation"**

Routing table manipulation

Threat of route packets of network to IP addresses other than that was intended via sender by unauthorised manipulation of routing table.

**enisa:nefarious-activity-abuse="DNS-poisoning-or-DNS-spoofing-or-DNS-Manipulations"**

DNS poisoning / DNS spoofing / DNS Manipulations
Threat of falsification of DNS information.

enisa:nefarious-activity-abuse="falsification-of-record"

Falsification of record

Threat of intentional data manipulation to falsify records.

enisa:nefarious-activity-abuse="autonomous-system-hijacking"

Autonomous System hijacking

Threat of overtaking by the attacker the ownership of a whole autonomous system and its prefixes despite origin validation.

enisa:nefarious-activity-abuse="autonomous-system-manipulation"

Autonomous System manipulation

Threat of manipulation by the attacker of a whole autonomous system in order to perform malicious actions.

enisa:nefarious-activity-abuse="falsification-of-configurations"

Falsification of configurations

Threat of intentional manipulation due to falsification of configurations.

enisa:nefarious-activity-abuse="misuse-of-audit-tools"

Misuse of audit tools

Threat of nefarious actions performed using audit tools (discovery of security weaknesses in information systems)

enisa:nefarious-activity-abuse="misuse-of-information-or-information systems-including-mobile-apps"

Misuse of information/ information systems (including mobile apps)

Threat of nefarious action due to misuse of information / information systems.

enisa:nefarious-activity-abuse="unauthorized-activities"

Unauthorized activities

Threat of nefarious action due to unauthorised activities.
Unauthorised use or administration of devices and systems

Threat of nefarious action due to unauthorised use of devices and systems.

Unauthorised use of software

Threat of nefarious action due to unauthorised use of software.

Unauthorized access to the information systems-or-networks (IMPI Protocol / DNS Registrar Hijacking)

Threat of unauthorised access to the information systems / network.

Network Intrusion

Threat of unauthorised access to network.

Unauthorized changes of records

Threat of unauthorised changes of information.

Unauthorized installation of software

Threat of unauthorised installation of software.

Web based attacks (Drive-by download / malicious URLs / Browser based attacks)

Threat of installation of unwanted malware software by misusing websites.

Compromising confidential information (data breaches)
Threat of data breach.

enisa:nefarious-activity-abuse="hoax"

Hoax

Threat of loss of IT assets security due to cheating.

enisa:nefarious-activity-abuse="false-rumour-and-or-fake-warning"

False rumour and/or fake warning

Threat of disruption of work due to rumours and/or a fake warning.

enisa:nefarious-activity-abuse="remote-activity-execution"

Remote activity (execution)

Threat of nefarious action by attacker remote activity.

enisa:nefarious-activity-abuse="remote-command-execution"

Remote Command Execution

Threat of nefarious action due to remote command execution.

enisa:nefarious-activity-abuse="remote-access-tool"

Remote Access Tool (RAT)

Threat of infection of software that has a remote administration capabilities allowing an attacker to control the victim’s computer.

enisa:nefarious-activity-abuse="botnets-remote-activity"

Botnets / Remote activity

Threat of penetration by software from malware distribution.

enisa:nefarious-activity-abuse="targeted-attacks"

Targeted attacks (APTs etc.)

Threat of sophisticated, targeted attack which combine many attack techniques.

enisa:nefarious-activity-abuse="mobile-malware-exfiltration"

Mobile malware (exfiltration)

Threat of mobile software that aims to gather information about a person or organization without their knowledge.
**Spear phishing attacks (targeted)**

Threat of attack focused on a single user or department within an organization, coming from someone within the company in a position of trust and requesting information such as login, IDs and passwords.

**Installation of sophisticated and targeted malware**

Threat of malware delivered by sophisticated and targeted software.

**Watering Hole attacks**

Threat of malware residing on the websites which a group often uses.

**Failed business process**

Threat of damage or loss of IT assets due to improperly executed business process.

**Brute force**

Threat of unauthorised access via systematically checking all possible keys or passwords until the correct one is found.

**Abuse of authorizations**

Threat of using authorised access to perform illegitimate actions.

**Estimative language**

Estimative language namespace available in JSON format at [this location](#). The JSON format can be freely reused in your application or automatically enabled in MISP taxonomy.

Estimative language to describe quality and credibility of underlying sources, data, and methodologies based Intelligence Community Directive 203 (ICD 203) and JP 2-0, Joint Intelligence
**likelihood-probability**

Properly expresses and explains uncertainties associated with major analytic judgments: Analytic products should indicate and explain the basis for the uncertainties associated with major analytic judgments, specifically the likelihood of occurrence of an event or development, and the analyst's confidence in the basis for this judgment. Degrees of likelihood encompass a full spectrum from remote to nearly certain. Analysts' confidence in an assessment or judgment may be based on the logic and evidentiary base that underpin it, including the quantity and quality of source material, and their understanding of the topic. Analytic products should note causes of uncertainty (e.g., type, currency, and amount of information, knowledge gaps, and the nature of the issue) and explain how uncertainties affect analysis (e.g., to what degree and how a judgment depends on assumptions). As appropriate, products should identify indicators that would alter the levels of uncertainty for major analytic judgments. Consistency in the terms used and the supporting information and logic advanced is critical to success in expressing uncertainty, regardless of whether likelihood or confidence expressions are used.

**estimative-language:likelihood-probability="almost-no-chance"**

Almost no chance - remote - 01-05%

**estimative-language:likelihood-probability="very-unlikely"**

Very unlikely - highly improbable - 05-20%

Associated numerical value="5"

**estimative-language:likelihood-probability="unlikely"**

Unlikely - improbable (improbably) - 20-45%

Associated numerical value="20"

**estimative-language:likelihood-probability="roughly-even-chance"**

Roughly even change - roughly even odds - 45-55%

Associated numerical value="45"

**estimative-language:likelihood-probability="likely"**

Likely - probable (probably) - 55-80%

Associated numerical value="55"

**estimative-language:likelihood-probability="very-likely"**

Very likely - highly probable - 80-95%

Associated numerical value="80"
Almost certain(ly) - nearly certain - 95-99%

Confidence in a judgment is based on three factors: number of key assumptions required, the credibility and diversity of sourcing in the knowledge base, and the strength of argumentation. Each factor should be assessed independently and then in concert with the other factors to determine the confidence level. Multiple judgments in a product may contain varying levels of confidence. Confidence levels are stated as Low, Moderate, and High.

Low
Uncorroborated information from good or marginal sources. Many assumptions. Mostly weak logical inferences, minimal methods application. Glaring intelligence gaps exist. Terms or expressions used: 'Possible', 'Could, may, might', 'Cannot judge, unclear.'

Moderate
Partially corroborated information from good sources. Several assumptions. Mix of strong and weak inferences and methods. Minimum intelligence gaps exist. Terms or expressions used: 'Likely, unlikely', 'Probable, improbable' 'Anticipate, appear'.

High
Well-corroborated information from proven sources. Minimal assumptions. Strong logical inferences and methods. No or minor intelligence gaps exist. Terms or expressions used: 'Will, will not', 'Almost certainly, remote', 'Highly likely, highly unlikely', 'Expect, assert, affirm'.

Market operators and public administrations that must comply to some notifications requirements under EU NIS directive
critical-infra-operators

**eu-marketop-and-publicadmin:critical-infra-operators="transport"**
Transport

**eu-marketop-and-publicadmin:critical-infra-operators="energy"**
Energy

**eu-marketop-and-publicadmin:critical-infra-operators="health"**
Health

**eu-marketop-and-publicadmin:critical-infra-operators="financial"**
Financial market operators

**eu-marketop-and-publicadmin:critical-infra-operators="banking"**
Banking

info-services

**eu-marketop-and-publicadmin:info-services="e-commerce"**
e-commerce platforms

**eu-marketop-and-publicadmin:info-services="internet-payment"**
Internet payment

**eu-marketop-and-publicadmin:info-services="cloud"**
cloud computing

**eu-marketop-and-publicadmin:info-services="search-engines"**
search engines

**eu-marketop-and-publicadmin:info-services="socnet"**
social networks

**eu-marketop-and-publicadmin:info-services="app-stores"**
application stores
eu-nis-sector-and-subsectors

Sectors and sub sectors as identified by the NIS Directive

**eu-nis-oes**

- **eu-nis-sector-and-subsectors:eu-nis-oes="energy"**
  Energy

- **eu-nis-sector-and-subsectors:eu-nis-oes="transport"**
  Transport Sector

- **eu-nis-sector-and-subsectors:eu-nis-oes="banking"**
  Banking

- **eu-nis-sector-and-subsectors:eu-nis-oes="financial"**
  Financial market operators

- **eu-nis-sector-and-subsectors:eu-nis-oes="health"**
  Health

- **eu-nis-sector-and-subsectors:eu-nis-oes="water"**
  Drinking Water Supply and Distribution

- **eu-nis-sector-and-subsectors:eu-nis-oes="digitalinfrastructure"**
  Digital Infrastructure
eu-nis-oes-energy

Electricity Sub Sector

eu-nis-sector-and-subsectors:eu-nis-oes-energy="electricity-energy"

Oil Sub Sector

eu-nis-sector-and-subsectors:eu-nis-oes-energy="oil-energy"

Gas Sub Sector

eu-nis-sector-and-subsectors:eu-nis-oes-energy="gas-energy"

Air Transport Sub Sector

eu-nis-sector-and-subsectors:eu-nis-oes-transport="air-transport"

Rail Transport Sub Sector

eu-nis-sector-and-subsectors:eu-nis-oes-transport="rail-transport"

Water Transport Sub Sector

eu-nis-sector-and-subsectors:eu-nis-oes-transport="water-transport"

Road Transport Sub Sector

eu-nis-sector-and-subsectors:eu-nis-oes-transport="road-transport"

Bank Credit Institutions Sub Sector

eu-nis-oes-banking

eu-nis-sector-and-subsectors:eu-nis-oes-banking="credit-banking"

Operators of Financial Trading Sub Sector

eu-nis-oes-financial

operators:eu-nis-oes-financial="trading-financial"

Financial Central Counterparty Sub Sector

operators:eu-nis-oes-financial="ccp-financial"
eu-nis-oes-health

Healthcare Provider Sub Sector

eu-nis-oes-water

Water Supply Sub Sector

Water Distribution Sub Sector

eu-nis-oes-diginfra

IXPs Sub Sector

DNS Service Provider Sub Sector

TLD Name Registry Sub Sector

eu-nis-dsp

Online Marketplace Sub Sector

Online Search Engine Sub Sector

Cloud Computing Service Sub Sector
EU classified information (EUCI) means any information or material designated by a EU security classification, the unauthorised disclosure of which could cause varying degrees of prejudice to the interests of the European Union or of one or more of the Member States.

**TS-UE/EU-TS**

Information and material the unauthorised disclosure of which could cause exceptionally grave prejudice to the essential interests of the European Union or of one or more of the Member States.

**euci:TS-UE/EU-TS**

TRES SECRET UE/EU TOP SECRET

Information and material the unauthorised disclosure of which could cause exceptionally grave prejudice to the essential interests of the European Union or of one or more of the Member States.

**S-UE/EU-S**

Information and material the unauthorised disclosure of which could seriously harm the essential interests of the European Union or of one or more of the Member States.

**euci:S-UE/EU-S**

SECRET UE/EU SECRET

Information and material the unauthorised disclosure of which could seriously harm the essential interests of the European Union or of one or more of the Member States.

**C-UE/EU-C**

Information and material the unauthorised disclosure of which could harm the essential interests of the European Union or of one or more of the Member States.

**euci:C-UE/EU-C**

CONFIDENTIEL UE/EU CONFIDENTIAL

Information and material the unauthorised disclosure of which could harm the essential interests of the European Union or of one or more of the Member States.
R-UE/EU-R

Information and material the unauthorised disclosure of which could be disadvantageous to the interests of the European Union or of one or more of the Member States.

euci:R-UE/EU-R

RESTREINT UE/EU RESTRICTED

Information and material the unauthorised disclosure of which could be disadvantageous to the interests of the European Union or of one or more of the Member States.

europol-event

europol-event namespace available in JSON format at this location. The JSON format can be freely reused in your application or automatically enabled in MISP taxonomy.

This taxonomy was designed to describe the type of events

infected-by-known-malware

The presence of any of the types of malware was detected in a system.

europol-event:infected-by-known-malware

System(s) infected by known malware

The presence of any of the types of malware was detected in a system.

dissemination-malware-email

Malware attached to a message or email message containing link to malicious URL.

europol-event:dissertation-malware-email

Dissemination of malware by email

Malware attached to a message or email message containing link to malicious URL.

hosting-malware-webpage

Web page disseminating one or various types of malware.
**europol-event:hosting-malware-webpage**

Hosting of malware on web page

Web page disseminating one or various types of malware.

**c&c-server-hosting**

Web page disseminating one or various types of malware.

**europol-event:c&c-server-hosting**

Hosting of malware on web page

Web page disseminating one or various types of malware.

**worm-spreading**

System infected by a worm trying to infect other systems.

**europol-event:worm-spreading**

Replication and spreading of a worm

System infected by a worm trying to infect other systems.

**connection-malware-port**

System attempting to gain access to a port normally linked to a specific type of malware.

**europol-event:connection-malware-port**

Connection to (a) suspicious port(s) linked to specific malware

System attempting to gain access to a port normally linked to a specific type of malware.

**connection-malware-system**

System attempting to gain access to an IP address or URL normally linked to a specific type of malware, e.g. C&C or a distribution page for components linked to a specific botnet.

**europol-event:connection-malware-system**

Connection to (a) suspicious system(s) linked to specific malware

System attempting to gain access to an IP address or URL normally linked to a specific type of malware, e.g. C&C or a distribution page for components linked to a specific botnet.
**flood**

Mass mailing of requests (network packets, emails, etc...) from one single source to a specific service, aimed at affecting its normal functioning.

**europol-event:flood**

Flood of requests

Mass mailing of requests (network packets, emails, etc...) from one single source to a specific service, aimed at affecting its normal functioning.

**exploit-tool-exhausting-resources**

One single source using specially designed software to affect the normal functioning of a specific service, by exploiting a vulnerability.

**europol-event:exploit-tool-exhausting-resources**

Exploit or tool aimed at exhausting resources (network, processing capacity, sessions, etc...)

One single source using specially designed software to affect the normal functioning of a specific service, by exploiting a vulnerability.

**packet-flood**

Mass mailing of requests (network packets, emails, etc...) from various sources to a specific service, aimed at affecting its normal functioning.

**europol-event:packet-flood**

Packet flooding

Mass mailing of requests (network packets, emails, etc...) from various sources to a specific service, aimed at affecting its normal functioning.

**exploit-framework-exhausting-resources**

Various sources using specially designed software to affect the normal functioning of a specific service, by exploiting a vulnerability.

**europol-event:exploit-framework-exhausting-resources**

Exploit or tool distribution aimed at exhausting resources

Various sources using specially designed software to affect the normal functioning of a specific service, by exploiting a vulnerability.
**vandalism**

Logical and physical activities which – although they are not aimed at causing damage to information or at preventing its transmission among systems – have this effect.

**europol-event:vandalism**

Vandalism

Logical and physical activities which – although they are not aimed at causing damage to information or at preventing its transmission among systems – have this effect.

**disruption-data-transmission**

Logical and physical activities aimed at causing damage to information or at preventing its transmission among systems.

**europol-event:disruption-data-transmission**

Intentional disruption of data transmission and processing mechanisms

Logical and physical activities aimed at causing damage to information or at preventing its transmission among systems.

**system-probe**

Single system scan searching for open ports or services using these ports for responding.

**europol-event:system-probe**

System probe

Single system scan searching for open ports or services using these ports for responding.

**network-scanning**

Scanning a network aimed at identifying systems which are active in the same network.

**europol-event:network-scanning**

Network scanning

Scanning a network aimed at identifying systems which are active in the same network.

**dns-zone-transfer**

Transfer of a specific DNS zone.
europol-event:dns-zone-transfer
DNS zone transfer
Transfer of a specific DNS zone.

wiretapping
Logical or physical interception of communications.

europol-event:wiretapping
Wiretapping
Logical or physical interception of communications.

dissemination-phishing-emails
Mass emailing aimed at collecting data for phishing purposes with regard to the victims.

europol-event:dissemination-phishing-emails
Dissemination of phishing emails
Mass emailing aimed at collecting data for phishing purposes with regard to the victims.

hosting-phishing-sites
Hosting web sites for phishing purposes.

europol-event:hosting-phishing-sites
Hosting phishing sites
Hosting web sites for phishing purposes.

aggregation-information-phishing-schemes
Collecting data obtained through phishing attacks on web pages, email accounts, etc...

europol-event:aggregation-information-phishing-schemes
Aggregation of information gathered through phishing schemes
Collecting data obtained through phishing attacks on web pages, email accounts, etc...
exploit-attempt
Unsuccessful use of a tool exploiting a specific vulnerability of the system.

europol-event:exploit-attempt
Exploit attempt
Unsuccessful use of a tool exploiting a specific vulnerability of the system.

sql-injection-attempt
Unsuccessful attempt to manipulate or read the information of a database by using the SQL injection technique.

europol-event:sql-injection-attempt
SQL injection attempt
Unsuccessful attempt to manipulate or read the information of a database by using the SQL injection technique.

xss-attempt
Unsuccessful attempts to perform attacks by using cross-site scripting techniques.

europol-event:xss-attempt
XSS attempt
Unsuccessful attempts to perform attacks by using cross-site scripting techniques.

file-inclusion-attempt
Unsuccessful attempt to include files in the system under attack by using file inclusion techniques.

europol-event:file-inclusion-attempt
File inclusion attempt
Unsuccessful attempt to include files in the system under attack by using file inclusion techniques.

brute-force-attempt
Unsuccessful login attempt by using sequential credentials for gaining access to the system.
**europol-event:brute-force-attempt**

Brute force attempt

Unsuccessful login attempt by using sequential credentials for gaining access to the system.

**password-cracking-attempt**

Attempt to acquire access credentials by breaking the protective cryptographic keys.

**europol-event:password-cracking-attempt**

Password cracking attempt

Attempt to acquire access credentials by breaking the protective cryptographic keys.

**dictionary-attack-attempt**

Unsuccessful login attempt by using system access credentials previously loaded into a dictionary.

**europol-event:dictionary-attack-attempt**

Dictionary attack attempt

Unsuccessful login attempt by using system access credentials previously loaded into a dictionary.

**exploit**

Successful use of a tool exploiting a specific vulnerability of the system.

**europol-event:exploit**

Use of a local or remote exploit

Successful use of a tool exploiting a specific vulnerability of the system.

**sql-injection**

Manipulation or reading of information contained in a database by using the SQL injection technique.

**europol-event:sql-injection**

SQL injection

Manipulation or reading of information contained in a database by using the SQL injection technique.
**XSS**
Attacks performed with the use of cross-site scripting techniques.

**europol-event:xss**
XSS
Attacks performed with the use of cross-site scripting techniques.

**file-inclusion**
Inclusion of files into a system under attack with the use of file inclusion techniques.

**europol-event:file-inclusion**
File inclusion
Inclusion of files into a system under attack with the use of file inclusion techniques.

**control-system-bypass**
Unauthorised access to a system or component by bypassing an access control system in place.

**europol-event:control-system-bypass**
Control system bypass
Unauthorised access to a system or component by bypassing an access control system in place.

**theft-access-credentials**
Unauthorised access to a system or component by using stolen access credentials.

**europol-event:theft-access-credentials**
Theft of access credentials
Unauthorised access to a system or component by using stolen access credentials.

**unauthorized-access-system**
Unauthorised access to a system or component.

**europol-event:unauthorized-access-system**
Unauthorised access to a system
Unauthorised access to a system or component.

**unauthorized-access-information**

Unauthorised access to a set of information.

**europol-event:unauthorized-access-information**

Unauthorised access to information

Unauthorised access to a set of information.

**data-exfiltration**

Unauthorised access to and sharing of a specific set of information.

**europol-event:data-exfiltration**

Data exfiltration

Unauthorised access to and sharing of a specific set of information.

**modification-information**

Unauthorised changes to a specific set of information.

**europol-event:modification-information**

Modification of information

Unauthorised changes to a specific set of information.

**deletion-information**

Unauthorised deleting of a specific set of information.

**europol-event:deletion-information**

Deletion of information

Unauthorised deleting of a specific set of information.

**illegitimate-use-resources**

Use of institutional resources for purposes other than those intended.
**europol-event:illegitimate-use-resources**

Misuse or unauthorised use of resources

Use of institutional resources for purposes other than those intended.

**illegitimate-use-name**

Using the name of an institution without permission to do so.

**europol-event:illegitimate-use-name**

Illegitimate use of the name of an institution or third party

Using the name of an institution without permission to do so.

**email-flooding**

Sending an unusually large quantity of email messages.

**europol-event:email-flooding**

Email flooding

Sending an unusually large quantity of email messages.

**spam**

Sending an email message that was unsolicited or unwanted by the recipient.

**europol-event:spam**

Sending an unsolicited message

Sending an email message that was unsolicited or unwanted by the recipient.

**copyrighted-content**

Distribution or sharing of content protected by copyright and related rights.

**europol-event:copyrighted-content**

Distribution or sharing of copyright protected content

Distribution or sharing of content protected by copyright and related rights.
content-forbidden-by-law

Distribution or sharing of illegal content such as child pornography, racism, xenophobia, etc...

europol-event:content-forbidden-by-law

Dissemination of content forbidden by law (publicly prosecuted offences)

Distribution or sharing of illegal content such as child pornography, racism, xenophobia, etc...

unspecified

Other unlisted events.

europol-event:unspecified

Other unspecified event

Other unlisted events.

undetermined

Field aimed at the classification of unprocessed events, which have remained undetermined from the beginning.

europol-event:undetermined

Undetermined

Field aimed at the classification of unprocessed events, which have remained undetermined from the beginning.

europol-incident

europol-incident namespace available in JSON format at this location. The JSON format can be freely reused in your application or automatically enabled in MISP taxonomy.

This taxonomy was designed to describe the type of incidents by class.

malware

europol-incident:malware="infection"

Infection

Infecting one or various systems with a specific type of malware.
Distribution
Infecting one or various systems with a specific type of malware.

C&C
Infecting one or various systems with a specific type of malware.

Undetermined

availability

DoS/DDoS
Disruption of the processing and response capacity of systems and networks in order to render them inoperative.

Sabotage
Premeditated action to damage a system, interrupt a process, change or delete information, etc.

information-gathering

Scanning
Active and passive gathering of information on systems or networks.

Sniffing
Unauthorised monitoring and reading of network traffic.

Phishing
Attempt to gather information on a user or a system through phishing methods.

**intrusion-attempt**

`europol-incident:intrusion-attempt="exploitation-vulnerability"`

Exploitation of vulnerability

Attempt to intrude by exploiting a vulnerability in a system, component or network.

`europol-incident:intrusion-attempt="login-attempt"`

Login attempt

Attempt to log in to services or authentication / access control mechanisms.

**intrusion**

`europol-incident:intrusion="exploitation-vulnerability"`

Exploitation of vulnerability

Actual intrusion by exploiting a vulnerability in the system, component or network.

`europol-incident:intrusion="compromising-account"`

Compromising an account

Actual intrusion in a system, component or network by compromising a user or administrator account.

**information-security**

`europol-incident:information-security="unauthorized-access"`

Unauthorised access

Unauthorised access to a particular set of information

`europol-incident:information-security="unauthorized-modification"`

Unauthorised modification/deletion

Unauthorised change or elimination of a particular set of information

**fraud**
**europol-incident:fraud="illegitimate-use-resources"**

Misuse or unauthorised use of resources

Use of institutional resources for purposes other than those intended.

**europol-incident:fraud="illegitimate-use-name"**

Illegitimate use of the name of a third party

Use of the name of an institution without permission to do so.

**abusive-content**

**europol-incident:abusive-content="spam"**

SPAM

Sending SPAM messages.

**europol-incident:abusive-content="copyright"**

Copyright

Distribution and sharing of copyright protected content.

**europol-incident:abusive-content="content-forbidden-by-law"**

Dissemination of content forbidden by law.

Child pornography, racism and apology of violence.

**other**

**europol-incident:other="other"**

Other

Other type of unspecified incident

**event-assessment**

Event-assessment namespace available in JSON format at [this location](#). The JSON format can be freely reused in your application or automatically enabled in [MISP](#) taxonomy.
A series of assessment predicates describing the event assessment performed to make judgement(s) under a certain level of uncertainty.

**alternative-points-of-view-process**

A list of procedures or practices which describe alternative points of view to validate or rate an analysis. The list describes techniques or methods which could reinforce the estimative language in a human analysis and/or challenge the assumptions to reduce the potential bias of the analysis introduced by the analyst(s).

- **event-assessment:alternative-points-of-view-process=“analytic-debates-within-the-organisation”**
  
analytic debates within the organisation

- **event-assessment:alternative-points-of-view-process=“devils-advocates-methodology”**
  
Devil’s advocates methodology

- **event-assessment:alternative-points-of-view-process=“competitive-analysis”**
  
competitive analysis

- **event-assessment:alternative-points-of-view-process=“interdisciplinary-brainstorming”**
  
interdisciplinary brainstorming

- **event-assessment:alternative-points-of-view-process=“intra-office-peer-review”**
  
intra-office peer review

- **event-assessment:alternative-points-of-view-process=“outside-expertise-review”**
  
Outside expertise review

**event-classification**

- **event-classification namespace available in JSON format at this location. The JSON format can be freely reused in your application or automatically enabled in MISP taxonomy.**
Classification of events as seen in tools such as RT/IR, MISP and other

**event-class**

**event-classification:event-class="incident_report"**
Incident Report

**event-classification:event-class="incident"**
Incident

**event-classification:event-class="investigation"**
Investigation

**event-classification:event-class="countermeasure"**
Countermeasure

**event-classification:event-class="general"**
General

**event-classification:event-class="exercise"**
Exercise

**exercise**

Exercise namespace available in JSON format at [this location](#). The JSON format can be freely reused in your application or automatically enabled in MISP taxonomy.

Exercise is a taxonomy to describe if the information is part of one or more cyber or crisis exercise.

**cyber-europe**

ENISA manages the programme of pan-European exercises CE2018 logonamed Cyber Europe. This is a series of EU-level cyber incident and crisis management exercises for both the public and private sectors from the EU and EFTA Member States. The Cyber Europe exercises are simulations of large-scale cybersecurity incidents that escalate to become cyber crises. The exercises offer opportunities to analyse advanced technical cybersecurity incidents but also to deal with complex business continuity and crisis management situations.
cyber-storm

Cyber Storm, the Department of Homeland Security’s (DHS) biennial exercise series, provides the framework for the most extensive government-sponsored cybersecurity exercise of its kind. Congress mandated the Cyber Storm exercise series to strengthen cyber preparedness in the public and private sectors. Securing cyber space is the DHS Office of Cybersecurity and Communications’ top priority.

locked-shields

Locked Shields is the world’s largest and most advanced international technical live-fire cyber defence exercise. This annual scenario-based, real-time network defence exercise, which has been organised by the NATO Cooperative Cyber Defence Centre of Excellence since 2010, focuses on training for security experts who protect national IT systems.
**lukex**


```exercise:lukex="2020"
2020
Cyber-Angriff auf die deutsche Stromversorgung```

**cyber-coalition**

Cyber Coalition tests and trains cyber defenders from across the Alliance in their ability to defend NATO and national networks. From defence against malware, through tackling hybrid challenges involving social media, to attacks on mobile devices, the exercise has a challenging, realistic scenario that helps prepare our cyber defenders for real-life cyber challenges. The training includes testing of operational and legal procedures, exchange of information and work with industry and partners.

```exercise:cyber-coalition="2017"
2017
NATO Cyber Coalition 2017```

```exercise:cyber-coalition="2018"
2018
NATO Cyber Coalition 2018```

**pace**

NATO-EU Parallel and Coordinated Exercise. PACE focuses on four key areas, namely situational awareness, effectiveness of our instruments to counter cyber threats at EU level, speed of reaction and appropriate reactivity of our crisis response mechanisms, as well as our capacity to communicate fast and in a coordinated way.

```exercise:pace="2017"
2017```
PACE17 will focus on four key areas, namely situational awareness, effectiveness of our instruments to counter cyber threats at EU level, speed of reaction and appropriate reactivity of our crisis response mechanisms, as well as our capacity to communicate fast and in a coordinated way. The exercise will be followed by an evaluation phase, to identify lessons learned and improve our toolbox.

exercise:pace="2018"

2018

cyber-sopex

Cyber SOPEx (formerly known as EuroSOPEX) is the first step in a series of ENISA exercises focusing on training the participants on situational awareness, information sharing, understanding roles and responsibilities and utilising related tools, as agreed by the CSIRTs Network

exercise:cyber-sopex="2019"

2019

exercise:cyber-sopex="2018"

2018

false-positive

false-positive namespace available in JSON format at this location. The JSON format can be freely reused in your application or automatically enabled in MISP taxonomy.

This taxonomy aims to ballpark the expected amount of false positives.

risk

Risk of having false positives in the tagged value.

false-positive:risk="low"

Low

The risk of having false positives in the tagged value is low.

Associated numerical value="25"

false-positive:risk="medium"

Medium
The risk of having false positives in the tagged value is medium.

Associated numerical value="50"

**false-positive: risk="high"**

High

The risk of having false positives in the tagged value is high.

Associated numerical value="75"

### file-type

file-type namespace available in JSON format at [this location](#). The JSON format can be freely reused in your application or automatically enabled in MISP taxonomy.

List of known file types.

### type

**file-type:type="peexe"**

executable

**file-type:type="pedll"**

executable

**file-type:type="neexe"**

executable

**file-type:type="nedll"**

executable

**file-type:type="mz"**

executable

**file-type:type="msi"**

executable
file-type:type="com"
executable

file-type:type="coff"
executable

file-type:type="elf"
executable

file-type:type="krnl"
executable

file-type:type="rpm"
executable

file-type:type="linux"
executable

file-type:type="macho"
executable

file-type:type="elf32"
executable

file-type:type="elf64"
executable

file-type:type="elfso"
executable

file-type:type="peexe32"
executable

file-type:type="peexe64"
executable
file-type:type="assembly"
executable

file-type:type="html"
internet

file-type:type="xml"
internet

file-type:type="flash"
internet

file-type:type="fla"
internet

file-type:type="iecookie"
internet

file-type:type="bittorrent"
internet

file-type:type="email"
internet

file-type:type="outlook"
internet

file-type:type="cap"
internet

file-type:type="symbian"
phone and tablet

file-type:type="palmos"
phone and tablet
file-type:type="wince"
phone and tablet

file-type:type="android"
phone and tablet

file-type:type="iphone"
phone and tablet

file-type:type="jpeg"
image

file-type:type="emf"
image

file-type:type="tiff"
image

file-type:type="gif"
image

file-type:type="png"
image

file-type:type="bmp"
image

file-type:type="gimp"
image

file-type:type="indesign"
image

file-type:type="psd"
image
file-type:type="flac"
video and audio

file-type:type="wav"
video and audio

file-type:type="midi"
video and audio

file-type:type="avi"
video and audio

file-type:type="mpeg"
video and audio

file-type:type="qt"
video and audio

file-type:type="asf"
video and audio

file-type:type="divx"
video and audio

file-type:type="flv"
video and audio

file-type:type="wma"
video and audio

file-type:type="wmv"
video and audio

file-type:type="rm"
video and audio
file-type: type="mov"
video and audio

file-type: type="mp4"
video and audio

file-type: type="3gp"
video and audio

file-type: type="text"
document

file-type: type="pdf"
document

file-type: type="ps"
document

file-type: type="doc"
document

file-type: type="docx"
document

file-type: type="rtf"
document

file-type: type="ppt"
document

file-type: type="pptx"
document

file-type: type="xls"
document
file-type:type="rzip"
bundle

file-type:type="dzip"
bundle

file-type:type="7zip"
bundle

file-type:type="cab"
bundle

file-type:type="jar"
bundle

file-type:type="rar"
bundle

file-type:type="mscompress"
bundle

file-type:type="ace"
bundle

file-type:type="arc"
bundle

file-type:type="arj"
bundle

file-type:type="asd"
bundle

file-type:type="blackhole"
bundle
file-type:type="awk"
code

file-type:type="dyalog"
code

file-type:type="fortran"
code

file-type:type="java-bytecode"
code

file-type:type="apple"
apple

file-type:type="mac"
apple

file-type:type="applesingle"
apple

file-type:type="appledouble"
apple

file-type:type="machfs"
apple

file-type:type="appleplist"
apple

file-type:type="maclib"
apple

file-type:type="lnk"
miscellaneous
Flesch Reading Ease is a revised system for determining the comprehension difficulty of written material. The scoring of the flesh score can have a maximum of 121.22 and there is no limit on how low a score can be (negative score are valid).

**score**

**flesch-reading-ease:score="90-100"**

Very Easy

Very easy to read. Easily understood by an average 11-year-old student.

Associated numerical value="100"

**flesch-reading-ease:score="80-89"**

Easy

Easy to read. Conversational English for consumers.

Associated numerical value="89"

**flesch-reading-ease:score="70-79"**

Fairly Easy

Fairly easy to read.

Associated numerical value="79"
flesch-reading-ease:score="60-69"
Standard
Plain English. Easily understood by 13- to 15-year-old students.
Associated numerical value="69"

flesch-reading-ease:score="50-59"
Fairly Difficult
Fairly difficult to read.
Associated numerical value="59"

flesch-reading-ease:score="30-49"
Difficult
Difficult to read.
Associated numerical value="49"

flesch-reading-ease:score="0-29"
Very Confusing
Very difficult to read. Best understood by university graduates.
Associated numerical value="29"

fpf

fpf namespace available in JSON format at [this location](https://fpf.org/2016/04/25/a-visual-guide-to-practical-data-de-identification/). The JSON format can be freely reused in your application or automatically enabled in MISP taxonomy.

The Future of Privacy Forum (FPF) [visual guide to practical de-identification](https://fpf.org/2016/04/25/a-visual-guide-to-practical-data-de-identification/) taxonomy is used to evaluate the degree of identifiability of personal data and the types of pseudonymous data, de-identified data and anonymous data. The work of FPF is licensed under a creative commons attribution 4.0 international license.

**degrees-of-identifiability**

Information containing direct and indirect identifiers.
Explicitly personal

Name, address, phone number, SSN, government-issued ID (e.g., Jane Smith, 123 Main Street, 555-555-5555)

Potentially identifiable

Unique device ID, license plate, medical record number, cookie, IP address (e.g., MAC address 68:A8:6D:35:65:03)

Not readily identifiable

Same as Potentially Identifiable except data are also protected by safeguards and controls (e.g., hashed MAC addresses & legal representations)

Pseudonymous-data

Information from which direct identifiers have been eliminated or transformed, but indirect identifiers remain intact.

Key coded

Clinical or research datasets where only curator retains key (e.g., Jane Smith, diabetes, HgB 15.1 g/dl = Csrk123)

Pseudonymous

Unique, artificial pseudonyms replace direct identifiers (e.g., HIPAA Limited Datasets, John Doe = 5L7T LX619Z) (unique sequence not used anywhere else)

Protected pseudonymous

Same as Pseudonymous, except data are also protected by safeguards and controls

De-identified-data

Direct and known indirect identifiers have been removed or manipulated to break the linkage to
real world identities.

**fpf:de-identified-data**="de-identified"

De-identified

Data are suppressed, generalized, perturbed, swapped, etc. (e.g., GPA: 3.2 = 3.0-3.5, gender: female = gender: male)

**fpf:de-identified-data**="protected-de-identified"

Protected de-identified

Same as De-Identified, except data are also protected by safeguards and controls

**anonymous-data**

Direct and indirect identifiers have en removed or manipulated together with mathematical and technical guarantees to prevent re-identification.

**fpf:anonymous-data**="anonymous"

Anonymous

For example, noise is calibrated to a data set to hide whether an individual is present or not (differential privacy)

**fpf:anonymous-data**="aggregated-anonymous"

Aggregated anonymous

Very highly aggregated data (e.g., statistical data, census data, or population data that 52.6% of Washington, DC residents are women)

**fr-classif**

fr-classif namespace available in JSON format at this location. The JSON format can be freely reused in your application or automatically enabled in MISP taxonomy.

French gov information classification system

Exclusive flag set which means the values or predicate below must be set exclusively.
**classifiees-defense**

- Exclusive flag set which means the values or predicate below must be set exclusively.

  - `fr-classif:classifiees-defense="TRES_SECRET_DEFENSE"`
    
    TRES SECRET DEFENSE
  
  - `fr-classif:classifiees-defense="SECRET_DEFENSE"`
    
    SECRET DEFENSE
  
  - `fr-classif:classifiees-defense="CONFIDENTIEL_DEFENSE"`
    
    CONFIDENTIEL DEFENSE

**non-classifiees-defense**

- Exclusive flag set which means the values or predicate below must be set exclusively.

  - `fr-classif:non-classifiees-defense="SECRET"`
    
    SECRET
  
  - `fr-classif:non-classifiees-defense="CONFIDENTIEL"`
    
    CONFIDENTIEL
  
  - `fr-classif:non-classifiees-defense="DIFFUSION_RESTREINTE"`
    
    DIFFUSION RESTREINTE

**non-classifiees**

- Exclusive flag set which means the values or predicate below must be set exclusively.

  - `fr-classif:non-classifiees="NON-CLASSIFIEES"`
    
    NON CLASSIFIEES
gdpr namespace available in JSON format at this location. The JSON format can be freely reused in your application or automatically enabled in MISP taxonomy.

Taxonomy related to the REGULATION (EU) 2016/679 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC (General Data Protection Regulation)

special-categories

Special categories of personal data, refer to Art. 9 of the GDPR

\texttt{gdpr:special-categories="racial-or-ethnic-origin"}

Racial or ethnic origin

\texttt{gdpr:special-categories="political-opinions"}

Political opinions

\texttt{gdpr:special-categories="religious-or-philosophical-beliefs"}

Religious or philosophical beliefs

\texttt{gdpr:special-categories="trade-union-membership"}

Trade union membership

\texttt{gdpr:special-categories="genetic-data"}

Genetic data

Genetic data means personal data relating to the inherited or acquired genetic characteristics of a natural person which give unique information about the physiology or the health of that natural person and which result, in particular, from an analysis of a biological sample from the natural person in question.

\texttt{gdpr:special-categories="biometric-data"}

Biometric data

Biometric data for the purpose of uniquely identifying a natural person. Biometric data means personal data resulting from specific technical processing relating to the physical, physiological or behavioural characteristics of a natural person, which allow or confirm the unique identification of that natural person, such as facial images or dactyloscopic data.
Health

Data concerning health. Data concerning health means personal data related to the physical or mental health of a natural person, including the provision of health care services, which reveal information about his or her health status.

Sex life or sexual orientation

Data concerning a natural person's sex life or sexual orientation

gsma-attack-category

gsma-attack-category namespace available in JSON format at this location. The JSON format can be freely reused in your application or automatically enabled in MISP taxonomy.

Taxonomy used by GSMA for their information sharing program with telco describing the attack categories

denial-of-service

gsma-attack-category:denial-of-service

(Distributed) Denial of Service

exploit-attack

gsma-attack-category:exploit-attack

Exploit attack

information-gathering

gsma-attack-category:information-gathering

Information gathering

insider-attack

gsma-attack-category:insider-attack

Insider attack
Interception attack

Manipulation attack

Physical attack

Spoofing

gsma-fraud

Redirect to JSON format at this location. The JSON format can be freely reused in your application or automatically enabled in MISP taxonomy.

Taxonomy used by GSMA for their information sharing program with telco describing the various aspects of fraud

Technical

Mailbox Hacking (CLI Spoofing)

IMEI Reprogramming
Call Forwarding Fraud

Call Conference / Multi-Party Calls

HLR Tampering / Switch Manipulation

SIM Card Cloning

False Base Station Attack

Spamming (SMS & IP services)

Phishing and Pharming

Mobile Malware

Fraud Risks associated with Voice over IP Services

PBX Hacking

Fraud Risks Associated with M2M Services

Data Charing Bypass
subscription

subscription="subscription-fraud"
Subscription Fraud

subscription="proxy-fraud"
Proxy Fraud

subscription="account-takeover"
Account Takeover

subscription="call-selling"
Call Selling

subscription="direct-debit-fraud"
Direct Debug Fraud

subscription="credit-card-fraud"
Credit Card Fraud (Card Present)

subscription="credit-card-not-present-transactions"
Credit Card Not Present Transactions

subscription="cheque-fraud"
Cheque Fraud

distribution

distribution="dealer-fraud"
Dealer Fraud

distribution="false-agent"
False Agent / Remote Activation Fraud

distribution="theft-and-handling-stolen-goods"
Theft and Handling Stolen Goods
gsma-fraud:distribution="handset-subsidy-loss"
Handset Subsidy Loss

gsma-fraud:distribution="remote-order-fraud"
Remote Order Fraud

business

gsma-fraud:business="premium-rate"
Premium Rate / Audiotext Services Fraud (PRS)

gsma-fraud:business="roaming-fraud"
Roaming Fraud

gsma-fraud:business="international-revenue-share-fraud"
International Revenue Share Fraud

gsma-fraud:business="inbound-roaming-fraud-risk-to-vpmn"
Inbound Roaming Fraud Risk to VPMN

gsma-fraud:business="interconnect-abuse"
Interconnect Abuse (GSM Gateways)

gsma-fraud:business="refiling"
Refiling

gsma-fraud:business="mobile-to-fixed-network-gateway-abuse"
Mobile to Fixed Network Gateways Abuse

gsma-fraud:business="false-answer-false-ring"
False Answer / False Ring

gsma-fraud:business="social-engineering"
Social Engineering
Internal Fraud

Normal Business Fraud and Crime

Brand Name / Logo Abuse

M-Commerce Provider Content Fraud

M-Commerce Provider PRS Fraud

Content Theft

Wangiri

Airtime Reseller Fraud

Prepaid

Prepaid Services Fraud - General

HLR Profile Manipulation

Manual Recharging
Generation of Abusive Calls

Scratch Card Abuse

gsma-network-technology

gsma-network-technology namespace available in JSON format at this location. The JSON format can be freely reused in your application or automatically enabled in MISP taxonomy.

Taxonomy used by GSMA for their information sharing program with telco describing the types of infrastructure. WiP

user

applications

end-devices-and-components

gsma-network-technology:end-devices-and-components="ms"
Mobile Station

gsma-network-technology:end-devices-and-components="mobile-equipment-radio"
Mobile Equipment Radio

services

radio-access-network

support-and-provisioning-systems

interconnects

core
honeypot-basic

honeyport-basic namespace available in JSON format at [this location](http://www.mcs.vuw.ac.nz/comp/Publications/archive/CS-TR-06/CS-TR-06-12.pdf). The JSON format can be freely reused in your application or automatically enabled in MISP taxonomy.


**interaction-level**

Describes whether the exposed functionality of a honeypot is limited in some way, which is usually the case for honeypots that simulate services.

**honeyport-basic:interaction-level="high"**

High Interaction Level

Exposed functionality of the honeypot is not limited.

**honeyport-basic:interaction-level="medium"**

Medium Interaction Level

Exposed functionality of the honeypot is limited to the service without exposing the full operating system.

**honeyport-basic:interaction-level="low"**

low Interaction Level

Exposed functionality being limited. For example, a simulated SSH server of a honeypot is not able to authenticate against a valid login/password combination.

**honeyport-basic:interaction-level="none"**

No interaction capabilities

No exposed functionality in the honeypot.

**honeyport-basic:interaction-level="adaptive"**

Learns from attack interaction
Learns from attack interaction

**data-capture**
Description the type of data a honeypot is able to capture

**honeypot-basic:data-capture="network-capture"**
Network capture

The honeypot collects raw network capture.

**honeypot-basic:data-capture="events"**
Events

The honeypot collects data about something that has happened or took place, a change in state.

**honeypot-basic:data-capture="attacks"**
Attacks

The honeypot collects malicious activity.

**honeypot-basic:data-capture="intrusions"**
Intrusions

The honeypot collects malicious activity that leads to a security failure.

**honeypot-basic:data-capture="none"**
None

The honeypot does not collect events, attacks, or intrusions.

**containment**

Classifies the measures a honeypot takes to defend against malicious activity spreading from itself.

**honeypot-basic:containment="block"**
Block

Attacker’s actions are identified and blocked. The attack never reaches the target.

**honeypot-basic:containment="defuse"**
Defuse
The attack reaches the target, but is manipulated in a way that it fails against the target.

**honeypot-basic:containment="slow-down"**

Slow Down

Attacker is slowed down in his actions of spreading malicious activity.

**honeypot-basic:containment="none"**

None

No action is taken to limit the intruder’s spread of malicious activity against other systems.

**distribution-appearance**

Describes whether the honeypot system appears to be confined to one system or multiple systems.

**honeypot-basic:distribution-appearance="distributed"**

Distributed

The honeypot is or appears to be composed of multiple systems.

**honeypot-basic:distribution-appearance="stand-alone"**

Stand-Alone

The honeypot is or appears to be one system.

**communication-interface**

Describes the interfaces one can use to interact directly with the honeypot.

**honeypot-basic:communication-interface="network-interface"**

Network Interface

The honeypot can be directly communicated with via a network interface.

**honeypot-basic:communication-interface="hardware-interface"**

Non-Network Hardware Interface

Examples: Printer port, CDROM drives, USB connections.

**honeypot-basic:communication-interface="software-api"**

Software API
The honeypot can be interacted with via a software API.

**role**

Describes in what role the honeypot acts within a multi-tier architecture.

**honeypot-basic:role="server"**

Server

The honeypot is passively awaiting requests from clients.

**honeypot-basic:role="client"**

Client

The honeypot is actively initiating requests to servers.

**iep**

- Information Exchange Policy (IEP) framework

- iep namespace available in JSON format at [this location](#). The JSON format can be freely reused in your application or automatically enabled in MISP taxonomy.

**commercial-use**

States whether Recipients are permitted to use information received in commercial products or services.

**iep:commercial-use="MAY"**

Recipients MAY use this information in commercial products or services.

**iep:commercial-use="MUST NOT"**

Recipients MUST NOT use this information in commercial products or services.

**external-reference**

This statement can be used to convey a description or reference to any applicable licenses, agreements, or conditions between the producer and receiver.

**iep:external-reference="$text"**

An external-reference value is required.
encrypt-in-transit
States whether the received information has to be encrypted when it is retransmitted by the recipient.

-iep:encrypt-in-transit="MUST"
Recipients MUST encrypt the information received when it is retransmitted or redistributed.

-iep:encrypt-in-transit="MAY"
Recipients MAY encrypt the information received when it is retransmitted or redistributed.

encrypt-at-rest
States whether the received information has to be encrypted by the Recipient when it is stored at rest.

-iep:encrypt-at-rest="MUST"
Recipients MUST encrypt the information received when it is stored at rest.

-iep:encrypt-at-rest="MAY"
Recipients MAY encrypt the information received when it is stored at rest.

permitted-actions
States the permitted actions that Recipients can take upon information received.

-iep:permitted-actions="NONE"
Recipients MUST contact the Providers before acting upon the information received.

-iep:permitted-actions="CONTACT FOR INSTRUCTION"
Recipients MUST contact the Providers before acting upon the information received.

-iep:permitted-actions="INTERNALLY VISIBLE ACTIONS"
Recipients MAY conduct actions on the information received that are only visible on the Recipients internal networks and systems, and MUST NOT conduct actions that are visible outside of the Recipients networks and systems, or visible to third parties.

-iep:permitted-actions="EXTERNALLY VISIBLE INDIRECT ACTIONS"
Recipients MAY conduct indirect, or passive, actions on the information received that are externally visible and MUST NOT conduct direct, or active, actions.
iep:permitted-actions="EXTERNALLY VISIBLE DIRECT ACTIONS"

Recipients MAY conduct direct, or active, actions on the information received that are externally visible.

**affected-party-notifications**

Recipients are permitted notify affected third parties of a potential compromise or threat.

iep:affected-party-notifications="MAY"

Recipients MAY notify affected parties of a potential compromise or threat.

iep:affected-party-notifications="MUST NOT"

Recipients MUST NOT notify affected parties of potential compromise or threat.

**traffic-light-protocol**

Recipients are permitted to redistribute the information received within the redistribution scope as defined by the enumerations.

iep:traffic-light-protocol="RED"

Personal for identified recipients only.

iep:traffic-light-protocol="AMBER"

Limited sharing on the basis of need-to-know.

iep:traffic-light-protocol="GREEN"

Community wide sharing.

iep:traffic-light-protocol="WHITE"

Unlimited sharing.

**provider-attribution**

Recipients could be required to attribute or anonymize the Provider when redistributing the information received.

iep:provider-attribution="MAY"

Recipients MAY attribute the Provider when redistributing the information received.
Recipient MUST attribute the Provider when redistributing the information received.

Recipient MUST NOT attribute the Provider when redistributing the information received.

Recipients could be required to obfuscate or anonymize information that could be used to identify the victims before redistributing the information received.

Recipients MAY obfuscate information about the specific affected parties.

Recipients MUST obfuscate information about the specific affected parties.

Recipients MUST NOT obfuscate information about the specific affected parties.

States whether the recipient MAY or MUST NOT resell the information received unmodified or in a semantically equivalent format.

Recipients MAY resell the information received.

Recipients MUST NOT resell the information received unmodified or in a semantically equivalent format.

States the UTC date that the IEP is effective from.

A start-date value is required
end-date
States the UTC date that the IEP is effective until.

_iep:end-date="$text"
An end-date value is required

reference
This statement can be used to provide a URL reference to the specific IEP implementation.

_iep:reference="$text"
A reference value is required

name
This statement can be used to provide a name for an IEP implementation.

_iep:name="$text"
A name value is required

version
States the version of the IEP framework that has been used.

_iep:version="$text"
A version value is required

id
Provides a unique ID to identify a specific IEP implementation.

_iep:id="$text"
An id value is required

ifx-vetting
ifx-vetting namespace available in JSON format at this location. The JSON format can be freely reused in your application or automatically enabled in MISP taxonomy.
The IFX taxonomy is used to categorise information (MISP events and attributes) to aid in the intelligence vetting process

**vetted**

*ifx-vetting:vetted="legit-but-compromised"

The attribute/event describes something that is legitly used, but seems to be compromised by 3rd parties to be used for malicious activities. Consider this if blocking is your course of action.

*ifx-vetting:vetted="legit"

The attribute/event describes something legitly used, that does not show signes of compromise or misuse.

*ifx-vetting:vetted="legit-uncertain"

The attribute/event describes something where it is not 100% clear if it is used only legitly.

*ifx-vetting:vetted="malicious"

The attribute/event describes something that is definitly used maliciously.

*ifx-vetting:vetted="malicious-uncertain"

The attribute/event describes something that seems to be used maliciously, but there is no 100% proof.

*ifx-vetting:vetted="invalid"

The attribute/event is invalid or wrong in respect to the situation described by the event.

*ifx-vetting:vetted="irrelevant"

The attribute/event is irrelevant to your organization or CTI process.

*ifx-vetting:vetted="undetermined"

The nature of the attribute/event cannot be further determined. Use this only as a last resort.

*ifx-vetting:vetted="fast-track"

The attribute/event was not vetted but passed through for operational reasons. A result might be higher false-positive rates.

**score**
ifx-vetting:score="0"
0

ifx-vetting:score="1"
1

ifx-vetting:score="2"
2

ifx-vetting:score="3"
3

ifx-vetting:score="4"
4

ifx-vetting:score="5"
5

ifx-vetting:score="6"
6

ifx-vetting:score="7"
7

ifx-vetting:score="8"
8

ifx-vetting:score="9"
9

ifx-vetting:score="10"
10

ifx-vetting:score="11"
11
36
37
38
39
40
41
42
43
44
45
46
47
72
73
74
75
76
77
78
79
80
81
82
83
incident-disposition

incident-disposition namespace available in JSON format at this location. The JSON format can be freely reused in your application or automatically enabled in MISP taxonomy.

How an incident is classified in its process to be resolved. The taxonomy is inspired from NASA Incident Response and Management Handbook. https://www.nasa.gov/pdf/589502main_ITSHBK-2810.09-02%20%5bNASA%20Information%20Security%20Incident%20Management%5d.pdf#page=9

incident

incident-disposition:incident="confirmed"

Confirmed

The incident is confirmed and response is underway following incident response procedure of the organisation.

incident-disposition:incident="deferred"

Deferred

The incident is deferred due to resource constraints, information type or external reasons.
incident-disposition:incident="unidentified"

Unidentified

The incident is unidentified because some assets, resources or context is missing to go a state which can be handled following the incident response procedure.

incident-disposition:incident="transferred"

Transferred

The incident is transferred to another organisations for further processing or incident handling.

incident-disposition:incident="discarded"

Discarded

The incident is discarded due to resource constraints, information type or external reasons.

incident-disposition:incident="silently-discarded"

Silently discarded

The incident is silently discarded due to resource constraints, information type or external reasons.

not-an-incident

incident-disposition:not-an-incident="insufficient-data"

Insufficient data

When insufficient data is available to explain an ambiguous (i.e., not definitively hostile or benign) indicator, the incident may be dispositioned as Insufficient Data.

incident-disposition:not-an-incident="faulty-indicator"

Faulty indicator

A false positive where an investigation reveals that the source indicator used as the basis for incident detection was a Faulty Indicator.

incident-disposition:not-an-incident="misconfiguration"

Misconfiguration

A false positive where an event that appeared to be malicious activity was subsequently disproven and determined to be a Misconfiguration (malfunction) of a system.
Scan or Probe

Reconnaissance activity which Scanned or Probed for the presence of a vulnerability which may be later exploited to gain unauthorized access.

Failed

A Failed attempt to gain unauthorized access, conduct a denial of service, install malicious code, or misuse an IT resource, typically because a security control prevented it from succeeding.

Refuted

Any other circumstance where a suspected incident was determined to not be an incident and was Refuted.

duplicate

duplicate

An incident may be a Duplicate of another record in the Incident Management System, and should be merged with the existing workflow.

infoleak

infoleak namespace available in JSON format at this location. The JSON format can be freely reused in your application or automatically enabled in MISP taxonomy.

A taxonomy describing information leaks and especially information classified as being potentially leaked. The taxonomy is based on the work by CIRCL on the AIL framework. The taxonomy aim is to be used at large to improve classification of leaked information.

automatic-detection

Credential

Credential
infoleak:automatic-detection="credit-card"
 Credit card

infoleak:automatic-detection="iban"
 IBAN

infoleak:automatic-detection="mail"
 Mail

infoleak:automatic-detection="phone-number"
 Phone number

infoleak:automatic-detection="api-key"
 API key

infoleak:automatic-detection="google-api-key"
 Google API key

infoleak:automatic-detection="aws-key"
 AWS key

infoleak:automatic-detection="private-key"
 Private key at large

infoleak:automatic-detection="encrypted-private-key"
 Encrypted private key at large

infoleak:automatic-detection="private-ssh-key"
 Private SSH key

infoleak:automatic-detection="private-static-key"
 Private state key

infoleak:automatic-detection="vpn-static-key"
 VPN static key
PGP message

PGP public key block

PGP signature

PGP private key

Certificate

RSA private key

DSA private key

EC private key

Base64

Binary

Hexadecimal

Bitcoin address
infoleak:automatic-detection="bitcoin-private-key"

Bitcoin private key

infoleak:automatic-detection="cve"

CVE

infoleak:automatic-detection="onion"

Onion link

infoleak:automatic-detection="sql-injection"

SQL injection

**analyst-detection**

infoleak:analyst-detection="credential"

Credential

infoleak:analyst-detection="credit-card"

Credit card

infoleak:analyst-detection="iban"

IBAN

infoleak:analyst-detection="mail"

Mail

infoleak:analyst-detection="phone-number"

Phone number

infoleak:analyst-detection="api-key"

API key

infoleak:analyst-detection="google-api-key"

Google API key
infoleak:analyst-detection="aws-key"
AWS key

infoleak:analyst-detection="private-key"
Private key at large

infoleak:analyst-detection="encrypted-private-key"
Encrypted private key at large

infoleak:analyst-detection="private-ssh-key"
Private SSH key

infoleak:analyst-detection="private-static-key"
Private state key

infoleak:analyst-detection="vpn-static-key"
VPN static key

infoleak:analyst-detection="pgp-message"
PGP message

infoleak:analyst-detection="pgp-public-key-block"
PGP public key block

infoleak:analyst-detection="pgp-signature"
PGP signature

infoleak:analyst-detection="pgp-private-key"
PGP private key

infoleak:analyst-detection="certificate"
Certificate

infoleak:analyst-detection="rsa-private-key"
RSA private key
infoleak:analyst-detection="dsa-private-key"
DSA private key

infoleak:analyst-detection="ec-private-key"
EC private key

infoleak:analyst-detection="base64"
Base64

infoleak:analyst-detection="binary"
Binary

infoleak:analyst-detection="hexadecimal"
Hexadecimal

infoleak:analyst-detection="bitcoin-address"
Bitcoin address

infoleak:analyst-detection="bitcoin-private-key"
Bitcoin private key

infoleak:analyst-detection="cve"
CVE

infoleak:analyst-detection="onion"
Onion link

infoleak:analyst-detection="sql-injection"
SQL injection

confirmed

infoleak:confirmed="false-positive"
False positive
infoleak:confirmed="false-negative"
False negative

infoleak:confirmed="true-positive"
True positive

infoleak:confirmed="true-negative"
True negative

source

infoleak:source="public-website"
Public website

infoleak:source="pastie-website"
Pastie-like website

infoleak:source="electronic-forum"
Electronic forum

infoleak:source="mailing-list"
Mailing-list

infoleak:source="source-code-repository"
Source code repository

infoleak:source="automatic-collection"
Automatic collection including honeypots, spamtramps or equivalent technologies

infoleak:source="manual-analysis"
Manual analysis or investigation where detection took place

infoleak:source="unknown"
Unknown
infoleak:source="other"
Other source not specified in this list

submission

infoleak:submission="manual"
Manual

infoleak:submission="automatic"
Automatic

infoleak:submission="crawler"
Crawler

output-format

infoleak:output-format="ail-daily"
Daily event

infoleak:output-format="ail-weekly"
Weekly event

infoleak:output-format="ail-monthly"
Monthly event

certainty

infoleak:certainty="100"
Certainty (probability equals 1 - 100%)
Certainty
Associated numerical value="100"

infoleak:certainty="93"
Almost certain (probability equals 0.93 - 93%)
Almost certain
**Probable** (probability equals 0.75 - 75%)

**Chances about even** (probability equals 0.50 - 50%)

**Probably not** (probability equals 0.30 - 30%)

**Almost certainly not** (probability equals 0.07 - 7%)

**Impossibility** (probability equals 0.0 - 0%)

**test**

**information-security-data-source**

information-security-data-source namespace available in JSON format at this location. The JSON format can be freely reused in your application or automatically enabled in MISP taxonomy.

Taxonomy to classify the information security data sources.
**type-of-information**

Type of provided information

**information-security-data-source:type-of-information="vulnerability"**

Vulnerability
Information regarding a weakness of an asset which might be exploited by a threat

**information-security-data-source:type-of-information="threat"**

Threat
Information regarding the potential cause on an unwanted incident

**information-security-data-source:type-of-information="countermeasure"**

Countermeasure
Information regarding any administrative, managerial, technical or legal control that is used to counteract an information security risk

**information-security-data-source:type-of-information="attack"**

Attack
Information regarding any unauthorized attempt to access, alter or destroy an asset

**information-security-data-source:type-of-information="risk"**

Risk
Information describing the consequences of a potential event, such as an attack

**information-security-data-source:type-of-information="asset"**

Asset
Information regarding any object or characteristic that has value to an organization

**originality**

Originality and novelty of the provided information

**information-security-data-source:originality="original-source"**

Original source
Information originates from the data sources which publish their own information
Secondary source

Information is integrated or copied from another information security data source

timeliness-sharing-behavior

Timeliness of the provided information

Routine sharing

Information is published at a specific point in time on a regular basis, such as daily, weekly or monthly reports

Incident specific

Information is published whenever news are available or a new incident occurs

integrability-format

Level of integrability format for the provided information

Structured

The provided security information is available in an standardized and structured data format such as MISP core format

Unstructured

The provided security information is available in unstructured form without following a common data representation format

integrability-interface

Level of integrability interface for the provided information
No interface
The information security data source doesn't provide any interface to access the information

API
The information security data source provides an application programming interface (APIs) to obtain the provided information

RSS Feeds
The information security data source provides an RSS Feed to keep track of the provided information

Export
The information security data source provides an interface to export contents as XML, JSON or plain text

Source of the creditability

Vendor
The publisher of the information is a vendor

Government
The publisher of the information is a government

Security expert
The publisher of the information is a security expert
Normal user

The publisher of the information is a normal user

**trustworthiness-traceability**

Traceability of the provided information

Yes

The provided information is classified as traceable if it can be traced back, based on meta-data, to a specific publisher and a publishing date

No

The provided information cannot be traced back (meta-data are not provided)

**trustworthiness-feedback-mechanism**

Feedback such as user ratings or comments regarding the usefulness of the provided information

Yes

The provided information is validated by including user rating, comments or additional analysis

No

The provided information is not validated (a user rating, comments is not available)

**type-of-source**

Types of information security data source
The JSON format can be freely reused in your application or automatically enabled in MISP taxonomy.

A full set of operational indicators for organizations to use to benchmark their security posture.
Indicators of this category give information on the occurrence of incidents caused by external malicious threat sources.

**information-security-indicators:**IEX="FGY.1"

Forged domain or brand names impersonating or imitating legitimate and genuine names

Forged domains are addresses very close to the domain names legitimately filed with registration companies or organizations (forged domains are harmful only when actively used to entice customers to the website for fraudulent purposes). It also includes domain names that imitate another domain name or a brand.

**information-security-indicators:**IEX="FGY.2"

Wholly or partly forged websites (excluding parking pages) spoiling company's image or business

Forged websites correspond to two main threats (forgery of sites in order to steal personal data such as account identifiers and passwords, forgery of services in order to capitalize on a brand and to generate turnover that creates unfair competition). In this case, reference is often made to phishing (1st usage) or pharming.

**information-security-indicators:**IEX="SPM.1"

Not requested received bulk messages (spam) targeting organization's registered users

Spam are messages received in company's or organization's messaging systems in the framework of mass and not individualized campaigns, luring into clicking dangerous URLs (possibly Trojan laden) or enticing to carry out harmful to concerned individual actions.

**information-security-indicators:**IEX="PHI.1"

Phishing targeting company's customers' workstations spoiling company's image or business

Phishing involves a growing number of business sectors (financial organizations, e-commerce sites, online games, social sites etc.). It includes attacks via e-mail with messages that contain either malicious URL links (to forged websites) or malicious URL links (to malware laden genuine websites).

**information-security-indicators:**IEX="PHI.2"

Spear phishing or whaling carried out using social engineering and targeting organization's specific registered users

Spear phishing are "spoofed" and customized messages looking like a usual professional relationship or an authority, and asking to click on or open dangerous URL links or dangerous attachments (malware laden).
Intrusion attempts on externally accessible servers

Attempts are here systematic scans (excluding network reconnaissance) and abnormal and suspicious requests on externally accessible servers, detected by an IDS/IPS or not.

Intrusion on externally accessible servers

Intrusion usually targets servers that host personal data (including data subject to regulations such as PCI DSS, for example). 3 objectives or motivations can be found wherever an intrusion exists: data theft (see before), installation of transfer links towards unlawful and rogue websites, getting a permanent internal access by installation of a backdoor for further purposes. This indicator does not include the figures from the Defacement and Misappropriation indicators, both of which however starting with an intrusion. However, it includes all means and methods to get access to servers, i.e. purely technical means (such as Command execution/injection attack) or identity usurpation to log on an admin or user account (see ETSI GS ISI 002 [4] specifications).

Intrusions on internal servers

This kind of incident typically comes after a PC malware installation or an intrusion on an externally accessible server often followed by a lateral movement. This indicator does not include the figures from the Misappropriation indicator which may however start with an intrusion on an internal server. This indicator includes the so-called APTs (Advanced Persistent Threats), which constitute however only a small part of this indicator. APTs are long lasting and stealthy incidents with large compromises of data through outbound links, which is not the case of most incidents of the IEX_INT.3 type. This type of incident is often the result of targeted attacks.

Obvious and visible websites defacements

Obvious defacements measures the defacement of homepages and of the most consulted pages of sites.

Servers resources misappropriation by external attackers

This indicator measures the amount of resources of servers misappropriated by an external attacker after a successful intrusion (on an externally accessible or an internal server).

Denial of service attacks on websites
This indicator measures denial-of-service attacks against websites, carried out either by sending of harmful requests (DoS), by sending a massive flow coming from multiple distributed sites (DDoS) or via other techniques. Due to the current state of the art of attack detection, the indicator is limited to DDoS attacks.

**information-security-indicators: IEX="MLW.1"**

Attempts to install malware on workstations

Malware installation attempts are detected by current conventional means (Antivirus and base IPS) and blocked by the same means. This indicator (which includes desktop and laptop PC based workstations, but does not include the different types of other workstations and mobile smart devices) provides an approximate insight into the malicious external pressure suffered in this regard. This indicator should be associated with indicator on successful malware installation in order to assess the actual effectiveness of conventional detection and blockage means in the fight against malware.

**information-security-indicators: IEX="MLW.2"**

Attempts to install malware on servers

Malware installation attempts are detected by current conventional means (antivirus and base IPS) and blocked by the same means. This indicator gives an approximate insight into the malicious external pressure suffered in this regard. This indicator should be associated with indicator on successful malware installation in order to assess the actual effectiveness of conventional detection and blockage means in the fight against malware.

**information-security-indicators: IEX="MLW.3"**

Malware installed on workstations

Malware could be not detected by conventional means (lack of activation or appropriate update), or noninventoried and/or specific very stealthy incidents, most of the time not detectable by conventional means (AV and standard IPS), consequently requiring other supplementary detection means (network or WS load, outbound links, advanced network devices as DPI tools, users themselves reporting to help desks). This indicator (which includes desktop and laptop Windows-based workstations, but does not include the different types of other workstations and mobile smart devices) therefore applies to both classical viruses and worms, as well as all new malware such as Trojan horses (which are defined as malware meant to data theft or malicious transactions) or bots (which are defined here as vectors for spam or DDoS attacks).

**information-security-indicators: IEX="MLW.4"**

Malware installed on internal servers

Malware could be not detected by conventional means (lack of activation or of appropriate update), or noninventoried and/or specific very stealthy incidents, most of the time not detectable by conventional means (AV and standard IPS), consequently requiring other supplementary detection means (network or server load, outbound links, advanced network devices as DPI tools,
administrators themselves). This indicator therefore applies to both classical viruses and worms, as well as all new malware such as Trojan horses (which are defined as malware meant to data theft or malicious transactions)

**information-security-indicators:IEX="PHY.1"**

Human intrusion into the organization’s perimeter

This indicator measures illicit entrance of individuals into security perimeter.

**IMF**

Indicators of this category provides information on the occurrence of incidents caused by malfunctions, breakdowns or human errors.

**information-security-indicators:IMF="BRE.1"**

Workstations accidental breakdowns or malfunctions

Breakdowns or malfunctions apply to both hardware and software, caused by system errors (components failure or bugs).

**information-security-indicators:IMF="BRE.2"**

Servers accidental breakdowns or malfunctions

Breakdowns or malfunctions apply to both hardware and software, caused by system errors (components failure or bugs).

**information-security-indicators:IMF="BRE.3"**

Mainframes accidental breakdowns or malfunctions

Breakdowns or malfunctions apply to both hardware and software, caused by system errors (components failure or bugs).

**information-security-indicators:IMF="BRE.4"**

Networks accidental breakdowns or malfunctions

Breakdowns or malfunctions apply to both hardware and software, caused by system errors (components failure or bugs).

**information-security-indicators:IMF="MDL.1"**

Delivery of email to wrong recipient

This indicator measures errors from the sender when selecting or typing email addresses leading to misdelivery incidents. Consequences may be very serious when confidentiality is critical.
Loss (or theft) of mobile devices belonging to the organization

This indicator measures the loss of all types of systems containing sensitive or not information belonging to the organization, whether encrypted or not (laptop computers, USB tokens, CD-ROMs, diskettes, magnetic tapes, smartphones, tablets, etc.). In some cases, it could be difficult to differentiate losses from thefts.

Downtime or malfunction of the log production function with possible legal impact

This type of event could have two main causes: an accidental system malfunction or a system manipulation error by an administrator. Logs taken into account here are systems logs and applications logs of all servers.

Absence of possible tracking of the person involved in a security event with possible legal impact

Concerns unique data related to a given and known to organization user (identifier tied to application software or directory). This indicator is a sub-set of indicator IMF_LOG.1.

Downtime or malfunction of the log production function for recordings with evidential value for access to or handling of information that, at this level, is subject to law or regulatory requirements

This indicator primarily relates to Personal Identifiable Information (PII) protected by privacy laws, to information falling under the PCI-DSS regulation, to information falling under European regulation in the area of breach notification (Telcos and ISPs to begin with), and to information about electronic exchanges between employees and the exterior (electronic messaging and Internet connection). This indicator does not include possible difficulties pertaining to proof forwarding from field operations to governance (state-of-the-art unavailable). This indicator is a sub-set of indicator IMF_LOG.1, but can be identical to this one in advanced organizations.

Indicators of this category provide information on the occurrence of incidents regarding internal deviant behaviours (including especially usurpation of rights or of identity).

A person within the organization impersonates a registered user (employee, partner, contractor, external service provider) using identifier, passwords or authentication devices that had previously been obtained in an illicit manner (using a social engineering technique or not). This measures
cases of usurpation for malicious purposes, and not ones that relate to user-friendly usage. Moreover, assumption is made that ID/Password is the main way of authentication

**information-security-indicators:IDB="RGH.1"**

Privilege escalation by exploitation of software or configuration vulnerability on an externally accessible server

Exploited vulnerabilities are typically tied to the underlying OS that supports the Web application, exploited notably through injection of additional characters in URL links. This behaviour specifically involves external service providers and company’s business partners that wish to access additional information or to launch unlawful actions (for example, service providers seeking information about their competitors). This type of behaviour is less frequent amongst employees, since it is often easier to get the same results by means of social engineering methods.

**information-security-indicators:IDB="RGH.2"**

Privilege escalation on a server or central application by social engineering

It is often easier to get the same results by means of social engineering methods than with technical means. Help desk teams are often involved in this kind of behaviour.

**information-security-indicators:IDB="RGH.3"**

Use on a server or central application of administrator rights illicitly granted by an administrator

Illicitly granting administrator privileges generally comes from simple errors or more worrisome negligence on the part of the administrators (malicious action is rarer). The case of forgotten temporary rights (see next indicator), is not included in this indicator.

**information-security-indicators:IDB="RGH.4"**

Use on a server or central application of time-limited granted rights after the planned period

This indicator measures situations where time-limited user accounts (created for training, problem resolution, emergency access, test, etc.) are still in use after the initial planned period.

**information-security-indicators:IDB="RGH.5"**

Abuse of privileges by an administrator on a server or central application

The motivation of rights usurpation by an administrator is often the desire to breach the confidentiality of sensitive data (for example, human resources data). This indicator is similar to the indicator IDB_RGH.6 (but with consequences that may be however often potentially more serious).
Abuse of privileges by an operator or a plain user on a server or central application

This indicator applies for example to authorized users having access to personal identifiable information about celebrities with no real need for their job (thereby violating the “right to know”).

Illicit use on a server or central application of rights not removed after departure or position change within the organization

This indicator also takes into account the problem of generic accounts (whose password might have been changed each time a user knowing this password is leaving organization).

Server resources misappropriation by an internal source

This indicators measures misappropriation of on-line IT resources for one’s own use (personal, association etc.).

Access to hacking Website

This indicator measures unauthorized access to a hacking Website from an internal workstation

Deactivating of logs recording by an administrator

This event is generally decided and deployed by an administrator in order to improve performance of the system under his/her responsibility (illicit voluntary stoppage). This indicator is a reduced subset of indicator IUS_RGH.5

Indicators of this category are indicators that concern all categories of incidents.

Exploitation of a software vulnerability without available patch

This indicators measures security incidents that are the result of an exploitation of a disclosed software vulnerability that has no available patch (with or without an applied workaround measure). It is used to assess the intensity of the exploitation of recently disclosed software vulnerabilities (zero day or not). Patching here applies only to standard software (excluding bespoke software), and the scope is limited to workstations (OS, browsers and various add-ons and plug-ins, office automation standard software).
information-security-indicators:IWH="VNP.2"

Exploitation of a non-patched software vulnerability

This indicator measures security incidents that are the result of the exploitation of a non-patched software vulnerability though a patch exists. It is used to assess effectiveness or application of patching-related organization and processes and tools (patching not launched). It is linked with indicator VOR_VNP.2 that is intended to assess problems of exceeding the "time limit for the window of exposure to risks". It has the same limitations as IWH_VNP.1 regarding scope.

information-security-indicators:IWH="VNP.3"

Exploitation of a poorly-patched software vulnerability

This indicator measures security incidents that are the result of the exploitation of a poorly patched software vulnerability. It is used to assess effectiveness of patching-related organization and processes and tools (process launched but patch not operational - Cf. no reboot, etc.). It is linked with indicator VOR_VNP.1, IWH_VNP.1 and IWH_VNP.2. It has the same limitations as IWH_VNP.1 regarding scope.

information-security-indicators:IWH="VCN.1"

Exploitation of a configuration flaw

This indicator measures security incidents that are the result of the exploitation of a configuration flaw on servers or workstations. A configuration flaw should be considered as a nonconformity against state-of-the-art security policy.

information-security-indicators:IWH="UKN.1"

Not categorized security incidents

This indicator measures all types of incidents that are new and/or a complex combination of more basic incidents and cannot be fully qualified and therefore precisely categorized.

information-security-indicators:IWH="UNA.1"

Security incidents on non-inventoried and/or not managed assets

This indicator measures security incidents tied to assets (on servers) non-inventoried and not managed by appointed teams. It is a key indicator insofar as a high percentage of incidents corresponds with this indicator on average in the profession (according to some public surveys).

**VBH**

Indicators of this category apply to the existence of abnormal behaviours that could lead to security incidents.
information-security-indicators:VBH="PRC.1"

Server accessed by an administrator with unsecure protocols

This indicator measures the use of insecure protocols set up by an administrator to get access to organization-based externally accessible servers making an external intrusion possible. Insecure protocol means unencrypted, without time-out, with poor authentication means etc. (for example Telnet).

information-security-indicators:VBH="PRC.2"

P2P client in a workstation

This indicator measures the installation of P2P clients set up by a user on its professional workstation with the risk of partial or full sharing of the workstation content. It applies to workstations that are either connected to the organization's network from within the organization or directly connected to the public network from outside (notably home). There is a high risk of accidental sharing (in one quarter of all cases) of files that may host confidential company data. It is most often carried out through HTTP channel (proposed on all of these services).

information-security-indicators:VBH="PRC.3"

VoIP clients in a workstation

This indicator measures VoIP clients installed by a user on his/hers own workstation in order to use a peer-to-peer service. It applies to workstations connected to an organization’s network from within the organization or directly connected to the public network from outside (notably home). The associated risk is to exchange dangerous Office documents. It is most often carried out through HTTP channel (proposed on all of these services).

information-security-indicators:VBH="PRC.4"

Outbound connection dangerously set up

This indicator measures outbound connection dangerously set up to get remote access to the company’s internal network without using an inbound VPN link and a focal access point with possible exploitation by an external intruder. The outbound connection method consists for example in using a GoToMyPC™ software or a LogMeIn® software or a computer to computer connection in tunnel mode.

information-security-indicators:VBH="PRC.5"

Not compliant laptop computer used to establish a connection

This indicator measures remote or local connection to the organization’s internal network from a roaming laptop computer that is organization-owned and is configured with weak parameters. In this situation and in case of the existence of a software to check compliance of roaming computers, another related software blocks the connection in principle and prevents its continuation.
Other unsecure protocols used

This indicator measures other unsecure or dangerous protocols set up with similar behaviours. The other cases are the other than the 5 previous ones (VBH_PRC.1 to VBH_PRC.5). It relates to dangerous or abusive usages, i.e. situations where usages are not required and where other more secure solutions exist.

Outbound controls bypassed to access Internet

This indicator measures the detection of Internet access from the internal network by means that bypass the outbound security devices. It primarily relates to Internet accesses from a perimeter area or to tunnelling (SSL port 443) or to straight accesses (via an ADSL link or public Wi-Fi access points and the telephone network) or to accesses via Smartphones connected to the workstation. The main underlying motivation is to prevent user tracking.

Anonymization site used to access Internet

This indicator measures the detection of anonymous Internet access from an internal workstation through an anonymization site. The goal is to maintain free access and to avoid organization’s filtering of accesses to forbidden websites.

Files recklessly downloaded

This indicator measures the download of files from an external website that is not known (no reputation) within the profession to an internal workstation. "No reputation" can be assessed by information provided by URL outbound filtering devices.

Personal public instant messaging account used for business file exchanges

This indicator measures the use of personal public instant messaging accounts for business exchanges with outside. This file exchange method has to be avoided due to network AV software bypassing and to identify lesser effectiveness of AV software.

Personal public messaging account used for business file exchanges

This indicator measures the use of personal public messaging accounts for business file exchanges with the exterior. The risk is to expose information to external attackers.
Workstations accessed in administrator mode

This indicator measures access to workstations in administrator mode without authorization.

Personal storage devices used

This indicator measures the use of personal storage devices on a professional workstation to input or output information or software. Mobile or removable personal storage devices include USB tokens, smartphones, tablets, etc. It is not applicable to personal devices authorized by security policy (Cf. VBH_WTI.3 and BYOD).

Personal devices used without compartmentalization (BYOD)

This indicator measures the lack of or the removal of basic security measures meant to compartmentalize professional activities on personal devices. Personal devices (BYOD) include PCs, tablets, smartphones, etc.

Not encrypted sensitive files exported

This indicator measures the lack of encryption of sensitive files uploaded from a professional workstation to professional mobile or removable storage devices.

Personal software used

This indicator measures the presence of personal software on a professional workstation that does not comply with the corporate security policy. It corresponds with all types of local unauthorized software (with a user licence or not), such as common personal software (games, office automation etc.) or more dangerous ones (hacking etc.). It should be added that VBH_PRC.2 and VBH_PRC.3 are a share of this indicator, and that this indicator is a subset of VBH_WTI.1.

Mailbox or Internet access with admin mode

This indicator applies to users using their admin account on a workstation to access their own mailbox or Internet. This behaviour is particularly dangerous since malware (through attached pieces on email or drive-by download on Web browser) are far easier to install on the workstation in this case.
Weak passwords used

The required strength of passwords depends on the organization’s security policy, but usable general recommendations in ISO/IEC 27002 [2].

Passwords not changed

This indicators measures password not changed in due periodic time (case of changes not periodically imposed). Situations in which changes are not periodically imposed by accessed systems themselves remain fairly frequent within organizations (apart from Active Directory), the figure being around 25 % of the cases on average.

Administrator passwords not changed

This indicators measures password not changed in due periodic time by an administrator in charge of an account used by automated applications and processes (case of changes not periodically imposed). Situations in which changes are not periodically imposed by accessed systems themselves remain fairly frequent within organizations (apart from Active Directory), the figure being around 25 % of the cases on average.

Not compliant user rights granted illicitly by an administrator

This indicator measures the granting of not compliant user rights by an administrator outside any official procedure. This vulnerability may originate with an error, negligence or malice.

Human weakness exploited by a spear phishing message meant to entice or appeal to do something possibly harmful to the organization

This vulnerability typically includes clicking on an Internet link or opening an attached document.

Human weakness exploited by exchanges meant to entice or appeal to tell some secrets to be used later

This vulnerability applies to discussions through on-line media leading to leakage of personal identifiable information (PII) or various business details to be used later (notably for identity usurpation).
**VSW**

Indicators of this category apply to the existence of weaknesses in software that could be exploited and lead to security incidents.

*information-security-indicators:VSW="WSR.1"*

Web applications software vulnerabilities

This indicators measures software vulnerabilities detected in Web applications running on externally accessible servers.

*information-security-indicators:VSW="OSW.1"*

OS software vulnerabilities regarding servers

This indicators measures software vulnerabilities detected in OS running on externally accessible servers.

*information-security-indicators:VSW="WBR.1"*

Web browsers software vulnerabilities

This indicators measures software vulnerabilities detected in Web browsers running on workstations.

**VCF**

Indicators of this category apply to the existence of weaknesses in the configuration of IT devices that could be exploited and lead to security incidents.

*information-security-indicators:VCF="DIS.1"*

Dangerous or illicit services on externally accessible servers

This indicator measures the presence of illicit and dangerous system services running on an externally accessible server.

*information-security-indicators:VCF="LOG.1"*

Insufficient size of the space allocated for logs

Such event could cause an overflow in case of quick series of unusual actions.

*information-security-indicators:VCF="FWR.1"*

Weak firewall filtering rules

This indicator measures the gaps between the active firewall filtering rules and the security policy.
information-security-indicators:VCF="WTI.1"

Workstation wrongly configured

This indicator measures the use of workstation with a disabled or lacking update AV and/or FW. The lack of update includes signature file older than x days (generally at least 6 days).

information-security-indicators:VCF="WTI.2"

Autorun feature enabled on workstations

This indicator measures the presence of Autorun feature enabled on workstations.

information-security-indicators:VCF="UAC.1"

Access rights configuration not compliant with the security policy

This indicator measures access rights configuration that are not compliant with corporate security policy. This indicator is more reliable in case of existence of a central repository of user rights within organization (and of an IAM achievement).

information-security-indicators:VCF="UAC.2"

Not compliant access rights on logs

This indicator measures non-compliant access rights on logs in servers which are sensitive and/or subject to regulations. This situation representing a key weakness since the necessary high confidence in the produced logs has been reduced to nothing. This indicator is a subset of VCF_UAC.1.

information-security-indicators:VCF="UAC.3"

Generic and shared administrator accounts

This indicator measures generic and shared administration accounts that are unnecessary or accounts that are necessary but without patronage. It concerns operating systems, databases and applications.

information-security-indicators:VCF="UAC.4"

Accounts without owners

This indicator measures accounts without owners that have not been erased. These are accounts that have no more assigned users (for example after internal transfer or departure of the users from organization).

information-security-indicators:VCF="UAC.5"

Inactive accounts
This indicator measures accounts inactive for at least 2 months that have not been disabled. These accounts are not used by their users due to prolonged but not definitive absence (long term illness, maternity, etc.), with the exclusion of messaging accounts (which should remain accessible to users from their home).

**VTC**

Indicators of this category measure the existence of weaknesses in the IT and physical architecture that could be exploited and lead to security incidents.

**information-security-indicators:VTC="BKP.1"**

Malfunction of server-hosted sensitive data safeguards

On servers hosting sensitive data with respect to availability, it concerns malfunctions of safeguards due to lack of periodic testing. This kind of event may be very serious since usually put trust is betrayed in a critical function.

**information-security-indicators:VTC="IDS.1"**

Full unavailability of IDS/IPS

Many causes are possible, including deliberate disconnection by a network administrator (to streamline operations or since IDS/IPS output is deemed too difficult to use), unwitting disconnection (error by a network administrator), breakdown, software malfunction, etc.

**information-security-indicators:VTC="WFI.1"**

Wi-Fi devices installed on the network without any official authorization

Many causes are possible, including for example local decisions for easier access of mobile users, rogue user behaviours or workstations configured as access points.

**information-security-indicators:VTC="RAP.1"**

Remote access points used to gain unauthorized access

This indicator is interesting to assess whether such accesses are localized (local areas, countries, etc.) or involve the whole organization or are increasing and spreading to whole organization.

**information-security-indicators:VTC="NRG.1"**

Devices or servers connected to the organization’s network without being registered and managed

According to some convergent studies, this event may be at the origin of some 70 % of all security incidents associated to malice.
Not operational physical access control means

This indicator includes access to protected internal areas. The 1st cause is the lack of effective control of users at software level. The 2nd cause is hardware breakdown of a component in the chain.

**VOR**

Indicators of this category measure the existence of weaknesses in the organization that could be exploited and lead to security incidents.

**Discovery of attacks**

This indicator measures stealthy security incidents difficult to detect. As most studies show, the time to discovery is often several months, time frame especially used to steal sensitive data. Incidents taken into account here are IEX_INT.3, IEX_MLW.3 and IEX_MLW.4. This indicator give landmarks regarding what may be deemed excessive, i.e. with an assumption which is above one week.

**Excessive time of window of risk exposure**

This indicator measures situations in which the time of the window of risk exposure exceeds the time limit expressed in security policy. The window of risks exposure is the period of time between the public disclosure of a software vulnerability and the actual and checked application of a patch that corresponds with the vulnerability’s remediation (independently of the time needed for the vendor to provide the patch). This indicator only applies to workstations (OS, application software and browsers), and to critical vulnerabilities (as publicly determined via the CVSS scale) that require an action as quickly as possible.

**Rate of not patched systems**

This indicator measures the rate of not patched systems for detected critical software vulnerabilities (see VOR_VNP.1 for criticality definition). Not patched systems to be taken into account are the ones which are not patched beyond the time limit defined in security policy. This indicator only applies to workstations (OS, application software and browsers).

**Rate of not reconfigured systems**

This indicator measures the rate of not reconfigured systems for detected critical configuration
vulnerabilities. Configuration vulnerabilities are either non-conformities relative to a level 3 security policy, or discrepancies relative to a state-of-the-art available within the profession (and that can correspond with a configuration master produced by a vendor and applied within the organization). This indicator only applies to workstations (OS, application software and browsers). Not reconfigured systems to be taken into account are the ones which are not reconfigured beyond the time limit defined in security policy.

**information-security-indicators:** VOR="RCT.1"

Reaction plans launched without experience feedback

This indicator applies to plans for responding to incidents formalized in security policy launched without experience feedback.

**information-security-indicators:** VOR="RCT.2"

Reaction plans unsuccessfully launched

This indicator measures failure in the performance of plans, leading to non-recovery of incidents and to subsequent possible launch of an escalation procedure.

**information-security-indicators:** VOR="PRT.1"

Launch of new IT projects without information classification

This indicator measures the launch of new IT projects without information classification. Availability of a classification model and scheme within the organization would make easier this task.

**information-security-indicators:** VOR="PRT.2"

Launch of new specific IT projects without risk analysis

This indicator measures the launch of new specific IT projects without performing a full risk analysis.

**information-security-indicators:** VOR="PRT.3"

Launch of new IT projects of a standard type without identification of vulnerabilities and threats

This indicator measures the launch of new IT projects of a standard type without identification of vulnerabilities and threats and of related security measures. For these IT projects, potential implementation of a simplified risk analysis method or of pre-defined security profiles can be applied.
IMP

Indicators as regards impact measurement.

**information-security-indicators:IMP="COS.1"**

Average cost to tackle a critical security incident

The average cost taken into account includes the following kinds of overhead: disruption to business operations (increased operating costs, etc.), fraud (money, etc.) and incident recovery costs (technical individual time, asset replacement, etc.). It does not include possible (generally very heavy) breach notification costs to customers and enforcement bodies (according to US and recently EU laws or regulations).

**information-security-indicators:IMP="TIM.1"**

Average time of Websites downtime due to whole security incidents

Applies to all 4 classes, but main security incidents concerned are malfunctions or breakdowns (software or hardware), DoS or DDoS attacks and Website defacements.

**information-security-indicators:IMP="TIM.2"**

Average time of Websites downtime due to successful malicious attacks

This indicator is a subset of the previous one (IMP_TIM.1) focusing on 3 possible classes (IEX, IUS, IMD).

**information-security-indicators:IMP="TIM.3"**

Average time of Websites downtime due to malfunctions or unintentional security incidents

This indicator is a subset of IMP_TIM.1 focusing on one class (IMF).

**interception-method**

The interception method used to intercept traffic.

**man-in-the-middle**

Interception where an attacker secretly relayed and possibly altered the communication between two parties.
interception-method:man-in-the-middle
Man-in-the-middle
Interception where an attacker secretly relayed and possibly altered the communication between two parties.

man-on-the-side
Interception where an attacker could read and send messages between two parties but not alter messages.

interception-method:man-on-the-side
Man-on-the-side
Interception where an attacker could read and send messages between two parties but not alter messages.

passive
Interception where an attacker could read messages between two parties.

interception-method:passive
Passive
Interception where an attacker could read messages between two parties.

search-result-poisoning
Interception where an attacker creates malicious websites intended to show up in search engine queries.

interception-method:search-result-poisoning
Search result poisoning
Interception where an attacker creates malicious websites intended to show up in search engine queries.

dns
Interception where domain name resolution is altered to re-direct traffic to a malicious IP address.

interception-method:dns
Dns
Interception where domain name resolution is altered to re-direct traffic to a malicious IP address.

**host-file**

Interception where the HOSTS file is modified to re-direct traffic to a malicious IP address.

**interception-method:host-file**

Host file

Interception where the HOSTS file is modified to re-direct traffic to a malicious IP address.

**other**

Other.

**interception-method:other**

Other

Other.

**kill-chain**

`i` kill-chain namespace available in JSON format at [this location](#). The JSON format can be freely reused in your application or automatically enabled in MISP taxonomy.

The Cyber Kill Chain, a phase-based model developed by Lockheed Martin, aims to help categorise and identify the stage of an attack.

**Reconnaissance**

**kill-chain:Reconnaissance**

Research, identification and selection of targets, often represented as crawling Internet websites such as conference proceedings and mailing lists for email addresses, social relationships, or information on specific technologies.

**Weaponization**

**kill-chain:Weaponization**

Coupling a remote access trojan with an exploit into a deliverable payload, typically by means of an automated tool (weaponizer). Increasingly, client application data files such as Adobe Portable Document Format (PDF) or Microsoft Office documents serve as the weaponized deliverable.
Delivery

**kill-chain:Delivery**

Transmission of the weapon to the targeted environment. The three most prevalent delivery vectors for weaponized payloads by APT actors, as observed by the Lockheed Martin Computer Incident Response Team (LM-CIRT) for the years 2004-2010, are email attachments, websites, and USB removable media.

Exploitation

**kill-chain:Exploitation**

After the weapon is delivered to victim host, exploitation triggers intruders' code. Most often, exploitation targets an application or operating system vulnerability, but it could also more simply exploit the users themselves or leverage an operating system feature that auto-executes code.

Installation

**kill-chain:Installation**

Installation of a remote access trojan or backdoor on the victim system allows the adversary to maintain persistence inside the environment.

Command and Control

**kill-chain:Command and Control**

Typically, compromised hosts must beacon outbound to an Internet controller server to establish a C2 channel. APT malware especially requires manual interaction rather than conduct activity automatically. Once the C2 channel establishes, intruders have 'hands on the keyboard' access inside the target environment.

Actions on Objectives

**kill-chain:Actions on Objectives**

Only now, after progressing through the first six phases, can intruders take actions to achieve their original objectives. Typically, this objective is data exfiltration which involves collecting, encrypting and extracting information from the victim environment; violations of data integrity or availability are potential objectives as well. Alternatively, the intruders may only desire access to the initial victim box for use as a hop point to compromise additional systems and move laterally inside the network.
**lifetime**

lifetime namespace available in JSON format at [this location](#). The JSON format can be freely reused in your application or automatically enabled in MISP taxonomy.

Lifetime of an event

**falling**

Falling

**lifetime:** falling

Falling

Falling

100

**publishing**

Publishing

**lifetime:** publishing

Publishing

Publishing

75

**propagating**

Propagating

**lifetime:** propagating

Propagating

Propagating

50

**discovering**

Discovering
maec-delivery-vectors

maec-delivery-vectors namespace available in JSON format at this location. The JSON format can be freely reused in your application or automatically enabled in MISP taxonomy.

Vectors used to deliver malware based on MAEC 5.0

maec-delivery-vector

maec-delivery-vectors:maec-delivery-vector="active-attacker"
active Attacker

maec-delivery-vectors:maec-delivery-vector="auto-executing-media"
auto-executing-media

maec-delivery-vectors:maec-delivery-vector="downloader"
downloader

maec-delivery-vectors:maec-delivery-vector="dropper"
dropper

maec-delivery-vectors:maec-delivery-vector="email-attachment"
email-attachment

maec-delivery-vectors:maec-delivery-vector="exploit-kit-landing-page"
exploit-kit-landing-page

maec-delivery-vectors:maec-delivery-vector="fake-website"
fake-website
maec-delivery-vectors:maec-delivery-vector="janitor-attack"
janitor-attack

maec-delivery-vectors:maec-delivery-vector="malicious-iframes"
malicious-iframes

maec-delivery-vectors:maec-delivery-vector="malvertising"
malvertising

maec-delivery-vectors:maec-delivery-vector="media-baiting"
media-baiting

maec-delivery-vectors:maec-delivery-vector="pharming"
pharming

maec-delivery-vectors:maec-delivery-vector="phishing"
phishing

maec-delivery-vectors:maec-delivery-vector="trojanized-link"
trojanized-link

maec-delivery-vectors:maec-delivery-vector="trojanized-software"
trojanized-software

maec-delivery-vectors:maec-delivery-vector="usb-cable-syncing"
usb-cable-syncing

maec-delivery-vectors:maec-delivery-vector="watering-hole"
watering-hole

maec-malware-behavior

maec-malware-behavior namespace available in JSON format at this location. The JSON format can be freely reused in your application or automatically enabled in MISP taxonomy.

Malware behaviours based on MAEC 5.0
maec-malware-behavior

maec-malware-behavior:maec-malware-behavior="access-premium-service"
access-premium-service

maec-malware-behavior:maec-malware-behavior="autonomous-remote-infection"
autonomous-remote-infection

maec-malware-behavior:maec-malware-behavior="block-security-websites"
block-security-websites

maec-malware-behavior:maec-malware-behavior="capture-camera-input"
capture-camera-input

maec-malware-behavior:maec-malware-behavior="capture-file-system-data"
capture-file-system-data

maec-malware-behavior:maec-malware-behavior="capture-gps-data"
capture-gps-data

maec-malware-behavior:maec-malware-behavior="capture-keyboard-input"
capture-keyboard-input

maec-malware-behavior:maec-malware-behavior="capture-microphone-input"
capture-microphone-input

maec-malware-behavior:maec-malware-behavior="capture-mouse-input"
capture-mouse-input

maec-malware-behavior:maec-malware-behavior="capture-printer-output"
capture-printer-output
maec-malware-behavior:maec-malware-behavior="capture-system-memory"
capture-system-memory

maec-malware-behavior:maec-malware-behavior="capture-system-network-traffic"
capture-system-network-traffic

maec-malware-behavior:maec-malware-behavior="capture-system-screenshot"
capture-system-screenshot

maec-malware-behavior:maec-malware-behavior="capture-touchscreen-input"
capture-touchscreen-input

maec-malware-behavior:maec-malware-behavior="check-for-payload"
check-for-payload

maec-malware-behavior:maec-malware-behavior="click-fraud"
click-fraud

maec-malware-behavior:maec-malware-behavior="compare-host-fingerprints"
compare-host-fingerprints

maec-malware-behavior:maec-malware-behavior="compromise-remote-machine"
compromise-remote-machine

maec-malware-behavior:maec-malware-behavior="control-local-machine-via-remote-command"
control-local-machine-via-remote-command

maec-malware-behavior:maec-malware-behavior="control-malware-via-remote-command"
control-malware-via-remote-command
crack-passwords

defeat-call-graph-generation

defeat-emulator

defeat-flow-oriented-disassembler

defeat-linear-disassembler

degrad-security-program

denial-of-service

destroy-hardware

detect-debugging

detect-emulator

detect-installed-analysis-tools
maec-malware-behavior:maec-malware-behavior="detect-installed-av-tools"
detect-installed-av-tools

maec-malware-behavior:maec-malware-behavior="detect-sandbox-environment"
detect-sandbox-environment

maec-malware-behavior:maec-malware-behavior="detect-vm-environment"
detect-vm-environment

maec-malware-behavior:maec-malware-behavior="determine-host-ip-address"
determine-host-ip-address

maec-malware-behavior:maec-malware-behavior="disable-access-rights-checking"
disable-access-rights-checking

maec-malware-behavior:maec-malware-behavior="disable-firewall"
disable-firewall

maec-malware-behavior:maec-malware-behavior="disable-kernel-patch-protection"
disable-kernel-patch-protection

maec-malware-behavior:maec-malware-behavior="disable-os-security-alerts"
disable-os-security-alerts

maec-malware-behavior:maec-malware-behavior="disable-privilege-limiting"
disable-privilege-limiting

maec-malware-behavior:maec-malware-behavior="disable-service-pack-patch-installation"
disable-service-pack-patch-installation
maec-malware-behavior: disable-system-file-overwrite-protection

disable-system-file-overwrite-protection

maec-malware-behavior: disable-update-services-daemons

disable-update-services-daemons

maec-malware-behavior: disable-user-account-control

disable-user-account-control

maec-malware-behavior: drop-retrieve-debug-log-file

drop-retrieve-debug-log-file

maec-malware-behavior: elevate-privilege

elevate-privilege

maec-malware-behavior: encrypt-data

encrypt-data

maec-malware-behavior: encrypt-files

encrypt-files

maec-malware-behavior: encrypt-self

encrypt-self

maec-malware-behavior: erase-data

erase-data

maec-malware-behavior: evade-static-heuristic

evade-static-heuristic

maec-malware-behavior: execute-before-external-to-kernel-hypervisor

execute-before-external-to-kernel-hypervisor
maec-malware-behavior: maec-malware-behavior="execute-non-main-cpu-code"
execute-non-main-cpu-code

maec-malware-behavior: maec-malware-behavior="execute-stealthy-code"
execute-stealthy-code

maec-malware-behavior: maec-malware-behavior="exfiltrate-data-via-covert-channel"
exfiltrate-data-via-covert-channel

maec-malware-behavior: maec-malware-behavior="exfiltrate-data-via—dumpster-dive"
exfiltrate-data-via-dumpster-dives

maec-malware-behavior: maec-malware-behavior="exfiltrate-data-via-fax"
exfiltrate-data-via-fax

maec-malware-behavior: maec-malware-behavior="exfiltrate-data-via-network"
exfiltrate-data-via-network

maec-malware-behavior: maec-malware-behavior="exfiltrate-data-via-physical-media"
exfiltrate-data-via-physical-media

maec-malware-behavior: maec-malware-behavior="exfiltrate-data-via-voip-phone"
exfiltrate-data-via-voip-phone

maec-malware-behavior: maec-malware-behavior="feed-misinformation-during-physical-memory-acquisition"
feed-misinformation-during-physical-memory-acquisition

maec-malware-behavior: maec-malware-behavior="file-system-instantiation"
file-system-instantiation
maec-malware-behavior:maec-malware-behavior="fingerprint-host"

fingerprint-host

maec-malware-behavior:maec-malware-behavior="generate-c2-domain-names"
generate-c2-domain-names

maec-malware-behavior:maec-malware-behavior="hide-arbitrary-virtual-memory"
hide-arbitrary-virtual-memory

maec-malware-behavior:maec-malware-behavior="hide-data-in-other-formats"
hide-data-in-other-formats

maec-malware-behavior:maec-malware-behavior="hide-file-system-artifacts"
hide-file-system-artifacts

maec-malware-behavior:maec-malware-behavior="hide-kernel-modules"
hide-kernel-modules

maec-malware-behavior:maec-malware-behavior="hide-network-traffic"
hide-network-traffic

maec-malware-behavior:maec-malware-behavior="hide-open-network-ports"
hide-open-network-ports

maec-malware-behavior:maec-malware-behavior="hide-processes"
hide-processes

maec-malware-behavior:maec-malware-behavior="hide-services"
hide-services

maec-malware-behavior:maec-malware-behavior="hide-threads"
hide-threads
maec-malware-behavior:maec-malware-behavior="hide-userspace-libraries"
hide-userspace-libraries

maec-malware-behavior:maec-malware-behavior="identify-file"
identify-file

maec-malware-behavior:maec-malware-behavior="identify-os"
identify-os

maec-malware-behavior:maec-malware-behavior="identify-target-machines"
identify-target-machines

maec-malware-behavior:maec-malware-behavior="impersonate-user"
impersonate-user

maec-malware-behavior:maec-malware-behavior="install-backdoor"
install-backdoor

maec-malware-behavior:maec-malware-behavior="install-legitimate-software"
install-legitimate-software

maec-malware-behavior:maec-malware-behavior="install-secondary-malware"
install-secondary-malware

maec-malware-behavior:maec-malware-behavior="install-secondary-module"
install-secondary-module

maec-malware-behavior:maec-malware-behavior="intercept-manipulate-network-traffic"
intercept-manipulate-network-traffic
maec-malware-behavior:maec-malware-behavior="inventory-security-products"
inventory-security-products

maec-malware-behavior:maec-malware-behavior="inventory-system-applications"
inventory-system-applications

maec-malware-behavior:maec-malware-behavior="inventory-victims"
inventory-victims

maec-malware-behavior:maec-malware-behavior="limit-application-type-version"
limit-application-type-version

maec-malware-behavior:maec-malware-behavior="log-activity"
log-activity

maec-malware-behavior:maec-malware-behavior="manipulate-file-system-data"
manipulate-file-system-data

maec-malware-behavior:maec-malware-behavior="map-local-network"
map-local-network

maec-malware-behavior:maec-malware-behavior="mine-for-cryptocurrency"
mine-for-cryptocurrency

maec-malware-behavior:maec-malware-behavior="modify-file"
modify-file

maec-malware-behavior:maec-malware-behavior="modify-security-software-configuration"
modify-security-software-configuration
maec-malware-behavior:maec-malware-behavior="move-data-to-staging-server"
mov-data-to-staging-server

maec-malware-behavior:maec-malware-behavior="obfuscate-artifact-properties"
obfuscate-artifact-properties

maec-malware-behavior:maec-malware-behavior="overload-sandbox"
overload-sandbox

maec-malware-behavior:maec-malware-behavior="package-data"
package-data

maec-malware-behavior:maec-malware-behavior="persist-after-hardware-changes"
persist-after-hardware-changes

maec-malware-behavior:maec-malware-behavior="persist-after-os-changes"
persist-after-os-changes

maec-malware-behavior:maec-malware-behavior="persist-after-system-reboot"
persist-after-system-reboot

maec-malware-behavior:maec-malware-behavior="prevent-api-unhooking"
prevent-api-unhooking

maec-malware-behavior:maec-malware-behavior="prevent-concurrent-execution"
prevent-concurrent-execution

maec-malware-behavior:maec-malware-behavior="prevent-debugging"
prevent-debugging
maec-malware-behavior:maec-malware-behavior="prevent-file-access"
prevent-file-access

maec-malware-behavior:maec-malware-behavior="prevent-file-deletion"
prevent-file-deletion

maec-malware-behavior:maec-malware-behavior="prevent-memory-access"
prevent-memory-access

maec-malware-behavior:maec-malware-behavior="prevent-native-api-hooking"
prevent-native-api-hooking

maec-malware-behavior:maec-malware-behavior="prevent-physical-memory-acquisition"
prevent-physical-memory-acquisition

maec-malware-behavior:maec-malware-behavior="prevent-registry-access"
prevent-registry-access

maec-malware-behavior:maec-malware-behavior="prevent-registry-deletion"
prevent-registry-deletion

maec-malware-behavior:maec-malware-behavior="prevent-security-software-from-executing"
prevent-security-software-from-executing

maec-malware-behavior:maec-malware-behavior="re-instantiate-self"
re-instantiate-self

maec-malware-behavior:maec-malware-behavior="remove-self"
remove-self
maec-malware-behavior:maec-malware-behavior="remove-sms-warning-messages"
remove-sms-warning-messages

maec-malware-behavior:maec-malware-behavior="remove-system-artifacts"
remove-system-artifacts

maec-malware-behavior:maec-malware-behavior="request-email-address-list"
request-email-address-list

maec-malware-behavior:maec-malware-behavior="request-email-template"
request-email-template

maec-malware-behavior:maec-malware-behavior="search-for-remote-machines"
search-for-remote-machines

maec-malware-behavior:maec-malware-behavior="send-beacon"
send-beacon

maec-malware-behavior:maec-malware-behavior="send-email-message"
send-email-message

maec-malware-behavior:maec-malware-behavior="social-engineering-based-remote-infection"
social-engineering-based-remote-infection

maec-malware-behavior:maec-malware-behavior="steal-browser-cache"
steal-browser-cache

maec-malware-behavior:maec-malware-behavior="steal-browser-cookies"
steal-browser-cookies
maec-malware-behavior:maec-malware-behavior="steal-browser-history"
steal-browser-history

maec-malware-behavior:maec-malware-behavior="steal-contact-list-data"
steal-contact-list-data

maec-malware-behavior:maec-malware-behavior="steal-cryptocurrency-data"
steal-cryptocurrency-data

maec-malware-behavior:maec-malware-behavior="steal-database-content"
steal-database-content

maec-malware-behavior:maec-malware-behavior="steal-dialed-phone-numbers"
steal-dialed-phone-numbers

maec-malware-behavior:maec-malware-behavior="steal-digital-certificates"
steal-digital-certificates

maec-malware-behavior:maec-malware-behavior="steal-documents"
steal-documents

maec-malware-behavior:maec-malware-behavior="steal-email-data"
steal-email-data

maec-malware-behavior:maec-malware-behavior="steal-images"
steal-images

maec-malware-behavior:maec-malware-behavior="steal-password-hashes"
steal-password-hashes

maec-malware-behavior:maec-malware-behavior="steal-pki-key"
steal-pki-key
maec-malware-behavior:maec-malware-behavior="steal-referrer-urls"
steal-referrer-urls

maec-malware-behavior:maec-malware-behavior="steal-serial-numbers"
steal-serial-numbers

maec-malware-behavior:maec-malware-behavior="steal-sms-database"
steal-sms-database

maec-malware-behavior:maec-malware-behavior="steal-web-network-credential"
steal-web-network-credential

maec-malware-behavior:maec-malware-behavior="stop-execution-of-security-software"
stop-execution-of-security-software

maec-malware-behavior:maec-malware-behavior="suicide-exit"
suicide-exit

maec-malware-behavior:maec-malware-behavior="test-for-firewall"
test-for-firewall

maec-malware-behavior:maec-malware-behavior="test-for-internet-connectivity"
test-for-internet-connectivity

maec-malware-behavior:maec-malware-behavior="test-for-network-drives"
test-for-network-drives

maec-malware-behavior:maec-malware-behavior="test-for-proxy"
test-for-proxy

maec-malware-behavior:maec-malware-behavior="test-smtp-connection"
test-smtp-connection
maec-malware-behavior:maec-malware-behavior="update-configuration"
update-configuration

maec-malware-behavior:maec-malware-behavior="validate-data"
validate-data

maec-malware-behavior:maec-malware-behavior="write-code-into-file"
write-code-into-file

maec-malware-capabilities

<table>
<thead>
<tr>
<th>maec-malware-capabilities namespace available in JSON format at this location. The JSON format can be freely reused in your application or automatically enabled in MISP taxonomy.</th>
</tr>
</thead>
</table>

Malware Capabilities based on MAEC 5.0

maec-malware-capability

maec-malware-capabilities:maec-malware-capability="anti-behavioral-analysis"
anti-behavioral-analysis

maec-malware-capabilities:maec-malware-capability="anti-code-analysis"
anti-code-analysis

maec-malware-capabilities:maec-malware-capability="anti-detection"
anti-detection

maec-malware-capabilities:maec-malware-capability="anti-removal"
anti-removal

maec-malware-capabilities:maec-malware-capability="availability-violation"
availability-violation

maec-malware-capabilities:maec-malware-capability="collection"
collection
maec-malware-capabilities:maec-malware-capability="command-and-control"

command-and-control

maec-malware-capabilities:maec-malware-capability="data-theft"

data-theft

maec-malware-capabilities:maec-malware-capability="destruction"

destruction

maec-malware-capabilities:maec-malware-capability="discovery"

discovery

maec-malware-capabilities:maec-malware-capability="exfiltration"

exfiltration

maec-malware-capabilities:maec-malware-capability="fraud"

fraud

maec-malware-capabilities:maec-malware-capability="infection-propagation"

infection-propagation

maec-malware-capabilities:maec-malware-capability="integrity-violation"

integrity-violation

maec-malware-capabilities:maec-malware-capability="machine-access-control"

machine-access-control

maec-malware-capabilities:maec-malware-capability="persistence"

persistence

maec-malware-capabilities:maec-malware-capability="privilege-escalation"

privilege-escalation
secondary-operation
security-degradation
access-control-degradation
anti-debugging
anti-disassembly
anti-emulation
anti-memory-forensics
anti-sandbox
anti-virus-evasion
anti-vm
authentication-credentials-theft
clean-traces-of-infection

communicate-with-c2-server

compromise-data-availability

compromise-system-availability

consume-system-resources

continuous-execution

data-integrity-violation

data-obfuscation

data-staging

determine-c2-server
email-spam
ensure-compatibility
environment-awareness
file-infection
hide-artifacts
hide-executing-code
hide-non-executing-code
host-configuration-probing
information-gathering-for-improvement
input-peripheral-capture
maec-malware-capabilities:maec-malware-capability="install-other-components"

install-other-components

maec-malware-capabilities:maec-malware-capability="local-machine-control"

local-machine-control

maec-malware-capabilities:maec-malware-capability="network-environment-probing"

network-environment-probing

maec-malware-capabilities:maec-malware-capability="os-security-feature-degradation"

os-security-feature-degradation

maec-malware-capabilities:maec-malware-capability="output-peripheral-capture"

output-peripheral-capture

maec-malware-capabilities:maec-malware-capability="physical-entity-destruction"

physical-entity-destruction

maec-malware-capabilities:maec-malware-capability="prevent-artifact-access"

prevent-artifact-access

maec-malware-capabilities:maec-malware-capability="prevent-artifact-deletion"

prevent-artifact-deletion

maec-malware-capabilities:maec-malware-capability="remote-machine-access"

remote-machine-access
maec-malware-capabilities:maec-malware-capability="security-software-degradation"
security-software-degradation

maec-malware-capabilities:maec-malware-capability="security-software-evasion"
security-software-evasion

maec-malware-capabilities:maec-malware-capability="self-modification"
self-modification

maec-malware-capabilities:maec-malware-capability="service-provider-security-feature-degradation"
service-provider-security-feature-degradation

maec-malware-capabilities:maec-malware-capability="stored-information-theft"
stored-information-theft

maec-malware-capabilities:maec-malware-capability="system-interface-data-capture"
system-interface-data-capture

maec-malware-capabilities:maec-malware-capability="system-operational-integrity-violation"
system-operational-integrity-violation

maec-malware-capabilities:maec-malware-capability="system-re-infection"
system-re-infection

maec-malware-capabilities:maec-malware-capability="system-state-data-capture"
system-state-data-capture

maec-malware-capabilities:maec-malware-capability="system-update-degradation"
system-update-degradation
maec-malware-capabilities:maec-malware-capability="user-data-theft"

user-data-theft

maec-malware-capabilities:maec-malware-capability="virtual-entity-destruction"

virtual-entity-destruction

maec-malware-obfuscation-methods

maec-malware-obfuscation-methods namespace available in JSON format at [this location](#). The JSON format can be freely reused in your application or automatically enabled in [MISP](#) taxonomy.

Obfuscation methods used by malware based on MAEC 5.0

maec-obfuscation-methods

maec-malware-obfuscation-methods:maec-obfuscation-methods="packing"

packing

maec-malware-obfuscation-methods:maec-obfuscation-methods="code-encryption"

code-encryption

maec-malware-obfuscation-methods:maec-obfuscation-methods="dead-code-insertion"

dead-code-insertion

maec-malware-obfuscation-methods:maec-obfuscation-methods="entry-point-obfuscation"

entry-point-obfuscation

maec-malware-obfuscation-methods:maec-obfuscation-methods="import-address-table-obfuscation"

import-address-table-obfuscation
maec-malware-obfuscation-methods:maec-obfuscation-methods="interleaving-code"

interleaving-code

maec-malware-obfuscation-methods:maec-obfuscation-methods="symbolic-obfuscation"

symbolic-obfuscation

maec-malware-obfuscation-methods:maec-obfuscation-methods="string-obfuscation"

string-obfuscation

maec-malware-obfuscation-methods:maec-obfuscation-methods="subroutine-reordering"

subroutine-reordering

maec-malware-obfuscation-methods:maec-obfuscation-methods="code-transposition"

code-transposition

maec-malware-obfuscation-methods:maec-obfuscation-methods="instruction-substitution"

instruction-substitution

maec-malware-obfuscation-methods:maec-obfuscation-methods="register-reassignment"

register-reassignment

malware_classification

malware_classification namespace available in JSON format at [this location](https://www.sans.org/reading-room/whitepapers/incident/malware-101-viruses-32848). The JSON format can be freely reused in your application or automatically enabled in MISP taxonomy.

malware-category

malware_classification:malware-category="Virus"
Virus

malware_classification:malware-category="Worm"
Worm

malware_classification:malware-category="Trojan"
Trojan

malware_classification:malware-category="Ransomware"
Ransomware

malware_classification:malware-category="Rootkit"
Rootkit

malware_classification:malware-category="Downloader"
Downloader

malware_classification:malware-category="Adware"
Adware

malware_classification:malware-category="Spyware"
Spyware

malware_classification:malware-category="Botnet"
Botnet

obfuscation-technique

malware_classification:obfuscation-technique="no-obfuscation"
No obfuscation is used

malware_classification:obfuscation-technique="encryption"
encryption
malware_classification:obfuscation-technique="oligomorphism"
oligomorphism

malware_classification:obfuscation-technique="metamorphism"
metamorphism

malware_classification:obfuscation-technique="stealth"
stealth

malware_classification:obfuscation-technique="armouring"
armouring

malware_classification:obfuscation-technique="tunneling"
tunneling

malware_classification:obfuscation-technique="XOR"
XOR

malware_classification:obfuscation-technique="BASE64"
BASE64

malware_classification:obfuscation-technique="ROT13"
ROT13

payload-classification

malware_classification:payload-classification="no-payload"
No payload

malware_classification:payload-classification="non-destructive"
Non-Destructive

malware_classification:payload-classification="destructive"
Destructive
Dropper

memory-classification

In memory

In memory temporarily

Only a part loaded in memory temporarily

Not in memory

As a user level process

As a process in the kernel

misp

misp namespace available in JSON format at this location. The JSON format can be freely reused in your application or automatically enabled in MISP taxonomy.

MISP taxonomy to infer with MISP behavior or operation.

ui

misp:ui="hide"

tag to hide from the user-interface.

api
misp:api="hide"

tag to hide from the API.

misp2yara

misp:misp2yara="generated"
generated

misp:misp2yara="as-is"
as-is

misp:misp2yara="valid"
valid

misp:misp2yara="invalid"
invalid

expansion

Expansion tag influencing the MISP behavior using expansion modules

misp:expansion="block"
block

contributor

misp:contributor="pgpfingerprint"
OpenPGP Fingerprint

confidence-level

misp:confidence-level="completely-confident"
Completely confident

Associated numerical value="100"

misp:confidence-level="usually-confident"
Usually confident
misp:confidence-level="fairly-confident"
Fairly confident

misp:confidence-level="rarely-confident"
Rarely confident

misp:confidence-level="unconfident"
Unconfident

misp:confidence-level="confidence-cannot-be-evaluated"
Confidence cannot be evaluated

threat-level

misp:threat-level="no-risk"
No risk

Harmless information. (CEUS threat level)

misp:threat-level="low-risk"
Low risk

Low risk which can include mass-malware. (CEUS threat level)

Associated numerical value="25"

misp:threat-level="medium-risk"
Medium risk

Medium risk which can include targeted attacks (e.g. APT). (CEUS threat level)

Associated numerical value="50"

misp:threat-level="high-risk"
High risk
High risk which can include highly sophisticated attacks or 0-day attack. (CEUS threat level)

Associated numerical value="100"

**automation-level**

⚠️ Exclusive flag set which means the values or predicate below must be set exclusively.

**misp:automation-level="unsupervised"**

Generated automatically without human verification

Associated numerical value="100"

**misp:automation-level="reviewed"**

Generated automatically but verified by a human

Associated numerical value="50"

**misp:automation-level="manual"**

Output of human analysis

**should-not-sync**

Event with this tag should not be synced to other MISP instances

**tool**

Tool associated with the information taggged

**misp:tool="misp2stix"**

misp2stix

**misp:tool="misp2yara"**

misp2yara

**monarc-threat**

Monarc-threat namespace available in JSON format at this location. The JSON format can be freely reused in your application or automatically enabled in MISP taxonomy.
**compromise-of-functions**

**monarc-threat:compromise-of-functions="error-in-use"**

Error in use

A person commits an operating error, input error or utilisation error on hardware or software.

**monarc-threat:compromise-of-functions="forging-of-rights"**

Forging of rights

A person assumes the identity of a different person in order to use his/her access rights to the information system, misinform the recipient, commit a fraud, etc.

**monarc-threat:compromise-of-functions="eavesdropping"**

Eavesdropping

Someone connected to communication equipment or media or located inside the transmission coverage boundaries of a communication.

**monarc-threat:compromise-of-functions="denial-of-actions"**

Denial of actions

A person or entity denies being involved in an exchange with a third party or carrying out an operation.

**monarc-threat:compromise-of-functions="abuse-of-rights"**

Abuse of rights

Someone with special rights (network administration, computer specialists, etc.) modifies the operating characteristics of the resources.

**monarc-threat:compromise-of-functions="breach-of-personnel-availability"**

Breach of personnel availability

Absence of qualified or authorised personnel to execute the usual operations.
Fraudulent copying or use of counterfeit software

Someone inside the organisation makes fraudulent copies (also called pirated copies) of package software or in-house software.

Corruption of data

Someone gains access to the communication equipment of the information system and corrupts transmission of information (by intercepting, inserting, destroying, etc.) or repeatedly attempts access until successful.

Illegal processing of data

A person carries out information processing that is forbidden by the law or a regulation.

Remote spying

Personnel actions observable from a distance. Visual observation with or without optical equipment, for example observation of a user entering a code or password on a keyboard.

Tampering with hardware

Someone with access to a communication medium or equipment installs an interception or destruction device in it.

Interception of compromising interference signals

Interfering signals from an electromagnetic source emitted by the equipment (by conduction on the electrical power supply cables or earth wires or by radiation in free space). Capture of these signals depends on the distance to the targeted equipment or the possibility of connecting to cables or any other conductor passing close to the equipment (coupling phenomenon).
Theft or destruction of media, documents or equipment

Media, documents or equipment can be accessed by foreigners either internally or externally. It can be damaged or stolen.

Retrieval of recycled or discarded media

Retrieval of electronic media (hard discs, floppy discs, back-up cartridges, USB keys, ZIP discs, removable hard discs, etc.) or paper copies (lists, incomplete print-outs, messages, etc.) intended for recycling and containing retrievable information.

Malware infection

Unwanted software that is doing operations seeking to harm the company.

Data from untrustworthy sources

Receiving false data or unsuitable equipment from outside sources and using them in the organisation.

Disclosure

Person who voluntarily or negligently disclosure information.

Failure of telecommunication equipment

Disturbance, shutdown or incorrect sizing of telecommunications services (telephone, Internet access, Internet network).
monarc-threat:loss-of-essential-services="loss-of-power-supply"

Loss of power supply

Failure, shutdown or incorrect sizing of the power supply to the assets arising either from the supplier's service or from the internal distribution system.

monarc-threat:loss-of-essential-services="failure-of-air-conditioning"

Failure of air-conditioning

Failure, shutdown or inadequacy of the air-conditioning service may cause assets requiring cooling or ventilation to shut down, malfunction or fail completely.

technical-failures

monarc-threat:technical-failures="software-malfunction"

Software malfunction

Design error, installation error or operating error committed during modification causing incorrect execution.

monarc-threat:technical-failures="equipment-malfunction-or-failure"

Equipment malfunction or failure

Logical or physical event causing hardware malfunctions or failures.

monarc-threat:technical-failures="saturation-of-the-information-system"

Saturation of the information system

A person or resource of a hardware, software or network type simulating an intense demand on resources by setting up continuous bombardment.

monarc-threat:technical-failures="breach-of-information-system-maintainability"

Breach of information system maintainability

Lack of expertise in the system making retrofitting and upgrading impossible

physical-damage

monarc-threat:physical-damage="destruction-of-equipment-or-supports"

Destruction of equipment or supports
Event causing destruction of equipment or media.

**monarc-threat:physical-damage="fire"**

Fire

Any situation that could facilitate the conflagration of premises or equipment.

**monarc-threat:physical-damage="water-damage"**

Water damage

Situation facilitating the water hazard on equipment (floods, water leak, cellars, etc.)

**monarc-threat:physical-damage="major-accident"**

Major accident

Any event that can physically destroy the premises

**monarc-threat:physical-damage="pollution"**

Pollution

Presence of dust, vapours, corrosive or toxic gases in the ambient air.

**monarc-threat:physical-damage="environmental-disaster"**

Environmental disaster (fire, flood, dust, dirt, etc.)

Any event that can physically ruin the premises

**ms-caro-malware**

ms-caro-malware namespace available in JSON format at [this location](#). The JSON format can be freely reused in your application or automatically enabled in [MISP taxonomy](#).

**malware-type**

**ms-caro-malware:malware-type="Adware"**
Adware - Software that shows you extra promotions that you cannot control as you use your PC

**ms-caro-malware:malware-type="Backdoor"**
A type of trojan that gives a malicious hacker access to and control of your PC

**ms-caro-malware:malware-type="Behavior"**
A type of detection based on file actions that are often associated with malicious activity

**ms-caro-malware:malware-type="BrowserModifier"**
A program than makes changes to your Internet browser without your permission

**ms-caro-malware:malware-type="Constructor"**
A program that can be used to automatically create malware files

**ms-caro-malware:malware-type="DDoS"**
When a number of PCs are made to access a website, network or server repeatedly within a given time period. The aim of the attack is to overload the target so that it crashes and can't respond

**ms-caro-malware:malware-type="Dialer"**
A program that makes unauthorized telephone calls. These calls may be charged at a premium rate and cost you a lot of money

**ms-caro-malware:malware-type="DoS"**
When a target PC or server is deliberately overloaded so that it doesn't work for any visitors anymore

**ms-caro-malware:malware-type="Exploit"**
A piece of code that uses software vulnerabilities to access information on your PC or install malware

**ms-caro-malware:malware-type="HackTool"**
A type of tool that can be used to allow and maintain unauthorized access to your PC
ms-caro-malware:malware-type="Joke"

A program that pretends to do something malicious but actually doesn't actually do anything harmful. For example, some joke programs pretend to delete files or format disks

ms-caro-malware:malware-type="Misleading"

The program that makes misleading or fraudulent claims about files, registry entries or other items on your PC

ms-caro-malware:malware-type="MonitoringTool"

A commercial program that monitors what you do on your PC. This can include monitoring what keys you press; your email or instant messages; your voice or video conversations; and your banking details and passwords. It can also take screenshots as you use your PC

ms-caro-malware:malware-type="Program"

Software that you may or may not want installed on your PC

ms-caro-malware:malware-type="PUA"

Potentially Unwanted Applications. Characteristics of unwanted software can include depriving users of adequate choice or control over what the software does to the computer, preventing users from removing the software, or displaying advertisements without clearly identifying their source.

ms-caro-malware:malware-type="PWS"

A type of malware that is used steal your personal information, such as user names and passwords. It often works along with a keylogger that collects and sends information about what keys you press and websites you visit to a malicious hacker

ms-caro-malware:malware-type="Ransom"

A detection for malicious programs that seize control of the computer on which they are installed. This trojan usually locks the screen and prevents the user from using the computer. It usually displays an alert message.

ms-caro-malware:malware-type="RemoteAccess"

A program that gives someone access to your PC from a remote location. This type of program is often installed by the computer owner

ms-caro-malware:malware-type="Rogue"

Software that pretends to be an antivirus program but doesn't actually provide any security. This type of software usually gives you a lot of alerts about threats on your PC that don't exist. It also tries to convince you to pay for its services
ms-caro-malware:malware-type="SettingsModifier"

A program that changes your PC settings

ms-caro-malware:malware-type="SoftwareBundler"

A program that installs unwanted software on your PC at the same time as the software you are trying to install, without adequate consent

ms-caro-malware:malware-type="Spammer"

A trojan that sends large numbers of spam emails. It may also describe the person or business responsible for sending spam

ms-caro-malware:malware-type="Spoofeer"

A type of trojan that makes fake emails that look like they are from a legitimate source

ms-caro-malware:malware-type="Spyware"

A program that collects your personal information, such as your browsing history, and uses it without adequate consent

ms-caro-malware:malware-type="Tool"

A type of software that may have a legitimate purpose, but which may also be abused by malware authors

ms-caro-malware:malware-type="Trojan"

A trojan is a program that tries to look innocent, but is actually a malicious application. Unlike a virus or a worm, a trojan doesn’t spread by itself. Instead they try to look innocent to convince you to download and install them. Once installed, a trojan can steal your personal information, download more malware, or give a malicious hacker access to your PC

ms-caro-malware:malware-type="TrojanClicker"

A type of trojan that can use your PC to click on websites or applications. They are usually used to make money for a malicious hacker by clicking on online advertisements and making it look like the website gets more traffic than it does. They can also be used to skew online polls, install programs on your PC, or make unwanted software appear more popular than it is

ms-caro-malware:malware-type="TrojanDownloader"

A type of trojan that installs other malicious files, including malware, onto your PC. It can download the files from a remote PC or install them directly from a copy that is included in its file.
ms-caro-malware:malware-type="TrojanDropper"

A type of trojan that installs other malicious files, including malware, onto your PC. It can
download the files from a remote PC or install them directly from a copy that is included in its file.

ms-caro-malware:malware-type="TrojanNotifier"

A type of trojan that sends information about your PC to a malicious hacker. It is similar to a
password stealer

ms-caro-malware:malware-type="TrojanProxy"

A type of trojan that installs a proxy server on your PC. The server can be configured so that when
you use the Internet, any requests you make are sent through a server controlled by a malicious
hacker.

ms-caro-malware:malware-type="TrojanSpy"

A program that collects your personal information, such as your browsing history, and uses it
without adequate consent.

ms-caro-malware:malware-type="VirTool"

A detection that is used mostly for malware components, or tools used for malware-related actions,
such as rootkits.

ms-caro-malware:malware-type="Virus"

A type of malware. Viruses spread on their own by attaching their code to other programs, or
copying themselves across systems and networks.

ms-caro-malware:malware-type="Worm"

A type of malware that spreads to other PCs. Worms may spread using one or more of the following
methods: Email programs, Instant messaging programs, File-sharing programs, Social networking
sites, Network shares, Removable drives with Autorun enabled, Software vulnerabilities

malware-platform

ms-caro-malware:malware-platform="AndroidOS"

Android operating system

ms-caro-malware:malware-platform="DOS"

MS-DOS platform
ms-caro-malware:malware-platform="EPOC"
Psion devices

ms-caro-malware:malware-platform="FreeBSD"
FreeBSD platform

ms-caro-malware:malware-platform="iPhoneOS"
iPhone operating system

ms-caro-malware:malware-platform="Linux"
Linux platform

ms-caro-malware:malware-platform="MacOS"
MAC 9.x platform or earlier

ms-caro-malware:malware-platform="MacOS_X"
MacOS X or later

ms-caro-malware:malware-platform="OS2"
OS2 platform

ms-caro-malware:malware-platform="Palm"
Palm operating system

ms-caro-malware:malware-platform="Solaris"
System V-based Unix platforms

ms-caro-malware:malware-platform="SunOS"
Unix platforms 4.1.3 or earlier

ms-caro-malware:malware-platform="SymbOS"
Symbian operating system

ms-caro-malware:malware-platform="Unix"
General Unix platforms
ms-caro-malware:malware-platform="Win16"
Win16 (3.1) platform

ms-caro-malware:malware-platform="Win2K"
Windows 2000 platform

ms-caro-malware:malware-platform="Win32"
Windows 32-bit platform

ms-caro-malware:malware-platform="Win64"
Windows 64-bit platform

ms-caro-malware:malware-platform="Win95"
Windows 95, 98 and ME platforms

ms-caro-malware:malware-platform="Win98"
Windows 98 platform only

ms-caro-malware:malware-platform="WinCE"
Windows CE platform

ms-caro-malware:malware-platform="WinNT"
WinNT

ms-caro-malware:malware-platform="ABAP"
Advanced Business Application Programming scripts

ms-caro-malware:malware-platform="ALisp"
ALisp scripts

ms-caro-malware:malware-platform="AmiPro"
AmiPro script

ms-caro-malware:malware-platform="ANSI"
American National Standards Institute scripts
compiled Apple scripts

Active Server Pages scripts

AutoIT scripts

Basic scripts

Basic scripts

Corelscript scripts

HTML Application scripts

HTML Application scripts

Install scripts

mIRC/pIRC scripts

Java binaries (classes)

Javascript scripts
ms-caro-malware:malware-platform="LOGO"
LOGO scripts

ms-caro-malware:malware-platform="MPB"
MapBasic scripts

ms-caro-malware:malware-platform="MSH"
Monad shell scripts

ms-caro-malware:malware-platform="MSIL"

ms-caro-malware:malware-platform="Perl"
Net intermediate language scripts
Perl scripts

ms-caro-malware:malware-platform="PHP"
Hypertext Preprocessor scripts

ms-caro-malware:malware-platform="Python"
Python scripts

ms-caro-malware:malware-platform="SAP"
SAP platform scripts

ms-caro-malware:malware-platform="SH"
Shell scripts

ms-caro-malware:malware-platform="VBA"
Visual Basic for Applications scripts

ms-caro-malware:malware-platform="VBS"
Visual Basic scripts

ms-caro-malware:malware-platform="WinBAT"
Winbatch scripts
Windows Help scripts

Windows registry scripts


macro scripting


Visio5 macros

Word1Macro

Word2Macro


Excel formulas

Excel 95 macros

XML metafile of Windows Media .asf files

HyperCard Apple scripts

MIME packets

Novell Netware files

Quicktime files

StarBasic (Staroffice XML) files

Shockwave Flash files

MS SQL server files

XML files

ms-caro-malware-full

**malware-type**

**ms-caro-malware-full:malware-type="Adware"**
Adware - Software that shows you extra promotions that you cannot control as you use your PC

**ms-caro-malware-full:malware-type="Backdoor"**
A type of trojan that gives a malicious hacker access to and control of your PC

**ms-caro-malware-full:malware-type="Behavior"**
A type of detection based on file actions that are often associated with malicious activity

**ms-caro-malware-full:malware-type="BrowswerModifier"**
A program than makes changes to your Internet browser without your permission

**ms-caro-malware-full:malware-type="Constructor"**
A program that can be used to automatically create malware files

**ms-caro-malware-full:malware-type="DDoS"**
When a number of PCs are made to access a website, network or server repeatedly within a given time period. The aim of the attack is to overload the target so that it crashes and can’t respond

**ms-caro-malware-full:malware-type="Dialer"**
A program that makes unauthorized telephone calls. These calls may be charged at a premium rate and cost you a lot of money

**ms-caro-malware-full:malware-type="DoS"**
When a target PC or server is deliberately overloaded so that it doesn't work for any visitors
ms-caro-malware-full:malware-type="Exploit"

A piece of code that uses software vulnerabilities to access information on your PC or install malware

ms-caro-malware-full:malware-type="HackTool"

A type of tool that can be used to allow and maintain unauthorized access to your PC

ms-caro-malware-full:malware-type="Joke"

A program that pretends to do something malicious but actually doesn't actually do anything harmful. For example, some joke programs pretend to delete files or format disks

ms-caro-malware-full:malware-type="Misleading"

The program that makes misleading or fraudulent claims about files, registry entries or other items on your PC

ms-caro-malware-full:malware-type="MonitoringTool"

A commercial program that monitors what you do on your PC. This can include monitoring what keys you press; your email or instant messages; your voice or video conversations; and your banking details and passwords. It can also take screenshots as you use your PC

ms-caro-malware-full:malware-type="Program"

Software that you may or may not want installed on your PC

ms-caro-malware-full:malware-type="PUA"

Potentially Unwanted Applications. Characteristics of unwanted software can include depriving users of adequate choice or control over what the software does to the computer, preventing users from removing the software, or displaying advertisements without clearly identifying their source.

ms-caro-malware-full:malware-type="PWS"

A type of malware that is used steal your personal information, such as user names and passwords. It often works along with a keylogger that collects and sends information about what keys you press and websites you visit to a malicious hacker

ms-caro-malware-full:malware-type="Ransom"

A detection for malicious programs that seize control of the computer on which they are installed. This trojan usually locks the screen and prevents the user from using the computer. It usually displays an alert message.
**ms-caro-malware-full:malware-type="RemoteAccess"**

A program that gives someone access to your PC from a remote location. This type of program is often installed by the computer owner.

**ms-caro-malware-full:malware-type="Rogue"**

Software that pretends to be an antivirus program but doesn't actually provide any security. This type of software usually gives you a lot of alerts about threats on your PC that don't exist. It also tries to convince you to pay for its services.

**ms-caro-malware-full:malware-type="SettingsModifier"**

A program that changes your PC settings.

**ms-caro-malware-full:malware-type="SoftwareBundler"**

A program that installs unwanted software on your PC at the same time as the software you are trying to install, without adequate consent.

**ms-caro-malware-full:malware-type="Spammer"**

A trojan that sends large numbers of spam emails. It may also describe the person or business responsible for sending spam.

**ms-caro-malware-full:malware-type="Spoofer"**

A type of trojan that makes fake emails that look like they are from a legitimate source.

**ms-caro-malware-full:malware-type="Spyware"**

A program that collects your personal information, such as your browsing history, and uses it without adequate consent.

**ms-caro-malware-full:malware-type="Tool"**

A type of software that may have a legitimate purpose, but which may also be abused by malware authors.

**ms-caro-malware-full:malware-type="Trojan"**

A trojan is a program that tries to look innocent, but is actually a malicious application. Unlike a virus or a worm, a trojan doesn't spread by itself. Instead, they try to look innocent to convince you to download and install them. Once installed, a trojan can steal your personal information, download more malware, or give a malicious hacker access to your PC.

**ms-caro-malware-full:malware-type="TrojanClicker"**

A type of trojan that can use your PC to click on websites or applications. They are usually used to...
make money for a malicious hacker by clicking on online advertisements and making it look like
the website gets more traffic than it does. They can also be used to skew online polls, install
programs on your PC, or make unwanted software appear more popular than it is

**ms-caro-malware-full:malware-type="TrojanDownloader"**

A type of trojan that installs other malicious files, including malware, onto your PC. It can
download the files from a remote PC or install them directly from a copy that is included in its file.

**ms-caro-malware-full:malware-type="TrojanDropper"**

A type of trojan that installs other malicious files, including malware, onto your PC. It can
download the files from a remote PC or install them directly from a copy that is included in its file.

**ms-caro-malware-full:malware-type="TrojanNotifier"**

A type of trojan that sends information about your PC to a malicious hacker. It is similar to a
password stealer

**ms-caro-malware-full:malware-type="TrojanProxy"**

A type of trojan that installs a proxy server on your PC. The server can be configured so that when
you use the Internet, any requests you make are sent through a server controlled by a malicious
hacker.

**ms-caro-malware-full:malware-type="TrojanSpy"**

A program that collects your personal information, such as your browsing history, and uses it
without adequate consent.

**ms-caro-malware-full:malware-type="VirTool"**

A detection that is used mostly for malware components, or tools used for malware-related actions,
such as rootkits.

**ms-caro-malware-full:malware-type="Virus"**

A type of malware. Viruses spread on their own by attaching their code to other programs, or
copying themselves across systems and networks.

**ms-caro-malware-full:malware-type="Worm"**

A type of malware that spreads to other PCs. Worms may spread using one or more of the following
methods: Email programs, Instant messaging programs, File-sharing programs, Social networking
sites, Network shares, Removable drives with Autorun enabled, Software vulnerabilities
malware-platform

ms-caro-malware-full:malware-platform="AndroidOS"
Android operating system

ms-caro-malware-full:malware-platform="DOS"
MS-DOS platform

ms-caro-malware-full:malware-platform="EPOC"
Psion devices

ms-caro-malware-full:malware-platform="FreeBSD"
FreeBSD platform

ms-caro-malware-full:malware-platform="iPhoneOS"
iPhone operating system

ms-caro-malware-full:malware-platform="Linux"
Linux platform

ms-caro-malware-full:malware-platform="MacOS"
MAC 9.x platform or earlier

ms-caro-malware-full:malware-platform="MacOS_X"
MacOS X or later

ms-caro-malware-full:malware-platform="OS2"
OS2 platform

ms-caro-malware-full:malware-platform="Palm"
Palm operating system

ms-caro-malware-full:malware-platform="Solaris"
System V-based Unix platforms
ms-caro-malware-full:malware-platform="SunOS"
Unix platforms 4.1.3 or earlier

ms-caro-malware-full:malware-platform="SymbOS"
Symbian operating system

ms-caro-malware-full:malware-platform="Unix"
General Unix platforms

ms-caro-malware-full:malware-platform="Win16"
Win16 (3.1) platform

ms-caro-malware-full:malware-platform="Win2K"
Windows 2000 platform

ms-caro-malware-full:malware-platform="Win32"
Windows 32-bit platform

ms-caro-malware-full:malware-platform="Win64"
Windows 64-bit platform

ms-caro-malware-full:malware-platform="Win95"
Windows 95, 98 and ME platforms

ms-caro-malware-full:malware-platform="Win98"
Windows 98 platform only

ms-caro-malware-full:malware-platform="WinCE"
Windows CE platform

ms-caro-malware-full:malware-platform="WinNT"
WinNT

ms-caro-malware-full:malware-platform="ABAP"
Advanced Business Application Programming scripts
ALisp scripts

AmiPro script

American National Standards Institute scripts

compiled Apple scripts

Active Server Pages scripts

AutoIT scripts

Basic scripts

Basic scripts

Corelscript scripts

HTML Application scripts

HTML Application scripts

Install scripts
ms-caro-malware-full:malware-platform="IRC"
mIRC/pIRC scripts

ms-caro-malware-full:malware-platform="Java"
Java binaries (classes)

ms-caro-malware-full:malware-platform="JS"
Javascript scripts

ms-caro-malware-full:malware-platform="LOGO"
LOGO scripts

ms-caro-malware-full:malware-platform="MPB"
MapBasic scripts

ms-caro-malware-full:malware-platform="MSH"
Monad shell scripts

ms-caro-malware-full:malware-platform="MSIL"

ms-caro-malware-full:malware-platform="Perl"
Net intermediate language scripts
Perl scripts

ms-caro-malware-full:malware-platform="PHP"
Hypertext Preprocessor scripts

ms-caro-malware-full:malware-platform="Python"
Python scripts

ms-caro-malware-full:malware-platform="SAP"
SAP platform scripts

ms-caro-malware-full:malware-platform="SH"
Shell scripts
Visual Basic for Applications scripts

Visual Basic scripts

Winbatch scripts

Windows Help scripts

Windows registry scripts


macro scripting


Visio5 macros

Word1Macro

Word2Macro
ms-caro-malware-full:malware-platform="W97M"

ms-caro-malware-full:malware-platform="WM"
Word 95 macros

ms-caro-malware-full:malware-platform="X97M"

ms-caro-malware-full:malware-platform="XF"
Excel formulas

ms-caro-malware-full:malware-platform="XM"
Excel 95 macros

ms-caro-malware-full:malware-platform="ASX"
XML metafile of Windows Media .asf files

ms-caro-malware-full:malware-platform="HC"
HyperCard Apple scripts

ms-caro-malware-full:malware-platform="MIME"
MIME packets

ms-caro-malware-full:malware-platform="Netware"
Novell Netware files

ms-caro-malware-full:malware-platform="QT"
Quicktime files

ms-caro-malware-full:malware-platform="SB"
StarBasic (Staroffice XML) files

ms-caro-malware-full:malware-platform="SWF"
Shockwave Flash files
ms-caro-malware-full:malware-platform="TSQL"

MS SQL server files

ms-caro-malware-full:malware-platform="XML"

XML files

malware-family

ms-caro-malware-full:malware-family="Zlob"

2008 - A family of trojans that often pose as downloadable media codecs. When installed, Win32/Zlob displays frequent pop-up advertisements for rogue security software

ms-caro-malware-full:malware-family="Vundo"

2008 - A multiplecomponent family of programs that deliver pop-up advertisements and may download and execute arbitrary files. Vundo is often installed as a browser helper object (BHO) without a user's consent

ms-caro-malware-full:malware-family="Virtumonde"

2008 - multi-component malware family that displays pop-up advertisements for rogue security software

ms-caro-malware-full:malware-family="Bancos"

2008 - A data-stealing trojan that captures online banking credentials and relays them to the attacker. Most variants target customers of Brazilian banks.

ms-caro-malware-full:malware-family="Cutwail"

2008 - A trojan that downloads and executes arbitrary files, usually to send spam. Win32/Cutwail has also been observed to transmit Win32/Newacc

ms-caro-malware-full:malware-family="Oderoor"

2008 - a backdoor trojan that allows an attacker access and control of the compromised computer. This trojan may connect with remote web sites and SMTP servers.

ms-caro-malware-full:malware-family="Newacc"

2008 - An attacker tool that automatically registers new e-mail accounts on Hotmail, AOL, Gmail, Lycos and other account service providers, using a Web service to decode CAPTCHA protection.
ms-caro-malware-full:malware-family="Captiya"

2008 - A trojan that transmits CAPTCHA images to a botnet, in what is believed to be an effort to improve the botnet’s ability to detect characters and break CAPTCHAs more successfully

ms-caro-malware-full:malware-family="Taterf"

2008 - A family of worms that spread through mapped drives in order to steal login and account details for popular online games.

ms-caro-malware-full:malware-family="Frethog"

2008 - A large family of password-stealing trojans that target confidential data, such as account information, from massively multiplayer online games

ms-caro-malware-full:malware-family="Tilcun"

2008 - A family of trojans that steals online game passwords and sends this captured data to remote sites.

ms-caro-malware-full:malware-family="Ceekat"

2008 - A collection of trojans that steal information such as passwords for online games, usually by reading information directly from running processes in memory. Different variants target different processes.

ms-caro-malware-full:malware-family="Corripio"

2008 - A loosely-related family of trojans that attempt to steal passwords for popular online games. Detections containing the name Win32/Corripio are generic, and hence may be reported for a large number of different malicious password-stealing trojans that are otherwise behaviorally dissimilar.

ms-caro-malware-full:malware-family="Zuten"

2008 - A family of malware that steals information from online games.

ms-caro-malware-full:malware-family="Lolyda"

2008 - A family of trojans that sends account information from popular online games to a remote server. They may also download and execute arbitrary files.

ms-caro-malware-full:malware-family="Storark"

2008 - A family of trojans that steals online game passwords and sends this captured data to remote sites.

ms-caro-malware-full:malware-family="Renos"

2008 - A family of trojan downloaders that installs rogue security software.
2008 - Adware that monitors the user's Web-browsing activity and displays pop-up advertisements related to the Internet sites the user is viewing.

2008 - Adware that displays targeted advertising to affected users while they browse the Internet, based on search terms entered into search engines.

2008 - A rogue security software family that claims to scan for malware and then demands that the user pay to remove nonexistent threats. Some variants unlawfully use Microsoft logos and trademarks.

2008 - A rogue security software family that claims to scan for malware and then demands that the user pay to remove non-existent threats. It appears to be based on Win32/SpySheriff

2008 - Adware that displays a dynamic toolbar and targeted pop-up ads based on its monitoring of Web-browsing activity.

2008 - A generic detection for a number of trojans that may perform different malicious functions. The behaviors exhibited by this family are highly variable

2008 - A detection for malicious Windows Media files that can be used to encourage users to download and execute arbitrary files on an affected machine.

2008 - A Chinese language Web browser toolbar that delivers pop-up and contextual advertisements, blocks certain other advertisements, and changes the Internet Explorer search page

2008 - A detection for various threats written in the Visual Basic programming language.

2008 - A program that displays misleading security alerts in order to convince users to purchase
rogue security software. It may be installed by Win32/Renos or manually by a computer user.

**ms-caro-malware-full:malware-family="Playmp3z"**

2008 - An adware family that may display advertisements in connection with the use of a 'free music player' from the site 'PlayMP3z.biz.'

**ms-caro-malware-full:malware-family="Tibs"**

2008 - A family of Trojans that may download and run other malicious software or may steal user data and send it to the attacker via HTTP POST or email. The Win32/Tibs family frequently downloads Trojans belonging to the Win32/Harnig and Win32/Passalert families, both of which are families of Trojan downloaders which may in turn download and run other malicious software.

**ms-caro-malware-full:malware-family="SeekmoSearchAssistant"**

2008 - Adware that displays targeted search results and pop-up advertisements based on terms that the user enters for Web searches. The pop-up advertisements may include adult content.

**ms-caro-malware-full:malware-family="RJump"**

2008 - A worm that attempts to spread by copying itself to newly attached media (such as USB memory devices or network drives). It also contains backdoor functionality that allows an attacker unauthorized access to an affected computer.

**ms-caro-malware-full:malware-family="SpywareSecure"**

2008 - A program that displays misleading warning messages in order to convince users to purchase a product that removes spyware.

**ms-caro-malware-full:malware-family="Winfixer"**

2008 - A program that locates various registry entries, Windows prefetch content, and other types of data, identifies them as privacy violations, and urges the user to purchase the product to fix them.

**ms-caro-malware-full:malware-family="C2Lop"**

2008 - A trojan that modifies Web browser settings, adds Web browser bookmarks to advertisements, updates itself and delivers pop-up and contextual advertisements.

**ms-caro-malware-full:malware-family="Matcash"**

2008 - A multicomponent family of trojans that downloads and executes arbitrary files. Some variants of this family may install a toolbar. observed to use the Win32/Slenfbot worm as a means of distribution.
ms-caro-malware-full:malware-family="Horst"

2008 - CAPTCHA Breaker typically delivered through an executable application that masquerades as an illegal software crack or key generator.

ms-caro-malware-full:malware-family="Slenfbot"

2008 - A family of worms that can spread via instant messaging programs, and may spread via removable drives. They also contain backdoor functionality that allows unauthorized access to an affected machine. This worm does not spread automatically upon installation but must be ordered to spread by a remote attacker.

ms-caro-malware-full:malware-family="Rustock"

2008 - A multicomponent family of rootkit-enabled backdoor trojans, developed to aid in the distribution of spam. Recent variants appear to be associated with the incidence of rogue security programs.

ms-caro-malware-full:malware-family="Gimmiv"

2008 - A family of trojans that are sometimes installed by exploits of a vulnerability documented in Microsoft Security Bulletin MS08-067.

ms-caro-malware-full:malware-family="Yektel"

2008 - A family of trojans that display fake warnings of spyware or malware in an attempt to lure the user into installing or paying money to register rogue security products such as Win32/FakeXPA.

ms-caro-malware-full:malware-family="Roron"

2008 - This virus spreads by attaching its code to other files on your PC or network. Some of the infected programs might no longer run correctly. Attempts to send personal information to a remote address. It may spread via e-mail, network shares, or peer-to-peer file sharing.

ms-caro-malware-full:malware-family="Swif"

2008 - A trojan that exploits a vulnerability in Adobe Flash Player to download malicious files. Adobe has published security bulletin APSB08-11 addressing the vulnerability.

ms-caro-malware-full:malware-family="Mult"

2008 - A group of threats, written in JavaScript, that attempt to exploit multiple vulnerabilities on affected computers in order to download, execute or otherwise run arbitrary code. The malicious JavaScript may be hosted on compromised or malicious websites, embedded in specially crafted PDF files, or could be called by other malicious scripts.
ms-caro-malware-full:malware-family="Wukill"

2008 - a family of mass-mailing e-mail and network worms. The Win32/Wukill worm spreads to root directories on certain local and mapped drives. The worm also spreads by sending a copy of itself as an attachment to e-mail addresses found on the infected computer.

ms-caro-malware-full:malware-family="Objsnapt"

2008 - A detection for a Javascript file that exploits a known vulnerability in the Microsoft Access Snapshot Viewer ActiveX Control.

ms-caro-malware-full:malware-family="Redirector"

2008 - The threat is a piece of JavaScript code that is inserted on bad or hacked websites. It can direct your browser to a website you don't want to go to. You might see the detection for this threat if you visit a bad or hacked website, or if you open an email message.

ms-caro-malware-full:malware-family="Xilos"

2008 - a detection for a proof-of-concept JavaScript obfuscation technique, which was originally published in 2002 in the sixth issue of 29A, an early online magazine for virus creators

ms-caro-malware-full:malware-family="Decdec"

2008 - A detection for certain malicious JavaScript code injected in HTML pages. The virus will execute on user computers that visit compromised websites.

ms-caro-malware-full:malware-family="BearShare"

2008 - A P2P file-sharing client that uses the decentralized Gnutella network. Free versions of BearShare have come bundled with advertising supported and other potentially unwanted software.

ms-caro-malware-full:malware-family="BitAccelerator"

2008 - A program that redirects Web search results to other Web sites and may display various advertisements to users while browsing Web sites.

ms-caro-malware-full:malware-family="Blubtool"

2008 - An Internet browser search toolbar that may be installed by other third-party software, such as a peer-to-peer file sharing application. It may modify Internet explorer search settings and display unwanted advertisements.

ms-caro-malware-full:malware-family="RServer"

2008 - Commercial remote administration software that can be used to control a computer. These programs are typically installed by the computer owner or administrator and should only be removed if unexpected
ms-caromalware-full:malware-family="UltraVNC"
2008 - A remote access program that can be used to control a computer. This program is typically
installed by the computer owner or administrator, and should only be removed if unexpected.

ms-caromalware-full:malware-family="GhostRadmin"
2008 - A remote administration tool that can be used to control a computer. These programs are
typically installed by the computer owner or administrator and should only be removed if unexpected

ms-caromalware-full:malware-family="TightVNC"
2008 - A remote control program that allows full control of the computer. These programs are
typically installed by the computer owner or administrator and should only be removed if unexpected

ms-caromalware-full:malware-family="DameWareMiniRemoteControl"
2008 - A detection for the DameWare Mini Remote Control tools. This program was detected by
definitions prior to 1.147.1889.0 as it violated the guidelines by which Microsoft identified
unwanted software. Based on analysis using current guidelines, the program does not have
unwanted behaviors. Microsoft has released definition 1.147.1889.0 which no longer detects this
program.

ms-caromalware-full:malware-family="SeekmoSearchAssistant_Repack"
2008 - A detection that is triggered by modified (that is, edited and re-packed) remote control
programs based on DameWare Mini Remote Control, a commercial software product

ms-caromalware-full:malware-family="Nbar"
2008 - A program that may display advertisements and redirect user searches to a certain website.
It may also download malicious or unwanted content into the system without user consent.

ms-caromalware-full:malware-family="Chir"
2008 - A family with a worm component and a virus component. The worm component spreads by
e-mail and by exploiting a vulnerability addressed by Microsoft Security Bulletin MS01-020. The
virus component may infect .exe, .scr, and HTML files.

ms-caromalware-full:malware-family="Sality"
2008 - A family of polymorphic file infectors that target executable files with the extensions .scr or
.exe. They may execute a damaging payload that deletes files with certain extensions and
terminates security-related processes and services.
ms-caro-malware-full:malware-family="Obfuscator"

2008 - A detection for programs that use a combination of obfuscation techniques to hinder analysis or detection by antivirus scanners

ms-caro-malware-full:malware-family="ByteVerify"

2008 - A detection of malicious code that attempts to exploit a vulnerability in the Microsoft Virtual Machine (VM). This flaw enables attackers to execute arbitrary code on a user's machine such as writing, downloading and executing additional malware. This vulnerability is addressed by update MS03-011, released in 2003.

ms-caro-malware-full:malware-family="Autorun"

2008 - A family of worms that spreads by copying itself to the mapped drives of an infected computer. The mapped drives may include network or removable drives.

ms-caro-malware-full:malware-family="Hamweq"

2008 - A worm that spreads through removable drives, such as USB memory sticks. It may contain an IRC-based backdoor enabling the computer to be controlled remotely by an attacker

ms-caro-malware-full:malware-family="Brontok"

2008 - A family of mass-mailing e-mail worms. The worm spreads by sending a copy of itself as an e-mail attachment to e-mail addresses that it gathers from files on the infected computer. It can also copy itself to USB and pen drives. Win32/Brontok can disable antivirus and security software, immediately terminate certain applications, and cause Windows to restart immediately when certain applications run. The worm may also conduct denial of service (DoS) attacks against certain Web sites

ms-caro-malware-full:malware-family="SpywareProtect"

2008 - A rogue security software family that may falsely claim that the user's computer is infected and encourages the user to buy a product for cleaning the alleged malware from the computer

ms-caro-malware-full:malware-family="Cbeplay"

2008 - A trojan that may upload computer operating system details to a remote Web site, download additional malware, and terminate debugging utilities

ms-caro-malware-full:malware-family="InternetAntivirus"

2008 - A program that displays false and misleading malware alerts to convince users to purchase rogue security software. This program also displays a fake Windows Security Center message

ms-caro-malware-full:malware-family="Nuwar"

2008 - A family of trojan droppers that install a distributed P2P downloader trojan. This
downloader trojan in turn downloads an e-mail worm component.

**ms-caromalware-full:malware-family="Rbot"**

2008 - A family of backdoor trojans that allows attackers to control the computer through an IRC channel

**ms-caromalware-full:malware-family="IRCbot"**

2008 - A large family of backdoor trojans that drops malicious software and connects to IRC servers via a backdoor to receive commands from attackers.

**ms-caromalware-full:malware-family="SkeemoSearchAssistant"**

2008 - A program that displays targeted search results and pop-up advertisements based on terms that the user enters for Web searches. The pop-up advertisements may include adult content

**ms-caromalware-full:malware-family="RealVNC"**

2008 - A management tool that allows a computer to be controlled remotely. It can be installed for legitimate purposes, but can also be installed from a remote location by an attacker.

**ms-caromalware-full:malware-family="MoneyTree"**

2008 - A family of software that provides the ability to search for adult content on local disk. It may also install other potentially unwanted software, such as programs that display pop-up ads.

**ms-caromalware-full:malware-family="Tracur"**

2008 - A trojan that downloads and executes arbitrary files. It is sometimes distributed by ASX/Wimad.

**ms-caromalware-full:malware-family="Meredrop"**

2008 - This is a generic detection for trojans that install and run malware on your PC. These trojans have been deliberately created in a complex way to hide their purpose and make them difficult to analyze.

**ms-caromalware-full:malware-family="Banker"**

2008 - A family of data-stealing trojans that captures banking credentials such as account numbers and passwords from computer users and relays them to the attacker. Most variants target customers of Brazilian banks; some variants target customers of other banks.

**ms-caromalware-full:malware-family="Ldpinch"**

2008 - a family of password-stealing trojans. This trojan gathers private user data such as passwords from the host computer and sends the data to the attacker at a preset e-mail address. The Win32/Ldpinch trojans use their own Simple Mail Transfer Protocol (SMTP) engine or a web-
based proxy for sending the e-mail, thus copies of the sent e-mail will not appear in the affected user's e-mail client.

**ms-caro-malware-full:malware-family="Advantage"**

2008 - a family of adware that displays pop-up advertisements and contacts a remote server to download updates

**ms-caro-malware-full:malware-family="Parite"**

2008 - a family of polymorphic file infectors that targets computers running Microsoft Windows. The virus infects .exe and .scr executable files on the local file system and on writeable network shares. In turn, the infected executable files perform operations that cause other .exe and .scr files to become infected.

**ms-caro-malware-full:malware-family="PossibleHostsFileHijack"**

2008 - an indicator that the computer's HOSTS file may have been modified by malicious or potentially unwanted software

**ms-caro-malware-full:malware-family="Alureon"**

2008 - A data-stealing trojan that gathers confidential information such as user names, passwords, and credit card data from incoming and outgoing Internet traffic. It may also download malicious data and modify DNS settings.

**ms-caro-malware-full:malware-family="PowerRegScheduler"**

2008 - This program was detected by definitions prior to 1.159.567.0 as it violated the guidelines by which Microsoft identified unwanted software. Based on analysis using current guidelines, the program does not have unwanted behaviors. Microsoft has released definition 1.159.567.0 which no longer detects this program.

**ms-caro-malware-full:malware-family="APSB08-11"**

2008 - A trojan that attempts to exploit a vulnerability in Adobe Flash Player. In the wild, this trojan has been used to download and execute arbitrary files, including other malware.

**ms-caro-malware-full:malware-family="ConHook"**

2008 - A family of Trojans that installs themselves as Browser Helper Objects (BHOs), and connects to the Internet without user consent. They also terminate specific security services, and download additional malware to the computer.

**ms-caro-malware-full:malware-family="Starware"**

2008 - This program was detected by definitions prior to 1.159.567.0 as it violated the guidelines by which Microsoft identified unwanted software. Based on analysis using current guidelines, the program does not have unwanted behaviors. Microsoft has released definition 1.159.567.0 which no
longer detects this program.

**ms-caro-malware-full:malware-family="WinSpywareProtect"

2008 - A program that may falsely claim that the user's system is infected and encourages the user to buy a promoted product for cleaning the alleged malware from the computer.

**ms-caro-malware-full:malware-family="Messenger Skinner"

2008 - A program, that may be distributed in the form of a freeware application, that displays advertisements, downloads additional files, and uses stealth to hide its presence.

**ms-caro-malware-full:malware-family="Skintrim"

2008 - A trojan that downloads and executes arbitrary files. It may be distributed by as a Microsoft Office Outlook addon used to display emoticons or other animated icons within e-mail messages.

**ms-caro-malware-full:malware-family="AdRotator"

2008 - delivers advertisements, and as the name suggests, rotates advertisements among sponsors. AdRotator contacts remote Web sites in order to deliver updated content. This application also displays fake error messages that encourage users to download and install additional applications.

**ms-caro-malware-full:malware-family="Wintrim"

2008 - A family of trojans that display pop-up advertisements depending on the user's keywords and browsing history. Its variants can monitor the user's activities, download applications, and send system information back to a remote server.

**ms-caro-malware-full:malware-family="Busky"

2008 - A family of Trojans that monitor and redirect Internet traffic, gather system information and download unwanted software such as Win32/ Renos and Win32/SpySheriff. Win32/Busky may be installed by a Web browser exploit or other vulnerability when visiting a malicious Web site.

**ms-caro-malware-full:malware-family="WhenU"

2008 - This program was detected by definitions prior to 1.173.303.0 as it violated the guidelines by which Microsoft identified unwanted software. Based on analysis using current guidelines, the program does not have unwanted behaviors.

**ms-caro-malware-full:malware-family="Mobis"

2008 - This program was detected by definitions prior to 1.175.2037.0 as it violated the guidelines by which Microsoft identified unwanted software. Based on analysis using current guidelines, the program does not have unwanted behaviors.
ms-caro-malware-full:malware-family="Sogou"

2008 - Detected by definitions prior to 1.155.995.0 as it violated the guidelines by which Microsoft identified unwanted software. Based on analysis using current guidelines, the program does not have unwanted behaviors. Microsoft has released definition 1.155.995.0 which no longer detects this program.

ms-caro-malware-full:malware-family="Sdbot"

2008 - A family of backdoor trojans that allows attackers to control infected computers. After a computer is infected, the trojan connects to an internet relay chat (IRC) server and joins a channel to receive commands from attackers.

ms-caro-malware-full:malware-family="DelfInject"

2008 - This threat can download and run files on your PC.

ms-caro-malware-full:malware-family="Vapsup"

2008 - This threat can perform a number of actions of a malicious hacker's choice on your PC.

ms-caro-malware-full:malware-family="BrowsingEnhancer"

2008 - This program was detected by definitions prior to 1.175.1834.0 as it violated the guidelines by which Microsoft identified unwanted software. Based on analysis using current guidelines, the program does not have unwanted behaviors.

ms-caro-malware-full:malware-family="Jeefo"

2008 - virus infects executable files, such as files with a .exe extension. When an infected file runs, the virus tries to run the original content of the file while it infects other executable files on your PC. This threat might have got on your PC if you inserted a removable disk or accessed a network connection that was infected.

ms-caro-malware-full:malware-family="Sezon"

2008 - An adware that redirects web browsing to advertising or search sites.

ms-caro-malware-full:malware-family="RuPass"

2008 - a DLL component which may be utilized by adware or malicious programs in order to monitor an affected user's Internet usage and to capture sensitive information. Win32/RuPass has been distributed as a 420,352 byte DLL file, with the file name 'ConnectionServices.dll'.

ms-caro-malware-full:malware-family="OneStepSearch"

2008 - Modifies the user's browser to deliver targeted advertisements when the user enters search keywords. It may also replace or override web browser error pages that would otherwise be displayed when unresolvable web addresses are entered into the browser's address bar.
ms-caro-malware-full:malware-family="GameVance"

2008 - Software that displays advertisements and tracks anonymous usage information in exchange for a free online gaming experience at the Web address 'gamevance.com.'

ms-caro-malware-full:malware-family="E404"

2008 - is a browser helper object (BHO) that takes advantage of invalid or mistyped URLs entered in the address bar by redirecting the browser to Web sites containing adware.

ms-caro-malware-full:malware-family="Mirar"

2008 - This program was detected by definitions prior to 1.175.2037.0 as it violated the guidelines by which Microsoft identified unwanted software. Based on analysis using current guidelines, the program does not have unwanted behaviors.

ms-caro-malware-full:malware-family="Fotomoto"

2008 - A Trojan that lowers security settings, delivers advertisements, and sends system and network configuration details to a remote Web site.

ms-caro-malware-full:malware-family="Ardamax"

2008 - The tool can capture your activity on your PC (such as the keys you press when typing in passwords) and might send this information to a hacker.

ms-caro-malware-full:malware-family="Hupigon"

2008 - A family of trojans that uses a dropper to install one or more backdoor files and sometimes installs a password stealer or other malicious programs.

ms-caro-malware-full:malware-family="CNNIC"

2008 - enables Chinese keyword searching in Internet Explorer and adds support for other applications to use Chinese domain names that registered with CNNIC. Also contains a kernel driver that protects its files and registry settings from being modified or deleted.

ms-caro-malware-full:malware-family="MotePro"

2008 - May display advertisement pop-ups, and download programs from predefined Web sites. When installed, Win32/MotePro runs as a Web Browser Helper Object (BHO).

ms-caro-malware-full:malware-family="CnsMin"

2008 - Installs a browser helper object (BHO) that redirects Internet Explorer searches to a Chinese search portal. CnsMin may be installed without adequate user consent. It may prevent its files from being removed or restore files that have been previously removed.
ms-caro-malware-full:malware-family="BaiduIebar"

2008 - A detection for an address line search tool. This program was detected by definitions prior to 1.153.956.0 as it violated the guidelines by which Microsoft identified unwanted software. Based on analysis using current guidelines, the program does not have unwanted behaviors. Microsoft has released definition 1.153.956.0 which no longer detects this program.

ms-caro-malware-full:malware-family="Ejik"

2008 - This program was detected by definitions prior to 1.175.1915.0 as it violated the guidelines by which Microsoft identified unwanted software. Based on analysis using current guidelines, the program does not have unwanted behaviors.

ms-caro-malware-full:malware-family="AlibabaIEToolBar"

2008 - This program was detected by definitions prior to 1.175.1834.0 as it violated the guidelines by which Microsoft identified unwanted software. Based on analysis using current guidelines, the program does not have unwanted behaviors.

ms-caro-malware-full:malware-family="BDPlugin"

2008 - a DLL file which is usually introduced to an affected system as a component of BrowserModifier:Win32/BaiduSobar. It may display unwanted pop-ups and advertisements on the affected system.

ms-caro-malware-full:malware-family="Adialer"

2008 - A trojan dialer program that connects to a premium number, or attempts to connect to adult websites via particular phone numbers without your permission, connects to remote hosts without user consent.

ms-caro-malware-full:malware-family="EGroupSexDial"

2008 - A dialer program that may attempt to dial a premium number, thus possibly resulting in international phone charges for the user.

ms-caro-malware-full:malware-family="Zonebac"

2008 - A family of backdoor Trojans that allows a remote attacker to download and run arbitrary programs, and which may upload computer configuration information and other potentially sensitive data to remote Web sites.

ms-caro-malware-full:malware-family="Antinny"

2008 - A family of worms that targets certain versions of Microsoft Windows. The worm spreads using a Japanese peer-to-peer file-sharing application named Winny. The worm creates a copy of itself with a deceptive file name in the Winny upload folder so that it can be downloaded by other Winny users.
ms-caro-malware-full:malware-family="RewardNetwork"

2008 - A program that monitors an affected user's Internet usage and reports this usage to a remote server. Win32/RewardNetwork may be visible as an Internet Explorer toolbar.

ms-caro-malware-full:malware-family="Virut"

2008 - A family of file infecting viruses that target and infect .exe and .scr files accessed on infected systems. Win32/Virut also opens a backdoor by connecting to an IRC server

ms-caro-malware-full:malware-family="Allaple"

2008 - A multi-threaded, polymorphic network worm capable of spreading to other computers connected to a local area network (LAN) and performing denial-of-service (DoS) attacks against targeted remote Web sites.

ms-caro-malware-full:malware-family="VKit_DA"

2008 - This virus spreads by attaching its code to other files on your PC or network. Some of the infected programs might no longer run correctly.

ms-caro-malware-full:malware-family="Small"

2008 - A generic detection for a variety of threats.

ms-caro-malware-full:malware-family="Netsky"

2008 - A mass-mailing worm that spreads by e-mailing itself to addresses found on an infected computer. Some variants contain a backdoor component and perform DoS attacks.

ms-caro-malware-full:malware-family="Luder"

2008 - A virus that spreads by infecting executable files, by inserting itself into .RAR archive files, and by sending a copy of itself as an attachment to e-mail addresses found on the infected computer. This virus has a date-activated, file damaging payload, and may connect to a remote server and accept commands from an attacker.

ms-caro-malware-full:malware-family="IframeRef"

2008 - A generic detection for specially formed IFrame tags that point to remote websites that contain malicious content.

ms-caro-malware-full:malware-family="Lovelorn"

2008 - This threat is classified as a mass-mailing worm. A mass mailing email worm is self-contained malicious code that propagates by sending itself through e-mail. Typically, a mass mailing email worm uses its own SMTP engine to send itself, thus copies of the sent worm will not appear in the infected user's outgoing or sent email folders. Technical details are currently not available.
ms-caro-malware-full:malware-family="Cekar"

2008 - This threat downloads and installs other programs, including other malware, onto your PC without your consent.

ms-caro-malware-full:malware-family="Dialsnif"

2008 - This threat can perform a number of actions of a malicious hacker's choice on your PC.

ms-caro-malware-full:malware-family="Conficker"

2008 - A worm that spreads by exploiting a vulnerability addressed by Security Bulletin MS08-067. Some variants also spread via removable drives and by exploiting weak passwords. It disables several important system services and security products and downloads arbitrary files.

ms-caro-malware-full:malware-family="LoveLetter"

2009 - A family of mass-mailing worms that targets computers running certain versions of Windows. It can spread as an e-mail attachment and through an Internet Relay Chat (IRC) channel. The worm can download, overwrite, delete, infect, and run files on the infected computer.

ms-caro-malware-full:malware-family="VBSWGbased"

2009 - A generic detection for VBScript code that is known to be automatically generated by a particular malware tool.

ms-caro-malware-full:malware-family="Slammer"

2009 - A memory resident worm that spreads through a vulnerability present in computers running either MSDE 2000 or SQL Server that have not applied Microsoft Security Bulletin MS02-039.

ms-caro-malware-full:malware-family="Msblast"

2009 - A family of network worms that exploit a vulnerability addressed by security bulletin MS03-039. The worm may attempt Denial of Service (DoS) attacks on some server sites or create a backdoor on the infected system.

ms-caro-malware-full:malware-family="Sasser"

2009 - A family of network worms that exploit a vulnerability fixed by security bulletin MS04-011. The worm spreads by randomly scanning IP addresses for vulnerable machines and infecting any that are found.

ms-caro-malware-full:malware-family="Nimda"

2009 - A family of worms that spread by exploiting a vulnerability addressed by Microsoft Security Bulletin MS01-020. The worm compromises security by sharing the C drive and creating a Guest account with administrator permissions.
**ms-caro-malware-full:malware-family="Mydoom"**

2009 - A family of massmailing worms that spread through e-mail. Some variants also spread through P2P networks. It acts as a backdoor trojan and can sometimes be used to launch DoS attacks against specific Web sites.

**ms-caro-malware-full:malware-family="Bagle"**

2009 - A worm that spreads by e-mailing itself to addresses found on an infected computer. Some variants also spread through peer-to-peer (P2P) networks. Bagle acts as a backdoor trojan and can be used to distribute other malicious software.

**ms-caro-malware-full:malware-family="Winwebsec"**

2009 - A family of rogue security software programs that have been distributed with several different names. The user interface varies to reflect each variant’s individual branding.

**ms-caro-malware-full:malware-family="Koobface"**

2009 - A multicomponent family of malware used to compromise computers and use them to perform various malicious tasks. It spreads through the internal messaging systems of popular social networking sites.

**ms-caro-malware-full:malware-family="Pdfjsc"**

2009 - A family of specially crafted PDF files that exploits vulnerabilities in Adobe Acrobat and Adobe Reader. The files contain malicious JavaScript that executes when opened with a vulnerable program.

**ms-caro-malware-full:malware-family="Pointfree"**

2009 - A browser modifier that redirects users when invalid Web site addresses or search terms are entered in the Windows Internet Explorer address bar.

**ms-caro-malware-full:malware-family="Chadem"**

2009 - A trojan that steals password details from an infected computer by monitoring network traffic associated with FTP connections.

**ms-caro-malware-full:malware-family="FakeIA"**

2009 - A rogue security software family that impersonates the Windows Security Center. It may display product names or logos in an apparently unlawful attempt to impersonate Microsoft products.

**ms-caro-malware-full:malware-family="Waledac"**

2009 - A trojan that is used to send spam. It also has the ability to download and execute arbitrary files, harvest e-mail addresses from the local machine, perform denial-of-service attacks, proxy...
network traffic, and sniff passwords

**ms-cararo-malware-full:malware-family="Provis"**

2009 - This threat can perform a number of actions of a malicious hacker’s choice on your PC.

**ms-cararo-malware-full:malware-family="Prolaco"**

2009 - A family of worms that spreads via email, removable drives, Peer-to-Peer (P2P) and network shares. This worm may also drop and execute other malware.

**ms-cararo-malware-full:malware-family="Mywife"**

2009 - A mass-mailing network worm that targets certain versions of Microsoft Windows. The worm spreads through e-mail attachments and writeable network shares. It is designed to corrupt the content of specific files on the third day of every month.

**ms-cararo-malware-full:malware-family="Melissa"**

2009 - A macro worm that spreads via e-mail and by infecting Word documents and templates. It is designed to work in Word 97 and Word 2000, and it uses Outlook to reach new targets through e-mail.

**ms-cararo-malware-full:malware-family="Rochap"**

2009 - A family of multicomponent trojans that download and execute additional malicious files. While downloading, some variants display a video from the Web site 'youtube.com' presumably to distract the user.

**ms-cararo-malware-full:malware-family="Gamania"**

2009 - A family of trojans that steals online game passwords and sends them to remote sites.

**ms-cararo-malware-full:malware-family="Mabezat"**

2009 - A polymorphic virus that infects Windows executable files. Apart from spreading through file infection, it also attempts to spread through e-mail attachments, network shares, removable drives and by CD-burning. It also contains a date-based payload that encrypts files with particular extensions.

**ms-cararo-malware-full:malware-family="Helpud"**

2009 - A family of trojans that steals login information for popular online games. The gathered information is then sent to remote websites.

**ms-cararo-malware-full:malware-family="PrivacyCenter"**

2009 - A family of programs that claims to scan for malware and displays fake warnings of 'malicious programs and viruses'. They then inform the user that they need to pay money to
register the software in order to remove these non-existent threats.

**ms-caro-malware-full:malware-family="FakeRean"**

2009 - This family of rogue security programs pretend to scan your PC for malware, and often report lots of infections. The program will say you have to pay for it before it can fully clean your PC. However, the program hasn’t really detected any malware at all and isn’t really an antivirus or antimalware scanner. It just looks like one so you’ll send money to the people who made the program. Some of these programs use product names or logos that unlawfully impersonate Microsoft products.

**ms-caro-malware-full:malware-family="Bredolab"**

2009 - A downloader that can access and execute arbitrary files from a remote host. Bredolab has been observed to download several other malware families to infected computers

**ms-caro-malware-full:malware-family="Rugzip"**

2009 - A trojan that downloads other malware from predefined Web sites. Rugzip may itself be installed by other malware. Once it has performed its malicious routines, it deletes itself to avoid detection.

**ms-caro-malware-full:malware-family="Fakespypro"**

2009 - A rogue security family that falsely claims that the affected computer is infected with malware and encourages the user to buy a promoted product it claims will clean the computer.

**ms-caro-malware-full:malware-family="Buzuz"**

2009 - A trojan that downloads malware known as 'SpywareIsolator' a rogue security software program.

**ms-caro-malware-full:malware-family="PoisonIvy"**

2009 - A family of backdoor trojans that allow unauthorized access to and control of an affected machine. Poisonivy attempts to hide by injecting itself into other processes

**ms-caro-malware-full:malware-family="AgentBypass"**

2009 - A detection for files that attempt to inject possibly malicious code into the explorer.exe process.

**ms-caro-malware-full:malware-family="Enfal"**

2009 - This threat can perform a number of actions of a malicious hacker’s choice on your PC.

**ms-caro-malware-full:malware-family="SystemHijack"**

2009 - A generic detection that uses advanced heuristics in the Microsoft Antivirus engine to detect
malware that displays particular types of malicious behavior.

**ms-caro-malware-full:malware-family="ProcInject"**

2009 - This threat can perform a number of actions of a malicious hacker's choice on your PC.

**ms-caro-malware-full:malware-family="Malres"**

2009 - A trojan that drops another malware, detected as Virtool:WinNT/Malres.A, into the system.

**ms-caro-malware-full:malware-family="Kirpich"**

2009 - A trojan that drops malicious code into the system. It also infects two system files; the infected files are detected as Virus:Win32/Kirpich.A, in the system. This does not constitute virus behavior for the trojan as it does not infect any other files and therefore does not have any conventional replication routines. TrojanDropper:Win32/Kirpich.A also disables Data Execution Protection and steals specific system information.

**ms-caro-malware-full:malware-family="Malagent"**

2009 - A generic detection for a variety of threats.

**ms-caro-malware-full:malware-family="Bumat"**

2009 - A generic detection for a variety of threats.

**ms-caro-malware-full:malware-family="Bifrose"**

2009 - A backdoor trojan that allows a remote attacker to access the compromised computer and injects its processes into the Windows shell and Internet Explorer.

**ms-caro-malware-full:malware-family="Ripinip"**

2009 - This threat can give a hacker unauthorized access and control of your PC.

**ms-caro-malware-full:malware-family="Riler"**

2009 - This threat can perform a number of actions of a malicious hacker's choice on your PC.

**ms-caro-malware-full:malware-family="Farfli"**

2009 - A trojan that drops various files detected as malware into a system. It also has backdoor capabilities that allow it to contact a remote attacker and wait for instructions.

**ms-caro-malware-full:malware-family="PcClient"**

2009 - A backdoor trojan family with several components including a key logger, backdoor, and a rootkit.
ms-caro-malware-full:malware-family="Veden"
2009 - A name used for backdoor trojan detections that have been added to Microsoft signatures after advanced automated analysis.

ms-caro-malware-full:malware-family="Banload"
2009 - A family of trojans that download other malware. Banload usually downloads Win32/Banker, which steals banking credentials and other sensitive data and sends it back to a remote attacker.

ms-caro-malware-full:malware-family="Microjoin"
2009 - a tool that is used to deploy malware without being detected. It is used to bundle multiple files, consisting of a clean file and malware files, into a single executable.

ms-caro-malware-full:malware-family="Killav"
2009 - a trojan that terminates a large number of security-related processes, including those for antivirus, monitoring, or debugging tools, and may install certain exploits for the vulnerability addressed by Microsoft Security Bulletin MS08-067

ms-caro-malware-full:malware-family="Cinmus"
2009 - This threat can perform a number of actions of a malicious hacker's choice on your PC.

ms-caro-malware-full:malware-family="MessengerPlus"

ms-caro-malware-full:malware-family="Haxdoor"
2009 - a backdoor trojan that allows remote control of the machine over the Internet. The trojan is rootkit-enabled, allowing it to hide processes and files related to the threat. Haxdoor lowers security settings on the computer and gathers user and system information to send to a third party

ms-caro-malware-full:malware-family="Nieguide"
2009 - a detection for a DLL file that connects to a Web site and may display advertisements or download other programs

ms-caro-malware-full:malware-family="Ithink"
2009 - displays pop-up advertisements; it is usually bundled with other applications

ms-caro-malware-full:malware-family="Pointad"
2009 - This program was detected by definitions prior to 1.175.2145.0 as it violated the guidelines by which Microsoft identified unwanted software. Based on analysis using current guidelines, the
program does not have unwanted behaviors.

**ms-caro-malware-full:malware-family="Webdir"**

2009 - A Web Browser Helper Object (BHO) used to collect user information and display targeted advertisings using Internet Explorer browser. Webdir attempts to modify certain visited urls to include affiliate IDs.

**ms-caro-malware-full:malware-family="Microbillsys"**

2009 - a program that processes payments made to a billing Web site. It is considered potentially unwanted software because it cannot be removed from the Add/Remove Programs list in Control Panel; rather, a user requires an ‘uninstall code’ before the program can be removed.

**ms-caro-malware-full:malware-family="Kerlofost"**

2009 - a browser helper object (BHO) that may modify browsing behavior; redirect searches; report user statistics, behavior, and searches back to a remote server; and display pop-up advertisements.

**ms-caro-malware-full:malware-family="Zwangi"**

2009 - A program that runs as a service in the background and modifies Web browser settings to visit a particular Web site

**ms-caro-malware-full:malware-family="DoubleD"**

2009 - an adware program that displays pop-up advertising, runs at each system start and is installed as an Internet Explorer toolbar.

**ms-caro-malware-full:malware-family="ShopAtHome"**

2009 - A browser redirector that monitors Web-browsing behavior and online purchases. It claims to track points for ShopAtHome rebates when the user buys products directly from affiliated merchant Web sites.

**ms-caro-malware-full:malware-family="FakeVimes"**

2009 - a downloading component of Win32/FakeVimes - a family of programs that claims to scan for malware and displays fake warnings of 'malicious programs and viruses'. They then inform the user that they need to pay money to register the software in order to remove these non-existent threats.

**ms-caro-malware-full:malware-family="FakeCog"**

2009 - This threat claims to scan your PC for malware and then shows you fake warnings. They try to convince you to pay to register the software to remove the non-existent threats.
2009 - a program that may display false and misleading alerts regarding errors and malware to entice users to purchase it.

2009 - a family of trojans consisting of a fake Security Center interface and a fake antivirus program.

2009 - A rogue security software family that uses a Korean-language user interface.

2009 - a generic detection for a trojan that interferes with an affected user's browsing habits and downloads and executes arbitrary files.

2009 - A trojan that attempts to establish a secure network connection to various Web sites without the user's consent.

2009 - A family of trojans that steals sensitive information from an affected computer.

2009 - A family of worms with multiple components that spreads via fixed and removable drives and via instant messaging. It also contains backdoor functionality that allows unauthorized access to an affected system.

2009 - A trojan that connects to remote servers, which may lead to unauthorized access to an affected system.

2009 - This threat has been 'obfuscated', which means it has tried to hide its purpose so your security software doesn't detect it. The malware that lies underneath this obfuscation can have almost any purpose.

2009 - a detection for a command-line tool and violated the guidelines by which Microsoft identified unwanted software.
ms-caro-malware-full:malware-family="Yabector"

2009 - This trojan can use your PC to click on online advertisements without your permission or knowledge. This can earn money for a malicious hacker by making a website or application appear more popular than it is.

ms-caro-malware-full:malware-family="Renocide"

2009 - A family of worms that spread via local, removable, and network drives and also using file sharing applications. They have IRC-based backdoor functionality, which may allow a remote attacker to execute commands on the affected computer.

ms-caro-malware-full:malware-family="Liften"

2009 - A trojan that is used to stop affected users from downloading security updates. It is downloaded by Trojan:Win32/FakeXPA.

ms-caro-malware-full:malware-family="ShellCode"

2009 - A generic detection for JavaScript-enabled objects that contain exploit code and may exhibit suspicious behavior. Malicious websites and malformed PDF documents may contain JavaScript that attempts to execute code without the affected user’s consent.

ms-caro-malware-full:malware-family="FlyAgent"

2009 - A backdoor trojan program that is capable of performing several actions depending on the commands of a remote attacker.

ms-caro-malware-full:malware-family="Psyme"

2009 - This threat downloads and installs other programs, including other malware, onto your PC without your consent.

ms-caro-malware-full:malware-family="Orsam"

2009 - A generic detection for a variety of threats. A name used for trojans that have been added to MS signatures after advanced automated analysis.

ms-caro-malware-full:malware-family="AgentOff"

2009 - This threat can perform a number of actions of a malicious hacker's choice on your PC.

ms-caro-malware-full:malware-family="Nuj"

2009 - A worm that copies itself to fixed, removable or network drives. Some variants of this worm may also terminate antivirus-related processes.
2009 - Worms automatically spread to other PCs. They can do this in a number of ways, including by copying themselves to removable drives, network folders, or spreading through email.

2009 - This program was detected by definitions prior to 1.175.2037.0 as it violated the guidelines by which Microsoft identified unwanted software. Based on analysis using current guidelines, the program does not have unwanted behaviors.

2009 - This family of worms can download other malware onto your PC, including: Win32/Beebone, Win32/Fareit, Win32/Zbot. Vobfus worms can be downloaded by other malware or spread via removable drives, such as USB flash drives.

2009 - a family of trojans that attempts to steal sensitive information, including passwords and FTP authentication details from affected computers. This family targets particular FTP applications and also attempts to steal data from Protected Storage.

2009 - This program was detected by definitions prior to 1.175.2037.0 as it violated the guidelines by which Microsoft identified unwanted software. Based on analysis using current guidelines, the program does not have unwanted behaviors.

2009 - This program was detected by definitions prior to 1.175.1834.0 as it violated the guidelines by which Microsoft identified unwanted software. Based on analysis using current guidelines, the program does not have unwanted behaviors.

2009 - This program was detected by definitions prior to 1.175.2037.0 as it violated the guidelines by which Microsoft identified unwanted software. Based on analysis using current guidelines, the program does not have unwanted behaviors.
which Microsoft identified unwanted software. Based on analysis using current guidelines, the program does not have unwanted behaviors.

**ms-caro-malware-full:malware-family="Fierads"**

2009 - This program was detected by definitions prior to 1.175.2037.0 as it violated the guidelines by which Microsoft identified unwanted software. Based on analysis using current guidelines, the program does not have unwanted behaviors.

**ms-caro-malware-full:malware-family="VBInject"**

2009 - This is a generic detection for malicious files that are obfuscated using particular techniques to prevent their detection or analysis.

**ms-caro-malware-full:malware-family="PerfectKeylogger"**

2009 - a commercial monitoring program that monitors user activity, such as keystrokes typed. MonitoringTool:Win32/PerfectKeylogger is available for purchase at the company’s website. It may also have been installed without user consent by a Trojan or other malware.

**ms-caro-malware-full:malware-family="AgoBot"**

2010 VOL09 - A backdoor that communicates with a central server using IRC.

**ms-caro-malware-full:malware-family="Bubnix"**

2010 VOL09 - A generic detection for a kernel-mode driver installed by other malware that hides its presence on an affected computer by blocking registry and file access to itself. The trojan may report its installation to a remote server and download and distribute spam email messages and could download and execute arbitrary files.

**ms-caro-malware-full:malware-family="Citeary"**

2010 VOL09 - A kernel mode driver installed by Win32/Citeary, a worm that spreads to all available drives including the local drive, installs device drivers and attempts to download other malware from a predefined website.

**ms-caro-malware-full:malware-family="Fakeinit"**


**ms-caro-malware-full:malware-family="Oficla"**

2010 VOL09 - A family of trojans that attempt to inject code into running processes in order to download and execute arbitrary files. It may download rogue security programs.
ms-carol-malware-full:malware-family="Pasur"

2010 VOL09 - A name used for backdoor trojan detections that have been added to Microsoft signatures after advanced automated analysis.

ms-carol-malware-full:malware-family="PrettyPark"

2010 VOL09 - A worm that spreads via email attachments. It allows backdoor access and control of an infected computer.

ms-carol-malware-full:malware-family="Prorat"

2010 VOL09 - A trojan that opens random ports that allow remote access from an attacker to the affected computer. This backdoor may download and execute other malware from predefined websites and may terminate several security applications or services.

ms-carol-malware-full:malware-family="Pushbot"

2010 VOL09 - A detection for a family of malware that spreads via MSN Messenger, Yahoo! Messenger, and AIM when commanded by a remote attacker. It contains backdoor functionality that allows unauthorized access and control of an affected machine.

ms-carol-malware-full:malware-family="Randex"

2010 VOL09 - A worm that scans randomly generated IP addresses to attempt to spread to network shares with weak passwords. After the worm infects a computer, it connects to an IRC server to receive commands from the attacker.

ms-carol-malware-full:malware-family="SDBot"

2010 VOL09 - A family of backdoor trojans that allows attackers to control infected computers over an IRC channel.

ms-carol-malware-full:malware-family="Trenk"

2010 VOL09 - A name used for backdoor trojan detections that have been added to Microsoft signatures after advanced automated analysis.

ms-carol-malware-full:malware-family="Tofsee"

2010 VOL09 - A multi-component family of backdoor trojans that act as a spam and traffic relay.

ms-carol-malware-full:malware-family="Ursap"

2010 VOL09 - A name used for backdoor trojan detections that have been added to Microsoft signatures after advanced automated analysis.
ms-caro-malware-full:malware-family="Zbot"

2010 VOL09 - A family of password stealing trojans that also contains backdoor functionality allowing unauthorized access and control of an affected machine.

ms-caro-malware-full:malware-family="Ciucio"

2010 VOL10 - A family of trojans that connect to certain websites in order to download arbitrary files.

ms-caro-malware-full:malware-family="ClickPotato"

2010 VOL10 - A program that displays popup and notification-style advertisements based on the user's browsing habits.

ms-caro-malware-full:malware-family="CVE-2010-0806"

2010 VOL10 - A detection for malicious JavaScript that attempts to exploit the vulnerability addressed by Microsoft Security Bulletin MS10-018.

ms-caro-malware-full:malware-family="Delf"

2010 VOL10 - A detection for various threats written in the Delphi programming language. The behaviors displayed by this malware family are highly variable.

ms-caro-malware-full:malware-family="FakePAV"

2010 VOL10 - A rogue security software family that masquerades as Microsoft Security Essentials.

ms-caro-malware-full:malware-family="Keygen"

2010 VOL10 - A generic detection for tools that generate product keys for illegally obtained versions of various software products.

ms-caro-malware-full:malware-family="Onescan"

2010 VOL10 - A Korean-language rogue security software family distributed under the names One Scan, Siren114, EnPrivacy, PC Trouble, My Vaccine, and others.

ms-caro-malware-full:malware-family="Pornpop"

2010 VOL10 - A generic detection for specially-crafted JavaScript-enabled objects that attempt to display pop-under advertisements, usually with adult content.

ms-caro-malware-full:malware-family="Startpage"

2010 VOL10 - A detection for various threats that change the configured start page of the affected user's web browser, and may also perform other malicious actions.
ms-caro-malware-full:malware-family="Begseabug"

2011 VOL11 - A trojan that downloads and executes arbitrary files on an affected computer.

ms-caro-malware-full:malware-family="CVE-2010-0840"

2011 VOL11 - A detection for a malicious and obfuscated Java class that exploits a vulnerability described in CVE-2010-0840. Oracle Corporation addressed the vulnerability with a security update in March 2010.

ms-caro-malware-full:malware-family="Cycbot"

2011 VOL11 - A backdoor trojan that allows attackers unauthorized access and control of an affected computer. After a computer is infected, the trojan connects to a specific remote server to receive commands from attackers.

ms-caro-malware-full:malware-family="DroidDream"

2011 VOL11 - A malicious program that affects mobile devices running the Android operating system. It may be bundled with clean applications, and is capable of allowing a remote attacker to gain access to the mobile device.

ms-caro-malware-full:malware-family="FakeMacdef"

2011 VOL11 - A rogue security software family that affects Apple Mac OS X. It has been distributed under the names MacDefender, MacSecurity, MacProtector, and possibly others.

ms-caro-malware-full:malware-family="GameHack"

2011 VOL11 - Malware that is often bundled with game applications. It commonly displays unwanted pop-up advertisements and may be installed as a web browser helper object.

ms-caro-malware-full:malware-family="Loic"

2011 VOL11 - An open-source network attack tool designed to perform denial-ofservice (DoS) attacks.

ms-caro-malware-full:malware-family="Lotoor"

2011 VOL11 - A detection for specially crafted Android programs that attempt to exploit vulnerabilities in the Android operating system to gain root privilege.

ms-caro-malware-full:malware-family="Nuqel"

2011 VOL11 - A worm that spreads via mapped drives and certain instant messaging applications. It may modify system settings, connect to certain websites, download arbitrary files, or take other malicious actions.
ms-caro-malware-full:malware-family="OfferBox"

2011 VOL11 - A program that displays offers based on the user's web browsing habits. Some versions may display advertisements in a pop-under window. Win32/OfferBox may be installed without adequate user consent by malware.

ms-caro-malware-full:malware-family="OpenCandy"

2011 VOL11 - An adware program that may be bundled with certain third-party software installation programs. Some versions may send user-specific information, including a unique machine code, operating system information, locale, and certain other information to a remote server without obtaining adequate user consent.

ms-caro-malware-full:malware-family="Pameseg"

2011 VOL11 - A fake program installer that requires the user to send SMS messages to a premium number to successfully install certain programs.

ms-caro-malware-full:malware-family="Pramro"

2011 VOL11 - A trojan that creates a proxy on the infected computer for email and HTTP traffic, and is used to send spam email.

ms-caro-malware-full:malware-family="Ramnit"

2011 VOL11 - A family of multi-component malware that infects executable files, Microsoft Office files, and HTML files. Win32/Ramnit spreads to removable drives and steals sensitive information such as saved FTP credentials and browser cookies. It may also open a backdoor to await instructions from a remote attacker.

ms-caro-malware-full:malware-family="Rlsloup"

2011 VOL11 - A family of trojans that are used to send spam email. Rlsloup consists of several components, including an installation trojan component and a spamming payload component.

ms-caro-malware-full:malware-family="ShopperReports"

2011 VOL11 - Adware that displays targeted advertising to affected users while browsing the Internet, based on search terms entered into search engines.

ms-caro-malware-full:malware-family="Sinowal"

2011 VOL11 - A family of password-stealing and backdoor trojans. It may try to install a fraudulent SSL certificate on the computer. Sinowal may also capture user data such as banking credentials from various user accounts and send the data to Web sites specified by the attacker.

ms-caro-malware-full:malware-family="Stuxnet"

2011 VOL11 - A multi-component family that spreads via removable volumes by exploiting the

**ms-caro-malware-full:malware-family="Swimnag"**

2011 VOL11 - A worm that spreads via removable drives and drops a randomly-named DLL in the Windows system folder.

**ms-caro-malware-full:malware-family="Tedroo"**

2011 VOL11 - A trojan that sends spam email messages. Some variants may disable certain Windows services or allow backdoor access by a remote attacker.

**ms-caro-malware-full:malware-family="Yimfoca"**

2011 VOL11 - A worm family that spreads via common instant messaging applications and social networking sites. It is capable of connecting to a remote HTTP or IRC server to receive updated configuration data. It also modifies certain system and security settings.

**ms-caro-malware-full:malware-family="Bamital"**

2011 VOL12 - A family of malware that intercepts web browser traffic and prevents access to specific security-related websites by modifying the Hosts file. Bamital variants may also modify specific legitimate Windows files in order to execute their payload.

**ms-caro-malware-full:malware-family="Blacole"**

2011 VOL12 - An exploit pack, also known as Blackhole, that is installed on a compromised web server by an attacker and includes a number of exploits that target browser software. If a vulnerable computer browses a compromised website containing the exploit pack, various malware may be downloaded and run.

**ms-caro-malware-full:malware-family="Bulilit"**

2011 VOL12 - A trojan that silently downloads and installs other programs without consent. Infection could involve the installation of additional malware or malware components to an affected computer.

**ms-caro-malware-full:malware-family="Dorkbot"**

2011 VOL12 - A worm that spreads via instant messaging and removable drives. It also contains backdoor functionality that allows unauthorized access and control of the affected computer. Win32/Dorkbot may be distributed from compromised or malicious websites using PDF or browser exploits.

**ms-caro-malware-full:malware-family="EyeStye"**

2011 VOL12 - A trojan that attempts to steal sensitive data using a method known as form grabbing, and sends it to a remote attacker. It may also download and execute arbitrary files and use a rootkit component to hide its activities.
ms-caro-malware-full:malware-family="FakeSysdef"

2011 VOL12 - A rogue security software family that claims to discover nonexistent hardware defects related to system memory, hard drives, and overall system performance, and charges a fee to fix the supposed problems.

ms-caro-malware-full:malware-family="Helompy"

2011 VOL12 - A worm that spreads via removable drives and attempts to capture and steal authentication details for a number of different websites or online services, including Facebook and Gmail.

ms-caro-malware-full:malware-family="Malf"

2011 VOL12 - A generic detection for malware that drops additional malicious files.

ms-caro-malware-full:malware-family="Rugo"

2011 VOL12 - A program that installs silently on the user's computer and displays advertisements.

ms-caro-malware-full:malware-family="Sirefef"

2011 VOL12 - A rogue security software family distributed under the name Antivirus 2010 and others.

ms-caro-malware-full:malware-family="Sisproc"

2011 VOL12 - A generic detection for a group of trojans that have been observed to perform a number of various and common malware behaviors.

ms-caro-malware-full:malware-family="Swisyn"

2011 VOL12 - A trojan that drops and executes arbitrary files on an infected computer. The dropped files may be potentially unwanted or malicious programs.

ms-caro-malware-full:malware-family="BlacoleRef"

2012 VOL13 - An obfuscated script, often found inserted into compromised websites, that uses a hidden inline frame to redirect the browser to a Blacole exploit server.

ms-caro-malware-full:malware-family="CVE-2012-0507"

2012 VOL13 - A detection for a malicious Java applet that exploits the Java Runtime Environment (JRE) vulnerability described in CVE-2012-0507, addressed by an Oracle security update in February 2012.

ms-caro-malware-full:malware-family="Flashback"

2012 VOL13 - A trojan that targets Java JRE vulnerability CVE-2012-0507 on Mac OS X to enroll the
infected computer in a botnet.

**ms-caro-malware-full:malware-family="Gendows"**

2012 VOL13 - A tool that attempts to activate Windows 7 and Windows Vista operating system installations.

**ms-caro-malware-full:malware-family="GingerBreak"**

2012 VOL13 - A program that affects mobile devices running the Android operating system. It drops and executes an exploit that, if run successfully, gains administrator privileges on the device.

**ms-caro-malware-full:malware-family="GingerMaster"**

2012 VOL13 - A malicious program that affects mobile devices running the Android operating system. It may be bundled with clean applications, and is capable of allowing a remote attacker to gain access to the mobile device.

**ms-caro-malware-full:malware-family="Mult_JS"**

2012 VOL13 - A generic detection for various exploits written in the JavaScript language.

**ms-caro-malware-full:malware-family="Patch"**

2012 VOL13 - A family of tools intended to modify, or ‘patch’ programs that may be evaluation copies, or unregistered versions with limited features for the purpose of removing the limitations.

**ms-caro-malware-full:malware-family="Phoex"**

2012 VOL13 - A malicious script that exploits the Java Runtime Environment (JRE) vulnerability discussed in CVE-2010-4452. If run in a computer running a vulnerable version of Java, it downloads and executes arbitrary files.

**ms-caro-malware-full:malware-family="Pluzoks"**

2012 VOL13 - A trojan that silently downloads and installs other programs without consent. This could include the installation of additional malware or malware components.

**ms-caro-malware-full:malware-family="Popupper"**

2012 VOL13 - A detection for a particular JavaScript script that attempts to display pop-under advertisements.

**ms-caro-malware-full:malware-family="Wizpop"**

2012 VOL13 - Adware that may track user search habits and download executable programs without user consent.
ms-caro-malware-full:malware-family="Wpakill"

2012 VOL13 - A family of tools that attempt to disable or bypass WPA (Windows Product Activation), WGA (Windows Genuine Advantage) checks, or WAT (Windows Activation Technologies), by altering Windows operating system files, terminating processes, or stopping services.

ms-caro-malware-full:malware-family="Yeltminky"

2012 VOL13 - A family of worms that spreads by making copies of itself on all available drives and creating an autorun.inf file to execute that copy.

ms-caro-malware-full:malware-family="Aimesu"

2013 VOL15 - A threat that exploits vulnerabilities in unpatched versions of Java, Adobe Reader, or Flash Player. It then installs other malware on the computer, including components of the Blackhole and Cool exploit kits.

ms-caro-malware-full:malware-family="Bdaejec"

2013 VOL15 - A trojan that allows unauthorized access and control of an affected computer, and that may download and install other programs without consent.

ms-caro-malware-full:malware-family="Bursted"

2013 VOL15 - A virus written in the AutoLISP scripting language used by the AutoCAD computer-aided design program. It infects other AutoLISP files with the extension .lsp.

ms-caro-malware-full:malware-family="Colkit"

2013 VOL15 - A detection for obfuscated, malicious JavaScript code that redirects to or loads files that may exploit a vulnerable version of Java, Adobe Reader, or Adobe Flash, possibly in an attempt to load malware onto the computer.

ms-caro-malware-full:malware-family="Coolex"

2013 VOL15 - A detection for scripts from an exploit pack known as the Cool Exploit Kit. These scripts are often used in ransomware schemes in which an attacker locks a victim's computer or encrypts the user's data and demands money to make it available again.

ms-caro-malware-full:malware-family="CplLnk"

2013 VOL15 - A generic detection for specially crafted malicious shortcut files that attempt to exploit the vulnerability addressed by Microsoft Security Bulletin MS10-046, CVE-2010-2568.

ms-caro-malware-full:malware-family="CVE-2011-1823"

2013 VOL15 - A detection for specially crafted Android programs that attempt to exploit a vulnerability in the Android operating system to gain root privilege.
ms-caro-malware-full:malware-family="CVE-2012-1723"

2013 VOL15 - A family of malicious Java applets that attempt to exploit vulnerability CVE-2012-1723 in the Java Runtime Environment (JRE) to download and install files of an attacker’s choice onto the computer.

ms-caro-malware-full:malware-family="DealPly"

2013 VOL15 - Adware that displays offers related to the user’s web browsing habits. It may be bundled with certain third-party software installation programs.

ms-caro-malware-full:malware-family="Fareit"

2013 VOL15 - A malware family that has multiple components: a password stealing component that steals sensitive information and sends it to an attacker, and a DDoS component that could be used against other computers.

ms-caro-malware-full:malware-family="FastSaveApp"

2013 VOL15 - An adware program that displays offers related to the user’s web browsing habits. It may use the name 'SaveAs' or 'SaveByClick'.

ms-caro-malware-full:malware-family="FindLyrics"

2013 VOL15 - An adware program that displays ads related to the user’s web browsing habits.

ms-caro-malware-full:malware-family="Gamarue"

2013 VOL15 - A worm that is commonly distributed via exploit kits and social engineering. Variants have been observed stealing information from the local computer and communicating with command-and-control (C&C) servers managed by attackers.

ms-caro-malware-full:malware-family="Gisav"

2013 VOL15 - An adware program that displays offers related to the user’s web browsing habits. It can be downloaded from the program’s website, and can be bundled with some third-party software installation programs.

ms-caro-malware-full:malware-family="InfoAtoms"

2013 VOL15 - An adware program that displays advertisements related to the user’s web browsing habits and inserts advertisements into websites.

ms-caro-malware-full:malware-family="Perl/IRCbot.E"

2013 VOL15 - A backdoor trojan that drops other malicious software and connects to IRC servers to receive commands from attackers.
2013 VOL15 - An exploit that tries to check whether certain versions of Adobe Acrobat or Adobe Reader are installed on the computer. If so, it tries to install malware.

2013 VOL15 - Adware that displays Korean-language advertisements.

2013 VOL15 - An adware program that shows certain deals related to the search terms entered on any web page.

2013 VOL15 - A software installer with a Portuguese language user interface. It presents itself as a free movie download but bundles with it a number of programs that may charge for services.

2013 VOL15 - A generic detection for trojans that modify the HOSTS file on the computer to redirect or limit Internet traffic to certain sites.

2013 VOL15 - A ransomware family that targets users from certain countries or regions. It locks the computer and displays a location-specific webpage that covers the desktop and demands that the user pay a fine for the supposed possession of illicit material.

2013 VOL15 - A family of malware that perpetrates click fraud. It might be delivered to the computer via hack tools for the game CrossFire.

2013 VOL15 - A JavaScript trojan that attempts to redirect the browser to another website.

2013 VOL15 - A ransomware trojan that locks an affected user's computer and requests that the user send a text message to a premium-charge number to unlock it.

2013 VOL15 - A family of ransomware trojans that targets users from certain countries. It locks the computer and displays a localized message demanding the payment of a fine for the supposed possession of illicit material. Some variants may also take webcam screenshots, play audio
messages, or affect certain processes or drivers.

**ms-caro-malware-full:malware-family="Truado"**

2013 VOL15 - A trojan that poses as an update for certain Adobe software.

**ms-caro-malware-full:malware-family="Urausy"**

2013 VOL15 - A family of ransomware trojans that locks the computer and displays a localized message, supposedly from police authorities, demanding the payment of a fine for alleged criminal activity.

**ms-caro-malware-full:malware-family="Wecykler"**

2013 VOL15 - A family of worms that spread via removable drives, such as USB drives, that may stop security processes and other processes on the computer, and log keystrokes that are later sent to a remote attacker.

**ms-caro-malware-full:malware-family="Weelsof"**

2013 VOL15 - A family of ransomware trojans that targets users from certain countries. It locks the computer and displays a localized message demanding the payment of a fine for the alleged possession of illicit material. Some variants may take steps that make it difficult to run or update virus protection.

**ms-caro-malware-full:malware-family="Yakdowpe"**

2013 VOL15 - A family of trojans that connect to certain websites to silently download and install other programs without consent.

**ms-caro-malware-full:malware-family="Anogre"**

2013 VOL16 - A threat that exploits a vulnerability addressed by Microsoft Security Bulletin MS11-087. This vulnerability can allow a hacker to install programs, view, change, or delete data or create new accounts with full administrative privileges.

**ms-caro-malware-full:malware-family="Brantall"**

2013 VOL16 - A family of trojans that download and install other programs, including Win32/Sefnit and Win32/Rotbrow. Brantall often pretends to be an installer for other, legitimate programs.

**ms-caro-malware-full:malware-family="Comame"**

2013 VOL16 - A generic detection for a variety of threats.

**ms-caro-malware-full:malware-family="Crilock"**

2013 VOL16 - A ransomware family that encrypts the computer’s files and displays a webpage that demands a fee to unlock them.
ms-caro-malware-full:malware-family="CVE-2011-3874"

2013 VOL16 - A threat that attempts to exploit a vulnerability in the Android operating system to gain access to and control of the device Java/CVE-2012-1723. A family of malicious Java applets that attempt to exploit vulnerability CVE-2012-1723 in the Java Runtime Environment (JRE) in order to download and install files of an attacker’s choice onto the computer.

ms-caro-malware-full:malware-family="Deminnix"

2013 VOL16 - A trojan that uses the computer for Bitcoin mining and changes the home page of the web browser. It can accidentally be downloaded along with other files from torrent sites.

ms-caro-malware-full:malware-family="Detplock"

2013 VOL16 - A generic detection for a variety of threats.

ms-caro-malware-full:malware-family="Dircrypt"

2013 VOL16 - Ransomware that encrypts the user's files and demands payment to release them. It is distributed through spam email messages and can be downloaded by other malware.

ms-caro-malware-full:malware-family="DonxRef"

2013 VOL16 - A generic detection for malicious JavaScript objects that construct shellcode. The scripts may try to exploit vulnerabilities in Java, Adobe Flash Player, and Windows.

ms-caro-malware-full:malware-family="Faceliker"

2013 VOL16 - A malicious script that likes content on Facebook without the user's knowledge or consent.

ms-caro-malware-full:malware-family="FakeAlert"

2013 VOL16 - A malicious script that falsely claims that the computer is infected with viruses and that additional software is needed to disinfect it.

ms-caro-malware-full:malware-family="Jenxcus"

2013 VOL16 - A worm that gives an attacker control of the computer. It is spread by infected removable drives, like USB flash drives. It can also be downloaded within a torrent file.

ms-caro-malware-full:malware-family="Loktrom"

2013 VOL16 - Ransomware that locks the computer and displays a full-screen message pretending to be from a national police force, demanding payment to unlock the computer.

ms-caro-malware-full:malware-family="Miposa"

2013 VOL16 - A trojan that downloads and runs malicious Windows Scripting Host (.wsh) files.
2013 VOL16 - A family of trojans that perform DDoS (distributed denial of service) attacks, allow backdoor access and control, download and run files, and perform a number of other malicious activities on the computer.

2013 VOL16 - A trojan that silently downloads and installs other programs without consent.

2013 VOL16 - A worm that spreads through removable drives, network shares, and P2P programs. It can lower the computer's security settings and disable antivirus products.

2013 VOL16 - A trojan that installs browser add-ons that claim to offer protection from other add-ons. Rotbrow can change the browser's home page, and can install the trojan Win32/Sefnit. It is commonly installed by Win32/Brantall.

2013 VOL16 - A family of trojans that can allow backdoor access, download files, and use the computer and Internet connection for click fraud. Some variants can monitor web browsers and hijack search results.

2013 VOL16 - A webpage component of the Neutrino exploit kit. It checks the version numbers of popular applications installed on the computer, and attempts to install malware that targets vulnerabilities in the software.

2013 VOL16 - A threat that can change the start page of the user's web browser, and may download and install other files to the computer. It is installed by software bundlers that advertise free software or games.

2014 VOL17 - A browser add-on that displays lyrics for songs on YouTube, and displays advertisements in the browser window.

2014 VOL17 - Adware that displays extra ads as the user browses the Internet, without revealing where the ads are coming from. It may be bundled with some third-party software installation programs.
ms-caro-malware-full:malware-family="Axpergle"

2014 VOL17 - A detection for the Angler exploit kit, which exploits vulnerabilities in recent versions of Internet Explorer, Silverlight, Adobe Flash Player, and Java to install malware.

ms-caro-malware-full:malware-family="Bepush"

2014 VOL17 - A family of trojans that download and install add-ons for the Firefox and Chrome browsers that post malicious links to social networking sites, track browser usage, and redirect the browser to specific websites.

ms-caro-malware-full:malware-family="BetterSurf"

2014 VOL17 - Adware that displays unwanted ads on search engine results pages and other websites. It may be included with software bundles that offer free applications or games.

ms-caro-malware-full:malware-family="Bladabindi"

2014 VOL17 - A family of backdoors created by a malicious hacker tool called NJ Rat. They can steal sensitive information, download other malware, and allow backdoor access to an infected computer.

ms-caro-malware-full:malware-family="Caphaw"

2014 VOL17 - A family of backdoors that spread via Facebook, YouTube, Skype, removable drives, and drive-by download. They can make Facebook posts via the user's account, and may steal online banking details.

ms-caro-malware-full:malware-family="Clikug"

2014 VOL17 - A threat that uses a computer for click fraud. It has been observed using as much as a gigabyte of bandwidth per hour.

ms-caro-malware-full:malware-family="CVE-2014-0322"

This threat uses a vulnerability MS14-012, CVE-2014-0322 in Internet Explorer 9 and 10 to download and run files on your PC, including other malware.

ms-caro-malware-full:malware-family="CVE-2013-0422"

2014 VOL17 - A detection for a malicious Java applet that exploits the Java Runtime Environment (JRE) vulnerability described in CVE-2013-0422, addressed by an Oracle security update in January 2013.

ms-caro-malware-full:malware-family="Dowque"

2014 VOL17 - A generic detection for malicious files that are capable of installing other malware.
ms-caro-malware-full:malware-family="Fashack"

2014 VOL17 - A detection for the Safehack exploit kit, also known as Flashpack. It uses vulnerabilities in Adobe Flash Player, Java, and Silverlight to install malware on a computer.

ms-caro-malware-full:malware-family="Feven"

2014 VOL17 - A browser add-on for Internet Explorer, Firefox, or Chrome that displays ads on search engine results pages and other websites, and redirects the browser to specific websites.

ms-caro-malware-full:malware-family="Fiexp"

2014 VOL17 - A detection for the Fiesta exploit kit, which attempts to exploit Java, Adobe Flash Player, Adobe Reader, Silverlight, and Internet Explorer to install malware.

ms-caro-malware-full:malware-family="Filcout"

2014 VOL17 - An application that offers to locate and download programs to run unknown files. It has been observed installing variants in the Win32/Sefnit family.

ms-caro-malware-full:malware-family="Genasom"

2014 VOL17 - A ransomware family that locks a computer and demands money to unlock it. It usually targets Russian-language users, and may open pornographic websites.

ms-caro-malware-full:malware-family="Kegotip"

2014 VOL17 - A password-stealing trojan that can steal email addresses, personal information, or user account information for certain programs.

ms-caro-malware-full:malware-family="Krypterade"

2014 VOL17 - Ransomware that fraudulently claims a computer has been used for unlawful activity, locks it, and demands that the user pay to unlock it.

ms-caro-malware-full:malware-family="Lecpetex"

2014 VOL17 - A family of trojans that steal sensitive information, such as user names and passwords. It can also use a computer for Litecoin mining, install other malware, and post malicious content via the user’s Facebook account.

ms-caro-malware-full:malware-family="Lollipop"

2014 VOL17 - Adware that may be installed by third-party software bundlers. It displays ads based on search engine searches, which can differ by geographic location and may be pornographic.

ms-caro-malware-full:malware-family="Meadgive"

2014 VOL17 - A detection for the Redkit exploit kit, also known as Infinity and Goon. It attempts to
exploit vulnerabilities in programs such as Java and Silverlight to install other malware.

**ms-caro-malware-full:malware-family="Neclu"**

2014 VOL17 - A detection for the Nuclear exploit kit, which attempts to exploit vulnerabilities in programs such as Java and Adobe Reader to install other malware.

**ms-caro-malware-full:malware-family="Ogimant"**

2014 VOL17 - A threat that claims to help download items from the Internet, but actually downloads and runs files that are specified by a remote attacker.

**ms-caro-malware-full:malware-family="OptimizerElite"**

2014 VOL17 - A misleading program that uses legitimate files in the Prefetch folder to claim that the computer is damaged, and offers to fix the damage for a price.

**ms-caro-malware-full:malware-family="Pangimop"**

2014 VOL17 - A detection for the Magnitude exploit kit, also known as Popads. It attempts to exploit vulnerabilities in programs such as Java and Adobe Flash Player to install other malware.

**ms-caro-malware-full:malware-family="Phish"**

2014 VOL17 - A password-stealing malicious webpage, known as a phishing page, that disguises itself as a page from a legitimate website.

**ms-caro-malware-full:malware-family="Prast"**

2014 VOL17 - A generic detection for various password stealing trojans.

**ms-caro-malware-full:malware-family="Plugin"**

2014 VOL17 - A file infector that infects .exe and .dll files. It may also perform backdoor actions.

**ms-caro-malware-full:malware-family="Spacekito"**

2014 VOL17 - A threat that steals information about the computer and installs browser add-ons that display ads.

**ms-caro-malware-full:malware-family="Tranikpik"**

This threat is a backdoor that can give a hacker unauthorized access and control of your PC

**ms-caro-malware-full:malware-family="Wordinvop"**

2014 VOL17 - A detection for a specially-crafted Microsoft Word file that attempts to exploit the vulnerability CVE-2006-6456, addressed by Microsoft Security Bulletin MS07-014.
ms-caro-malware-full:malware-family="Zegost"

2014 VOL17 - A backdoor that allows an attacker to remotely access and control a computer.

ms-caro-malware-full:malware-family="Archost"

2014 VOL18 - A downloader that installs other programs on the computer without the user’s consent, including other malware.

ms-caro-malware-full:malware-family="Balamid"

2014 VOL18 - A trojan that can use the computer to click on online advertisements without the user’s permission or knowledge. This can earn money for a malicious hacker by making a website or application appear more popular than it is.

ms-caro-malware-full:malware-family="BeeVry"

2014 VOL18 - A trojan that modifies a number of settings to prevent the computer from accessing security-related websites, and lower the computer’s security.

ms-caro-malware-full:malware-family="Bondat"

2014 VOL18 - A family of threats that collects information about the computer, infects removable drives, and tries to stop the user from accessing files. It spreads by infecting removable drives, such as USB thumb drives and flash drives.

ms-caro-malware-full:malware-family="Bregent"

2014 VOL18 - A downloader that injects malicious code into legitimate processes such as explorer.exe and svchost.exe, and downloads other malware onto the computer.

ms-caro-malware-full:malware-family="Brolo"

2014 VOL18 - A ransomware family that locks the web browser and displays a message, often pretending to be from a law enforcement agency, demanding money to unlock the browser.

ms-caro-malware-full:malware-family="CostMin"

2014 VOL18 - An adware family that installs itself as a browser extension for Internet Explorer, Mozilla Firefox, and Google Chrome, and displays advertisements as the user browses the Internet.

ms-caro-malware-full:malware-family="CouponRuc"

2014 VOL18 - A browser modifier that changes browser settings and may also modify some computer and Internet settings.

ms-caro-malware-full:malware-family="Crastic"

2014 VOL18 - A trojan that sends sensitive information to a remote attacker, such as user names,
passwords and information about the computer. It can also delete System Restore points, making it harder to recover the computer to a pre-infected state.

**ms-caro-malware-full:malware-family="Crowti"**

2014 VOL18 - A ransomware family that encrypts files on the computer and demands that the user pay a fee to decrypt them, using Bitcoins.

**ms-caro-malware-full:malware-family="CVE-2013-1488"**

2014 VOL18 - A detection for threats that use a Java vulnerability to download and run files on your PC, including other malware. Oracle addressed the vulnerability with a security update in April 2013.

**ms-caro-malware-full:malware-family="DefaultTab"**

2014 VOL18 - A browser modifier that redirects web browser searches and prevents the user from changing browser settings.

**ms-caro-malware-full:malware-family="Ippedo"**

2014 VOL18 - A worm that can send sensitive information to a malicious hacker. It spreads through infected removable drives, such as USB flash drives.

**ms-caro-malware-full:malware-family="Kilim"**

2014 VOL18 - A trojan that hijacks the user’s Facebook, Twitter, or YouTube account to promote pages. It may post hyperlinks or like pages on Facebook, post comments on YouTube videos, or follow profiles and send direct messages on Twitter without permission.

**ms-caro-malware-full:malware-family="Mofin"**

2014 VOL18 - A worm that can steal files from your PC and send them to a malicious hacker. It spreads via infected removable drives, such as USB flash drives.

**ms-caro-malware-full:malware-family="MpTamperSrp"**

2014 VOL18 - A generic detection for an attempt to add software restriction policies to restrict Microsoft antimalware products, such as Microsoft Security Essentials and Windows Defender, from functioning properly.

**ms-caro-malware-full:malware-family="Mujormel"**

2014 VOL18 - A password stealer that can steal personal information, such as user names and passwords, and send the stolen information to a malicious hacker.

**ms-caro-malware-full:malware-family="PennyBee"**

2014 VOL18 - Adware that shows ads as the user browses the web. It can be installed from the
program’s website or bundled with some third-party software installation programs.

**ms-caro-malware-full:malware-family="Phdet"**

2014 VOL18 - A family of backdoor trojans that is used to perform distributed denial-of service (DDoS) attacks against specified targets.

**ms-caro-malware-full:malware-family="Rimod"**

2014 VOL18 - A generic detection for files that change various security settings in the computer Win32/Rotbrow. A trojan that installs browser add-ons that claim to offer protection from other add-ons. Rotbrow can change the browser’s home page, and can install the trojan Win32/Sefnit. It is commonly installed by Win32/Brantall.

**ms-caro-malware-full:malware-family="Sigru"**

2014 VOL18 - A virus that can stop some files from working correctly in Windows XP and earlier operating systems. It spreads by infecting the master boot record (MBR) on connected hard disks and floppy disks.

**ms-caro-malware-full:malware-family="SimpleShell"**

2014 VOL18 - A backdoor that can give a malicious hacker unauthorized access to and control of the computer.

**ms-caro-malware-full:malware-family="Softpulse"**

2014 VOL18 - A software bundler that no longer meets Microsoft detection criteria for unwanted software following a program update in September of 2014.

**ms-caro-malware-full:malware-family="SquareNet"**

2014 VOL18 - A software bundler that installs other unwanted software, including adware and click-fraud malware.

**ms-caro-malware-full:malware-family="Tugspay"**

2014 VOL18 - A downloader that spreads by posing as an installer for legitimate software, such as a Java update, or through other malware. When installed, it downloads unwanted software to the computer.

**ms-caro-malware-full:malware-family="Tupym"**

2014 VOL18 - A worm that copies itself to the system folder of the affected computer, and attempts to contact remote hosts.

**ms-caro-malware-full:malware-family="Vercuser"**

2014 VOL18 - A worm that typically spreads via drive-by download. It also receives commands from
a remote server, and has been observed dropping other malware on the infected computer.

**ms-caro-malware-full:malware-family="Adnel"**

2015 VOL19 - A family of macro malware that can download other threats to the computer, including TrojanDownloader:Win32/Drixed.

**ms-caro-malware-full:malware-family="Adodb"**

2015 VOL19 - A generic detection for script trojans that exploit a vulnerability in Microsoft Data Access Components (MDAC) that allows remote code execution. Microsoft released Security Bulletin MS06-014 in April 2006 to address the vulnerability.

**ms-caro-malware-full:malware-family="AlterbookSP"**

2015 VOL19 - A browser add-on that formerly displayed behaviors of unwanted software. Recent versions of the add-on no longer meet Microsoft detection criteria, and are no longer considered unwanted software.

**ms-caro-malware-full:malware-family="BrobanDel"**

2015 VOL19 - A family of trojans that can modify boletos bancários, a common payment method in Brazil. They can be installed on the computer when a user opens a malicious spam email attachment.

**ms-caro-malware-full:malware-family="CompromisedCert"**

2015 VOL19 - A detection for the Superfish VisualDiscovery advertising program that was preinstalled on some Lenovo laptops sold in 2014 and 2015. It installs a compromised trusted root certificate on the computer, which can be used to conduct man-in-the-middle attacks on the computer.

**ms-caro-malware-full:malware-family="CouponRuc_new"**

2015 VOL19 - A browser modifier that changes browser settings and may also modify some computer and Internet settings.

**ms-caro-malware-full:malware-family="CVE-2014-6332"**

2015 VOL19 - This threat uses a Microsoft vulnerability MS14-064 to download and run files on your PC, including other malware.

**ms-caro-malware-full:malware-family="Dyzap"**

2015 VOL19 - A threat that steals login credentials for a long list of banking websites using man-in-the-browser (MITB) attacks. It is usually installed on the infected computer by TrojanDownloader:Win32/Upatre.
ms-caro-malware-full:malware-family="EoRezo"

2015 VOL19 - Adware that displays targeted advertising to affected users while browsing the Internet, based on downloaded pre-configured information.

ms-caro-malware-full:malware-family="FakeCall"

2015 VOL19 - This threat is a webpage that claims your PC is infected with malware. It asks you to phone a number to receive technical support to help remove the malware.

ms-caro-malware-full:malware-family="Foosace"

2015 VOL19 - A threat that creates files on the compromised computer and contacts a remote host. Observed in the STRONTIUM APT.

ms-caro-malware-full:malware-family="IeEnablerCby"

2015 VOL19 - A browser modifier that installs additional browser addons without the user's consent. It bypasses the normal prompts or dialogs that ask for consent to install add-ons.

ms-caro-malware-full:malware-family="InstalleRex"

2015 VOL19 - A software bundler that installs unwanted software, including Win32/CouponRuc and Win32/SaverExtension. It alters its own 'Installed On' date in Programs and Features to make it more difficult for a user to locate it and remove it.

ms-caro-malware-full:malware-family="JackTheRipper"

2015 VOL19 - A virus that can stop some files from working correctly in Windows XP and earlier operating systems. It spreads by infecting the master boot record (MBR) on connected hard disks and floppy disks.

ms-caro-malware-full:malware-family="Kenilfe"

2015 VOL19 - A worm written in AutoCAD Lisp that only runs if AutoCAD is installed on the computer or network. It renames and deletes certain AutoCAD files, and may download and execute arbitrary files from a remote host.

ms-caro-malware-full:malware-family="KipodToolsCby"

2015 VOL19 - A browser modifier that installs additional browser addons without the user's consent. It bypasses the normal prompts or dialogs that ask for consent to install add-ons.

ms-caro-malware-full:malware-family="Macoute"

2015 VOL19 - A worm that can spread itself to removable USB drives, and may communicate with a remote host.
ms-caro-malware-full:malware-family="NeutrinoEK"
2015 VOL19 - This threat is a webpage that spreads the exploit kit known as Neutrino.

ms-caro-malware-full:malware-family="Peaac"
2015 VOL19 - A generic detection for various threats that display trojan characteristics.

ms-caro-malware-full:malware-family="Peals"
2015 VOL19 - A generic detection for various threats that display trojan characteristics.

ms-caro-malware-full:malware-family="Radonskra"
2015 VOL19 - A family of threats that perform a variety of malicious acts, including stealing information about the computer, showing extra advertisements as the user browses the web, performing click fraud, and downloading other programs without consent.

ms-caro-malware-full:malware-family="SaverExtension"
2015 VOL19 - A browser add-on that shows ads in the browser without revealing their source, and prevents itself from being removed normally.

ms-caro-malware-full:malware-family="Sdbby"
2015 VOL19 - A threat that exploits a bypass to gain administrative privileges on a machine without going through a User Access Control prompt.

ms-caro-malware-full:malware-family="Simda"
2015 VOL19 - A threat that can give an attacker backdoor access and control of an infected computer. It can then steal passwords and gather information about the computer to send to the attacker.

ms-caro-malware-full:malware-family="Skeeyah"
2015 VOL19 - A generic detection for various threats that display trojan characteristics.

ms-caro-malware-full:malware-family="Wordjmp"
2015 VOL19 - An exploit that targets a vulnerability in Word 2002 and 2003 that could allow an attacker to remotely execute arbitrary code. Microsoft released Security Bulletin MS06-027 in June 2006 to address the vulnerability.

ms-caro-malware-full:malware-family="Bayads"
2015 VOL20 - A program that displays ads as the user browses the web. It can be bundled with other software. It may call itself bdraw, delta, dlclient, Pay-ByAds, or pricehorse in Programs and Features.
2015 VOL20 - This application can also affect the quality of your computing experience. We have seen this leading to the following potentially unwanted behaviors on PCs: Adds files that run at startup, Modifies boot configuration data, Modifies file associations, Injects into other processes on your system, Changes browser settings, Adds a local proxy, Modifies your system DNS settings, Stops Windows Update, Disables User Access Control (UAC), These applications are most commonly software bundlers or installers for applications such as toolbars, adware, or system optimizers. We have observed this application installing software that you might not have intended on your PC.

2015 VOL20 - Behavioral detection of certain files acting in a malicious way.

2015 VOL20 - These programs are most commonly software bundlers or installers for software such as toolbars, adware, or system optimizers. The software might modify your homepage, your search provider, or perform other actions that you might not have intended.

2015 VOL20 - A browser modifier that installs browser add-ons without obtaining the user's consent. The add-ons show extra advertisements as the user browses the web, and can inject additional ads into web search results pages.

2015 VOL20 - A threat that is often used in targeted attacks. It can give an attacker access to the computer to download and run files, steal domain credentials, and perform other malicious actions.

2015 VOL20 - A threat that uses an infected Microsoft Office file to download other malware onto the computer. It can arrive as a spam email attachment, usually as a Word file (.doc).

2015 VOL20 - A trojan is a type of malware that can't spread on its own. It relies on you to run them on your PC by mistake, or visit a hacked or malicious webpage. They can steal your personal information, download more malware, or give a malicious hacker access to your PC.

2015 VOL20 - A software bundler that does not provide the user with the option to decline installation of unwanted software.
**ms-caro-malware-full:malware-family="Fourthrem"**

2015 VOL20 - A program that installs unwanted software without adequate consent on the computer at the same time as the software the user is trying to install.

**ms-caro-malware-full:malware-family="Hao123"**

2015 VOL20 - This threat is a modified Internet Explorer shortcut that changes your Internet Explorer homepage. It might arrive on your PC through bundlers that offer free software. The threat will run a separate threat-related file that changes the Internet Explorer.

**ms-caro-malware-full:malware-family="Mizenota"**

2015 VOL20 - This program is a software bundler that installs unwanted software on your PC at the same time as the software you are trying to install. It may install one of the following:

- BrowserModifier:Win32/SupTab,
- BrowserModifier:Win32/Sasquor,
- BrowserModifier:Win32/Smudplu,
- SoftwareBundler:Win32/Pokavampo,
- BrowserModifier:Win32/Shopperz,
- Adware:Win32/EoRezo

**ms-caro-malware-full:malware-family="Mytonel"**

2015 VOL20 - A program that downloads and installs other programs onto the computer without the user's consent, including other malware.

**ms-caro-malware-full:malware-family="OutBrowse"**

2015 VOL20 - A software bundler that installs additional unwanted programs alongside software that the user wishes to install. It can remove or hide the installer's close button, leaving no way to decline the additional applications.

**ms-caro-malware-full:malware-family="Peapoon"**

2015 VOL20 - An adware program that shows users ads that they cannot control as they browse the web. It may identify itself as Coupon in Programs and Features.

**ms-caro-malware-full:malware-family="Pokki"**

2015 VOL20 - A browser add-on that formerly displayed behaviors of unwanted software. Recent versions of the add-on no longer meet Microsoft detection criteria, and are no longer considered unwanted software.

**ms-caro-malware-full:malware-family="Putalol"**

2015 VOL20 - An adware program that shows users ads that they cannot control as they browse the web. It may identify itself as Lolliscan in Programs and Features.

**ms-caro-malware-full:malware-family="SpigotSearch"**

2015 VOL20 - This application can affect the quality of your computing experience. For example,
some potentially unwanted applications can: Install additional bundled software, Modify your homepage, Modify your search provider. These applications are most commonly software bundlers or installers for applications such as toolbars, adware, or system optimizers. We have observed this application installing software that you might not have intended on your PC.

**ms-caro-malware-full:malware-family="Spursint"**

2015 VOL20 - This threat has been detected as one of the executable malware that are distributed through URLs.

**ms-caro-malware-full:malware-family="Sulunch"**

2015 VOL20 - A generic detection for a group of trojans that perform a number of common malware behaviors.

**ms-caro-malware-full:malware-family="SupTab"**

2015 VOL20 - A browser modifier that installs itself and changes the browser's default search provider, without obtaining the user's consent for either action.

**ms-caro-malware-full:malware-family="Sventore"**

2015 VOL20 - This trojan can install other malware or unwanted software onto your PC.

**ms-caro-malware-full:malware-family="Tillail"**

2015 VOL20 - A software bundler that installs unwanted software alongside the software the user is trying to install. It has been observed to install the browser modifier Win32/SupTab.

**ms-caro-malware-full:malware-family="VOPackage"**

2015 VOL20 - This application can also affect the quality of your computing experience. We have seen this leading to the following potentially unwanted behaviors on PCs: Adds files that run at startup, Installs a driver, Injects into other processes on your system, Injects into browsers, Changes browser settings, Changes browser shortcuts, Installs browser extensions, Adds a local proxy, Tampers with root certificate trust, Modifies the system hosts file, Modifies your system DNS settings, Disables anti-virus products, Tampers with system Group Policy settings, These applications are most commonly software bundlers or installers for applications such as toolbars, adware, or system optimizers. We have observed this application installing software that you might not have intended on your PC.

**ms-caro-malware-full:malware-family="Xiazai"**

2015 VOL20 - A program that installs unwanted software on the computer at the same time as the software the user is trying to install, without adequate consent.
The NATO namespace is available in JSON format at [this location](#). The JSON format can be freely reused in your application or automatically enabled in MISP taxonomy.

NATO classification markings:

- `nato:classification="CTS"`  
  COSMIC TOP SECRET

- `nato:classification="CTS-B"`  
  COSMIC TOP SECRET BOHEMIA

- `nato:classification="NS"`  
  NATO SECRET

- `nato:classification="NC"`  
  NATO CONFIDENTIAL

- `nato:classification="NR"`  
  NATO RESTRICTED

- `nato:classification="NU"`  
  NATO UNCLASSIFIED

- `nato:classification="CTS-A"`  
  COSMIC TOP SECRET ATOMAL

- `nato:classification="NS-A"`  
  SECRET ATOMAL

- `nato:classification="NC-A"`  
  CONFIDENTIAL ATOMAL
nis

nis namespace available in JSON format at this location. The JSON format can be freely reused in your application or automatically enabled in MISP taxonomy.

The taxonomy is meant for large scale cybersecurity incidents, as mentioned in the Commission Recommendation of 13 September 2017, also known as the blueprint. It has two core parts: The nature of the incident, i.e. the underlying cause, that triggered the incident, and the impact of the incident, i.e. the impact on services, in which sector(s) of economy and society.

impact-sectors-impacted

The impact on services, in the real world, indicating the sectors of the society and economy, where there is an impact on the services.

nis:impact-sectors-impacted="energy"

Energy

The impact is in the Energy sector and its subsectors such as electricity, oil, or gas, for example, impacting electricity suppliers, power plants, distribution system operators, transmission system operators, oil transmission, natural gas distribution, etc.

nis:impact-sectors-impacted="transport"

Transport

The impact is in the transport sector and subsectors such as air, rail, water, road, for example, impacting air traffic control systems, railway companies, maritime port authorities, road traffic management systems, etc.

nis:impact-sectors-impacted="banking"

Banking

The impact is in the Banking sector, for example impacting banks, online banking, credit services, payment services, etc.

nis:impact-sectors-impacted="financial"

Financial

The impact is in the Financial market infrastructure sector, for example, impacting traders, trading platforms, clearing services, etc.

nis:impact-sectors-impacted="health"

Health
The impact is in the Health sector, for example, impacting hospitals, medical devices, medicine supply, pharmacies, etc.

**nis:impact-sectors-impacted="drinking-water"**

Drinking water

The impact is in the Drinking water supply and distribution sector, for example impacting drinking water supply, drinking water distribution systems, etc.

**nis:impact-sectors-impacted="digital-infrastructure"**

Digital infrastructure

The impact is in the Digital infrastructure sector, for example impacting internet exchange points, domain name systems, top level domain registries, etc.

**nis:impact-sectors-impacted="communications"**

Communications

The impact is in the Electronic communications sector, for example, impacting mobile network services, fixed telephone lines, satellite communications, etc.

**nis:impact-sectors-impacted="digital-services"**

Digital services

The impact is in the digital services sector, for example, impacting cloud services, online market places, online search engines, etc.

**nis:impact-sectors-impacted="trust-and-identification-services"**

Trust and identification services

The impact is in the electronic trust and identification services, for example, impacting certificate authorities, electronic identity systems, smartcards, etc.

**nis:impact-sectors-impacted="government"**

Government

The impact is in the government sector, for example, impacting the functioning of public administrations, elections, or emergency services

**impact-severity**

The severity of the impact, nationally, in the real world, for society and/or the economy, i.e. the level of disruption for the country or a large region of the country, the level of risks for health and/or
safety, the level of physical damages and/or financial costs.

- **nis:impact-severity**="red"
  - Red
  - Very large impact

- **nis:impact-severity**="yellow"
  - Yellow
  - Large impact.

- **nis:impact-severity**="green"
  - Green
  - Minor impact.

- **nis:impact-severity**="white"
  - White
  - No impact.

**impact-outlook**

The outlook for the incident, the prognosis, for the coming hours, considering the impact in the real world, the impact on services, for the society and/or the economy.

- **nis:impact-outlook**="improving"
  - Improving
  - Severity of impact is expected to decrease in the next 6 hours.

- **nis:impact-outlook**="stable"
  - Stable
  - Severity of impact is expected to remain the same in the 6 hours.
nis:impact-outlook="worsening"

Worsening

Severity of impact is expected to increase in the next 6 hours.

nature-root-cause

The Root cause category is used to indicate what type event or threat triggered the incident.

⚠️ Exclusive flag set which means the values or predicate below must be set exclusively.

nis:nature-root-cause="system-failures"

System failures

The incident is due to a failure of a system, i.e. without external causes. For example a hardware failure, software bug, a flaw in a procedure, etc. triggered the incident.

nis:nature-root-cause="natural-phenomena"

Natural phenomena

The incident is due to a natural phenomenon. For example a storm, lightning, solar flare, flood, earthquake, wildfire, etc. triggered the incident.

nis:nature-root-cause="human-errors"

Human errors

The incident is due to a human error, i.e. system worked correctly, but was used wrong. For example, a mistake, or carelessness triggered the incident.

nis:nature-root-cause="malicious-actions"

Malicious actions

The incident is due to a malicious action. For example, a cyber-attack or physical attack, vandalism, sabotage, insider attack, theft, etc., triggered the incident.

nis:nature-root-cause="third-party-failures"

Third party failures

The incident is due to a disruption of a third party service, like a utility. For example a power cut, or an internet outage, etc. triggered the incident.
nature-severity

The severity of the threat is used to indicate, from a technical perspective, the potential impact, the risk associated with the threat. For example, the severity is high if an upcoming storm is exceptionally strong, if an observed DDoS attack is exceptionally powerful, or if a software vulnerability is easily exploited and present in many different systems. For example, in certain situations a critical software vulnerability would require concerted and urgent work by different organizations.

exclusive

Exclusive flag set which means the values or predicate below must be set exclusively.

nis:nature-severity="high"

High

High severity, potential impact is high.

nis:nature-severity="medium"

Medium

Medium severity, potential impact is medium.

nis:nature-severity="low"

Low

Low severity, potential impact is low.

test

A test predicate meant to test interoperability between tools. Tags contained within this predicate are to be ignored.

nis:test="test"

Test

Test value meant for testing interoperability. Tags with this value are to be ignored.

open_threat

open_threat namespace available in JSON format at this location. The JSON format can be freely reused in your application or automatically enabled in MISP taxonomy.
threat-category

open_threat:threat-category="Physical"

Threats to the confidentiality, integrity, or availability of information systems that are physical in nature. These threats generally describe actions that could lead to the theft, harm, or destruction of information systems.

open_threat:threat-category="Resource"

Threats to the confidentiality, integrity, or availability of information systems that are the result of a lack of resources required by the information system. These threats often cause failures of information systems through a disruption of resources required for operations.

open_threat:threat-category="Personal"

Threats to the confidentiality, integrity, or availability of information systems that are the result of failures or actions performed by an organization's personnel. These threats can be the result of deliberate or accidental actions that cause harm to information systems.

open_threat:threat-category="Technical"

Threats to the confidentiality, integrity, or availability of information systems that are technical in nature. These threats are most often considered when identifying threats and constitute the technical actions performed by a threat actor that can cause harm to an information system.

threat-name

open_threat:threat-name="PHY-001"

Loss of Property - Rating: 5.0

open_threat:threat-name="PHY-002"

Theft of Property - Rating: 5.0

open_threat:threat-name="PHY-003"

Accidental Destruction of Property - Rating: 3.0
open_threat:threat-name="PHY-004"
Natural Destruction of Property - Rating: 3.0

open_threat:threat-name="PHY-005"
Intentional Destruction of Property - Rating: 2.0

open_threat:threat-name="PHY-006"
Intentional Sabotage of Property - Rating: 2.0

open_threat:threat-name="PHY-007"
Intentional Vandalism of Property - Rating: 2.0

open_threat:threat-name="PHY-008"
Electrical System Failure - Rating: 4.0

open_threat:threat-name="PHY-009"
Heating, Ventilation, Air Conditioning (HVAC) Failure - Rating: 3.0

open_threat:threat-name="PHY-010"
Structural Facility Failure - Rating: 2.0

open_threat:threat-name="PHY-011"
Water Distribution System Failure - Rating: 2.0

open_threat:threat-name="PHY-012"
Sanitation System Failure - Rating: 1.0

open_threat:threat-name="PHY-013"
Natural Gas Distribution Failure - Rating: 1.0

open_threat:threat-name="PHY-014"
Electronic Media Failure - Rating: 3.0

open_threat:threat-name="RES-001"
Disruption of Water Resources - Rating: 2.0
Disruption of Fuel Resources - Rating: 2.0

Disruption of Materials Resources - Rating: 2.0

Disruption of Electrical Resources - Rating: 4.0

Disruption of Transportation Services - Rating: 1.0

Disruption of Communications Services - Rating: 4.0

Disruption of Emergency Services - Rating: 1.0

Disruption of Governmental Services - Rating: 1.0

Supplier Viability - Rating: 2.0

Supplier Supply Chain Failure - Rating: 2.0

Logistics Provider Failures - Rating: 1.0

Logistics Route Disruptions - Rating: 1.0

Technology Services Manipulation - Rating: 3.0
Personnel Labor / Skills Shortage - Rating: 5.0
Loss of Personnel Resources - Rating: 3.0
Disruption of Personnel Resources - Rating: 3.0
Social Engineering of Personnel Resources - Rating: 4.0
Negligent Personnel Resources - Rating: 4.0
Personnel Mistakes / Errors - Rating: 4.0
Personnel Inaction - Rating: 3.0
Organizational Fingerprinting via Open Sources - Rating:
System Fingerprinting via Open Sources - Rating: 2.0
System Fingerprinting via Scanning - Rating: 2.0
System Fingerprinting via Sniffing - Rating: 2.0
Credential Discovery via Open Sources - Rating: 4.0
Credential Discovery via Scanning - Rating: 3.0

Credential Discovery via Sniffing - Rating: 4.0

Credential Discovery via Brute Force - Rating: 4.0

Credential Discovery via Cracking - Rating: 4.0

Credential Discovery via Guessing - Rating: 2.0

Credential Discovery via Pre-Computational Attacks - Rating: 3.0

Misuse of System Credentials - Rating: 3.0

Escalation of Privilege - Rating: 5.0

Abuse of System Privileges - Rating: 4.0

Memory Manipulation - Rating: 4.0

Cache Poisoning - Rating: 3.0

Physical Manipulation of Technical Device - Rating: 2.0
Manipulation of Trusted System - Rating: 4.0

Cryptanalysis - Rating: 1.0

Data Leakage / Theft - Rating: 3.0

Denial of Service - Rating: 2.0

Maintaining System Persistence - Rating: 5.0

Manipulation of Data in Transit / Use - Rating: 2.0

Capture of Data in Transit / Use via Sniffing - Rating: 3.0

Capture of Data in Transit / Use via Debugging - Rating: 2.0

Capture of Data in Transit / Use via Keystroke Logging - Rating: 3.0

Replay of Data in Transit / Use - Rating: 2.0

Misdelivery of Data - Rating: 2.0

Capture of Stored Data - Rating: 3.0
Manipulation of Stored Data - Rating: 3.0

Application Exploitation via Input Manipulation - Rating: 5.0

Application Exploitation via Parameter Injection - Rating: 4.0

Application Exploitation via Code Injection - Rating: 4.0

Application Exploitation via Command Injection - Rating: 4.0

Application Exploitation via Path Traversal - Rating: 3.0

Application Exploitation via API Abuse - Rating: 3.0

Application Exploitation via Fuzzing - Rating: 3.0

Application Exploitation via Reverse Engineering - Rating: 3.0

Application Exploitation via Resource Location Guessing - Rating: 2.0

Application Exploitation via Source Code Manipulation - Rating: 3.0

Application Exploitation via Authentication Bypass - Rating: 2.0
osint namespace available in JSON format at this location. The JSON format can be freely reused in your application or automatically enabled in MISP taxonomy.

Open Source Intelligence - Classification (MISP taxonomies)

**source-type**

*osint:source-type*="blog-post"

Blog post

*osint:source-type*="microblog-post"

Microblog post like Twitter

*osint:source-type*="technical-report"

Technical or analysis report

*osint:source-type*="presentation"

Presentation or slidedeck

*osint:source-type*="news-report"

News report

*osint:source-type*="pastie-website"

Pastie-like website

*osint:source-type*="electronic-forum"

Electronic forum

*osint:source-type*="mailing-list"

Mailing-list

*osint:source-type*="block-or-filter-list"

Block or Filter List
Source code repository

Infrastructure allowing the gathering of the evidences such as open directories, public web services or left over on public services

Expansion

Automatic analysis including dynamic analysis or sandboxes output

Automatic collection including honeypots, spamtraps or equivalent technologies

Manual analysis or investigation

Manual collection from crawlers, honeypots, spamtraps, gathering tools or equivalent technologies

Unknown

Other source not specified in this list

Perpetual

Information available publicly on long-term

Ephemeral
Information available publicly on short-term

certainty

osint:certainty="100"
Certainty (probability equals 1 - 100%)
Certainty
Associated numerical value="100"

osint:certainty="93"
Almost certain (probability equals 0.93 - 93%)
Almost certain
Associated numerical value="93"

osint:certainty="75"
Probable (probability equals 0.75 - 75%)
Probable
Associated numerical value="75"

osint:certainty="50"
Chances about even (probability equals 0.50 - 50%)
Chances about even
Associated numerical value="50"

osint:certainty="30"
Probably not (probability equals 0.30 - 30%)
Probably not
Associated numerical value="30"

osint:certainty="7"
Almost certainly not (probability equals 0.07 - 7%)
Almost certainly not
Associated numerical value="7"
Impossibility (probability equals 0 - 0%)

passivetotal

passivetotal namespace available in JSON format at this location. The JSON format can be freely reused in your application or automatically enabled in MISP taxonomy.

Tags from RiskIQ's PassiveTotal service

sinkholed

passivetotal:sinkholed="yes"
Yes

passivetotal:sinkholed="no"
No

ever-compromised

passivetotal:ever-compromised="yes"
Yes

passivetotal:ever-compromised="no"
No

dynamic-dns

passivetotal:dynamic-dns="yes"
Yes

passivetotal:dynamic-dns="no"
No
Penetration test (pentest) classification.

**Approach**

This group is dealing with different types of pentest.

**pentest:approach="blackbox"**

Blackbox penetration test requires no prior information about the target network or application and is actually performed keeping it as a real-world hacker attack scenario. ([https://www.evolution-sec.com/en/products/blackbox-penetration-testing](https://www.evolution-sec.com/en/products/blackbox-penetration-testing))

**pentest:approach="greybox"**

Gray box testing lies between black and white. Testers will have knowledge of some areas but not others. These areas are defined at the start of an engagement. ([https://www.intelisecure.com/security-assessments-pen-testing/approaches/](https://www.intelisecure.com/security-assessments-pen-testing/approaches/))

**pentest:approach="whitebox"**

White box, or authenticated tests, target the security of your underlying technology with full knowledge of your IT department. Information typically shared with the tester includes: network diagrams, IP addresses, system configurations, and access credentials. ([https://www.intelisecure.com/security-assessments-pen-testing/approaches/](https://www.intelisecure.com/security-assessments-pen-testing/approaches/))
Vulnerability scanning is a security technique used to identify security weaknesses in a computer system. (https://www.techopedia.com/definition/4160/vulnerability-scanning)

A red team is an group that challenges an organization to improve its effectiveness by assuming an adversarial role or point of view without any predefined scope. (https://en.wikipedia.org/wiki/Red_team)

Automated tool that perform network checks

A scan against multiple ports of a single IP.

A scan against a group of IPs for a single port.

It is the discovery of networks and machines with services.

Vulnerability scanning is a security technique used to identify security weaknesses in a computer system. (https://www.techopedia.com/definition/4160/vulnerability-scanning)

Exploitation of a vulnerability

When a piece of code doesn’t verify the type of object that is passed to it, and uses it blindly without type-checking, it leads to type confusion. (https://cloudblogs.microsoft.com/microsoftsecure/2015/06/17/understanding-type-confusion-vulnerabilities-cve-2015-0336/)

The format string exploit occurs when the submitted data of an input string leads to arbitrary read or write in the memory. In this way, the attacker could execute code, read the stack, or cause a segmentation fault in the running application, causing new behaviors that could compromise the security or the stability of the system. (https://www.owasp.org/index.php/Format_string_attack)
pentest:exploit="stack_overflow"

In software, a stack overflow is type of buffer overflow that occurs if the call stack pointer exceeds the stack bound. (https://en.wikipedia.org/wiki/Stack_overflow)

pentest:exploit="heap_overflow"

A heap overflow is a type of buffer overflow that occurs in the heap data area. (https://en.wikipedia.org/wiki/Heap_overflow)

pentest:exploit="heap_spraying"

Heap spraying is a technique used in exploits to facilitate arbitrary code execution. In general, code that sprays the heap attempts to put a certain sequence of bytes at a predetermined location in the memory of a target process by having it allocate (large) blocks on the process’s heap and fill the bytes in these blocks with the right values. (https://en.wikipedia.org/wiki/Heap_spraying)

pentest:exploit="fuzzing"

Fuzzing is an automated software testing technique that involves providing invalid, unexpected, or random data as inputs to a computer program. (https://en.wikipedia.org/wiki/Fuzzing)

pentest:exploit="ROP"

The Return-Oriented Programming (ROP) is a computer security exploit technique in which the attacker uses control of the call stack to indirectly execute cherry-picked machine instructions or groups of machine instructions immediately prior to the return instruction in subroutines within the existing program code, in a way similar to the execution of a threaded code interpreter. (https://en.wikipedia.org/wiki/Return-oriented_programming)

pentest:exploit="null_pointer_dereference"

A NULL pointer dereference occurs when the application dereferences a pointer that it expects to be valid, but is NULL, typically causing a crash or exit. (https://cwe.mitre.org/data/definitions/476.html)

post_exploitation

Utilizing post exploitation techniques will ensure that a penetration tester maintains some level of access and can potentially lead to deeper footholds into the targets trusted infrastructure. (https://www.offensive-security.com/metasploit-unleashed/msf-post-exploitation/)

pentest:post_exploitation="privilege_escalation"

Privilege escalation is the act of exploiting a bug, design flaw or configuration oversight in an operating system or software application to gain elevated access to resources that are normally protected from an application or user. (https://en.wikipedia.org/wiki/Privilege_escalation)
**pentest:post_exploitation="pivoting"**

Pivoting refers to a method used by penetration testers that uses the compromised system to attack other systems on the same network to avoid restrictions such as firewall configurations, which may prohibit direct access to all machines. ([https://en.wikipedia.org/wiki/Exploit_(computer_security)#Pivoting](https://en.wikipedia.org/wiki/Exploit_(computer_security)#Pivoting))

**pentest:post_exploitation="password_cracking"**

Password cracking is the process of recovering passwords from data that have been stored in or transmitted by a computer system. ([https://en.wikipedia.org/wiki/Password_cracking](https://en.wikipedia.org/wiki/Password_cracking))

**pentest:post_exploitation="persistence"**

The persistence is when a penetration tester let him a way to keep its exploitation on a machine or a domain even if the system is rebooted.

**pentest:post_exploitation="data_exfiltration"**

After an exploitation of a machine, a penetration tester will try to exfiltrate sensitive data.

**web**

This is group is dealing with web vulnerabilities

**pentest:web="injection"**

Code injection is the exploitation of a computer bug that is caused by processing invalid data. Injection is used by an attacker to introduce (or "inject") code into a vulnerable computer program and change the course of execution. ([https://en.wikipedia.org/wiki/Code_injection](https://en.wikipedia.org/wiki/Code_injection))

**pentest:web="SQLi"**

An SQL injection is a computer attack in which malicious code is embedded in a poorly-designed application and then passed to the SQL backend database. The malicious data then produces database query results or actions that should never have been executed. ([https://www.techopedia.com/definition/4126/sql-injection](https://www.techopedia.com/definition/4126/sql-injection))

**pentest:web="NoSQLi"**

An NoSQL injection is a computer attack in which malicious code is embedded in a poorly-designed application and then passed to the NoSQL backend database. The malicious data then produces database query results or actions that should never have been executed.

**pentest:web="XML injection"**

XML Injection is an attack technique used to manipulate or compromise the logic of an XML application or service. The injection of unintended XML content and/or structures into an XML
message can alter the intend logic of the application. Further, XML injection can cause the insertion of malicious content into the resulting message/document. (http://projects.webappsec.org/w/page/13247004/XML%20Injection)

pentest:web="CSRF"

Cross-Site Request Forgery (CSRF) is an attack that forces an end user to execute unwanted actions on a web application in which they're currently authenticated. CSRF attacks specifically target state-changing requests, not theft of data, since the attacker has no way to see the response to the forged request. (https://www.owasp.org/index.php/Cross-Site_Request_Forgery_(CSRF))

pentest:web="SSRF"

Server Side Request Forgery (SSRF) refers to an attack where in an attacker is able to send a crafted request from a vulnerable web application. SSRF is usually used to target internal systems behind firewalls that are normally inaccessible to an attacker from the external network. (https://www.acunetix.com/blog/articles/server-side-request-forgery-vulnerability/)

pentest:web="XSS"

Cross-site scripting (XSS) is a security breach that takes advantage of dynamically generated Web pages. In an XSS attack, a Web application is sent with a script that activates when it is read by an unsuspecting user's browser or by an application that has not protected itself against cross-site scripting. (https://www.webopedia.com/TERM/X/XSS.html)

pentest:web="file_inclusion"

The File Inclusion vulnerability allows an attacker to include a file, usually exploiting a "dynamic file inclusion" mechanisms implemented in the target application. The vulnerability occurs due to the use of user-supplied input without proper validation. (https://www.owasp.org/index.php/Testing_for_Local_File_Inclusion)

pentest:web="web_tree_discovery"

A web tree discovery is a brute force directories and files names on web/application server

pentest:web="bruteforce"

A brute-force attack consists of an attacker trying many passwords or passphrases with the hope of eventually guessing correctly. (https://en.wikipedia.org/wiki/Brute-force_attack)

pentest:web="fuzzing"

Fuzzing is an automated software testing technique that involves providing invalid, unexpected, or random data as inputs to a computer program. (https://en.wikipedia.org/wiki/Fuzzing)
This is group is dealing with network vulnerabilities

**pentest:network="sniffing"**


**pentest:network="spoofing"**

Spoofing, in general, is a fraudulent or malicious practice in which communication is sent from an unknown source disguised as a source known to the receiver. Spoofing is most prevalent in communication mechanisms that lack a high level of security. ([https://www.techopedia.com/definition/5398/spoofing](https://www.techopedia.com/definition/5398/spoofing))

**pentest:network="man_in_the_middle"**

man-in-the-middle attack (MITM) is an attack where the attacker secretly relays and possibly alters the communication between two parties who believe they are directly communicating with each other. ([https://en.wikipedia.org/wiki/Man-in-the-middle_attack](https://en.wikipedia.org/wiki/Man-in-the-middle_attack))

**pentest:network="network_discovery"**

It is the discovery of networks and machines with services.

**social_engineering**

Social engineering is an attack vector that relies heavily on human interaction and often involves tricking people into breaking normal security procedures. ([https://krashconsulting.com/index.php/services/sea/](https://krashconsulting.com/index.php/services/sea/))

**pentest:social_engineering="phishing"**

Phishing is the attempt to obtain sensitive information such as usernames, passwords, and credit card details (and money), often for malicious reasons, by disguising as a trustworthy entity in an electronic communication. ([https://en.wikipedia.org/wiki/Phishing](https://en.wikipedia.org/wiki/Phishing))

**pentest:social_engineering="malware"**

Malware, short for malicious software, is an umbrella term used to refer to a variety of forms of harmful or intrusive software, including computer viruses, worms, Trojan horses, ransomware, spyware, adware, scareware, and other malicious programs. ([https://en.wikipedia.org/wiki/Malware](https://en.wikipedia.org/wiki/Malware))
vulnerability

This is group is dealing with the classification of weaknesses and vulnerabilities

pentest:vulnerability="CWE"

Targeted to developers and security practitioners, the Common Weakness Enumeration (CWE) is a formal list of software weakness types. (https://cwe.mitre.org/about/)

pentest:vulnerability="CVE"

Common Vulnerabilities and Exposures (CVE) is a dictionary-type list of standardized names for vulnerabilities and other information related to security exposures. (https://en.wikipedia.org/wiki/Common_Vulnerabilities_and_Exposures)

priority-level

priority-level namespace available in JSON format at this location. The JSON format can be freely reused in your application or automatically enabled in MISP taxonomy.

After an incident is scored, it is assigned a priority level. The six levels listed below are aligned with NCCIC, DHS, and the CISS to help provide a common lexicon when discussing incidents. This priority assignment drives NCCIC urgency, pre-approved incident response offerings, reporting requirements, and recommendations for leadership escalation. Generally, incident priority distribution should follow a similar pattern to the graph below. Based on https://www.us-cert.gov/NCCIC-Cyber-Incident-Scoring-System.

Exclusive flag set which means the values or predicate below must be set exclusively.

emergency

An Emergency priority incident poses an imminent threat to the provision of wide-scale critical infrastructure services, national government stability, or the lives of U.S. persons.

priority-level:emergency

Emergency

An Emergency priority incident poses an imminent threat to the provision of wide-scale critical infrastructure services, national government stability, or the lives of U.S. persons.
A Severe priority incident is likely to result in a significant impact to public health or safety, national security, economic security, foreign relations, or civil liberties.

**Severe**

A Severe priority incident is likely to result in a significant impact to public health or safety, national security, economic security, foreign relations, or civil liberties.

90

**High**

A High priority incident is likely to result in a demonstrable impact to public health or safety, national security, economic security, foreign relations, civil liberties, or public confidence.

**High**

A High priority incident is likely to result in a demonstrable impact to public health or safety, national security, economic security, foreign relations, civil liberties, or public confidence.

85

**Medium**

A Medium priority incident may affect public health or safety, national security, economic security, foreign relations, civil liberties, or public confidence.

**Medium**

A Medium priority incident may affect public health or safety, national security, economic security, foreign relations, civil liberties, or public confidence.

75

**Low**

A Low priority incident is unlikely to affect public health or safety, national security, economic security, foreign relations, civil liberties, or public confidence.
priority-level: low

Low

A Low priority incident is unlikely to affect public health or safety, national security, economic security, foreign relations, civil liberties, or public confidence.

50

baseline-minor

A Baseline–Minor priority incident is an incident that is highly unlikely to affect public health or safety, national security, economic security, foreign relations, civil liberties, or public confidence. The potential for impact, however, exists and warrants additional scrutiny.

priority-level: baseline-minor

Baseline - Minor

A Baseline–Minor priority incident is an incident that is highly unlikely to affect public health or safety, national security, economic security, foreign relations, civil liberties, or public confidence. The potential for impact, however, exists and warrants additional scrutiny.

25

baseline-negligible

A Baseline–Negligible priority incident is an incident that is highly unlikely to affect public health or safety, national security, economic security, foreign relations, civil liberties, or public confidence.

priority-level: baseline-negligible

Baseline - Negligible

A Baseline–Negligible priority incident is an incident that is highly unlikely to affect public health or safety, national security, economic security, foreign relations, civil liberties, or public confidence.

ransomware

Ransomware namespace available in JSON format at this location. The JSON format can be freely reused in your application or automatically enabled in MISP taxonomy.

Ransomware is used to define ransomware types and the elements that compose them.
**type**

Type is used to describe the type of a ransomware and how it works.

**ransomware:type=","scareware"**

Scareware is a form of malware which uses social engineering to cause shock, anxiety, or the perception of a threat in order to manipulate users into buying unwanted software.

**ransomware:type=","locker-ransomware"**

Locker ransomware, also called screen locker, denies access to the browser, computer or device.

**ransomware:type=","crypto-ransomware"**

Crypto ransomware, also called data locker or cryptoware, prevents access to files or data. Crypto ransomware doesn't necessarily have to use encryption to stop users from accessing their data, but the vast majority of it does.

**element**

Elements that composed or are linked to a ransomware and its execution.

**ransomware:element=","ransomnote"**

A ransomnote is the message left by the attacker to threaten their victim and ask for a ransom. It is usually seen as a text or HTML file, or a picture set as background.

**ransomware:element=","ransomware-appended-extension"**

This is the extension added by the ransomware to the files.

**ransomware:element=","ransomware-encrypted-extensions"**

This is the list of extensions that will be encrypted by the ransomware. Beware to keep the order.

**ransomware:element=","ransomware-excluded-extensions"**

This is the list of extensions that will not be encrypted by the ransomware. Beware to keep the order.

**ransomware:element=","dropper"**

A dropper is a means of getting malware into a machine while bypassing the security checks, often by containing the malware inside of itself.
A downloader is a means of getting malware into a machine while bypassing the security checks, by downloading it instead of containing it.

**complexity-level**

Level of complexity of the ransomware.

**ransomware:complexity-level="no-actual-encryption-scareware"**

No actual encryption (scareware). Infection merely poses as a ransomware by displaying a ransom note or message while not actually encrypting user files.

**ransomware:complexity-level="display-ransomnote-before-encrypting"**

Displaying the ransom note before the encryption process commences. As seen in the case of Nemucod, some ransomware will display a ransom note before file encryption. This is a serious operational flaw in the ransomware. The victim or their antivirus solution could effectively take prompt evasive action to prevent ransomware from commencing encryption.

**ransomware:complexity-level="decryption-essentials-extracted-from-binary"**

Decryption essentials can be reverse engineered from ransomware code or the user’s system. For example, if the ransomware uses a hard-coded key, then it becomes straight-forward for malware analysts to extract the key by reverse engineering the ransomware binary.

**ransomware:complexity-level="derived-encryption-key-predicted"**

Another possibility of reverse engineering the key is demonstrated in the case of Linux.Encoder, a type of ransomware where a timestamp on the system was used to create keys for encryption resulting in easy decryption provided that the timestamp is still accessible.

**ransomware:complexity-level="same-key used-for-each-infection"**

Ransomware uses the same key for every victim. If the same key is used to encrypt all victims during a campaign, then one victim can share the secret key with others.

**ransomware:complexity-level="encryption-circumvented"**

Decryption possible without key - files can be decrypted without the need for a key due to poor choice or implementation of the encryption algorithm. Consider the case of desuCrypt that used an RC4 stream cipher for encryption. Using a stream cipher with key reuse is vulnerable to known plaintext attacks and known ciphertext attacks due to key reuse and hence this is a poor implementation of an encryption algorithm.
Files can be restored using Shadow Volume Copies (“Previous Versions”) on the New Technology File System (NTFS), that were neglected to be deleted by the ransomware.

Files can be restored using a System State backup, System Image backup or other means of backup mechanisms (such as third-party backup software) that will render the ransomware’s extortion attempt unsuccessful.

Decryption key can be retrieved from the host machine's file structure or memory by an average user without the need for an expert. In the case of CryptoDefense, the ransomware did not securely delete keys from the host machine. The user can examine the right file or folder to discover the decryption key.

User can prevent ransomware from acquiring the encryption key. Ransomware belongs in this category if its encryption procedure can be interrupted or blocked by due diligence on part of the user. For example, CryptoLocker discussed above cannot commence operation until it receives a key from the C&C server. A host or border firewall can block a list of known C&C servers hence rendering ransomware ineffective.

Easy “Click-and-run” solutions such as a decryptor has been created by the security community such that a user can simply run the program to decrypt all files.

There exists a kill switch outside of an attacker's control that renders the cryptoviral infection ineffective. For example, in the case of WannaCry, a global kill switch existed in the form of a domain name. The ransomware reached out to this domain before commencing encryption and if the domain existed, the ransomware aborted execution. This kill switch was outside the attacker’s control as anyone could register it and neutralize the ransomware outbreak.

Key can be retrieved from a central location such as a C&C server on a compromised host or gleaned with some difficulty from communication between ransomware on the host and the C&C
server. For instance, in the case of CryptoLocker, authorities were able to seize a network of compromised hosts used to spread CryptoLocker and gain access to decryption essentials of around 500,000 victims.

Ransomware uses custom encryption techniques and violates the fundamental rule of cryptography: “do not roll your own crypto.” It is tempting to design a custom cipher that one cannot break themselves, however it will likely not withstand the scrutiny of professional cryptanalysts. Amateur custom cryptography in the ransomware implies there will likely soon be a solution to decrypt files without paying the ransom. An example of this is an early variant of the GPCode ransomware that emerged in 2005 with weak custom encryption.

Key can only be retrieved under rare, specialized laboratory settings. For example, in the case of WannaCry, a vulnerability in a cryptographic API on an unpatched Windows XP system allowed users to acquire from RAM the prime numbers used to compute private keys and hence retrieve the decryption key. However, the victim had to have been running a specific version of Windows XP and be fortunate enough that the related address space in memory has not been reallocated to another process. In another example, it is theoretically possible to reverse WannaCry encryption by exploiting a flaw in the pseudo-random-number-generator (PRNG) in an unpatched Windows XP system that reveals keys generated in the past. Naturally, these specialized conditions are not true for most victims.

A small subset of files left unencrypted by the ransomware for any number of reasons. Certain ransomware are known to only encrypt a file if its size exceeds a predetermined value. In addition, ransomware might decrypt a few files for free to prove decryption is possible. In such cases, a small number of victims may be lucky enough to only need these unencrypted files and can tolerate loss of the rest.

Encryption model is resistant to cryptographic attacks and has been implemented seemingly flawlessly such that there are no known vulnerabilities in its execution. Simply put, there is no proven way yet to decrypt the files without paying the ransom.

Purpose

Purpose of the ransomware.

This has been the traditional approach - ransomware is installed on the victim’s machine, and its only purpose is to create income for the cybercriminal(s). In fact, ransomware is simple extortion,
but via digital means.

**ransomware:purpose="deployed-to-showcase-skills-for-fun-or-for-testing-purposes"**

Some cybercriminals like to show off, and as such create the side-business of ransomware, or, more particularly to showcase their coding skills. Another example may be to send ransomware 'as a joke' or for fun to your friends, and giving them a bad time. Some cybercriminals may be testing the waters by deploying ransomware in an organisation, to stress-test the defenses, or to test their own programming skills, or the lack thereof.

**ransomware:purpose="deployed-as-smokescreen"**

A very interesting occurrence indeed: ransomware is installed to hide the real purpose of whatever the cybercriminal or attacker is doing. This may be data exfiltration, lateral movement, or anything else, in theory, everything is a possible scenario... except for the ransomware itself.

**ransomware:purpose="deployed-to-cause-frustration"**

Another possible angle that goes hand in hand with the classic extortion scheme - deploying ransomware with intent of frustrating the victim. Basically, cyber bullying. While there may be a request for a monetary amount, it is not the purpose.

**ransomware:purpose="deployed-out-of-frustration"**

Sometimes, an attacker may gain initial access to a server or other machine, but consequent attempts to, for example, exfiltrate data or attack other machine, is unsuccessful. This may be due to a number of things, but often due to the access being discovered, and quickly patched. On the other hand, it may have not been discovered yet, but the attacker is sitting with the same problem: the purpose is not fulfilled. Then, out of frustration, or to gain at least something out of the victim, the machine gets trashed with ransomware. Another possibility is a disgruntled employee, leaving ransomware as a 'present' before leaving the company.

**ransomware:purpose="deployed-as-a-cover-up"**

This may sound ambiguous at first, but imagine a scenario where a company may face sanctions, is already compromised, or has a running investigation. The company or organisation deploying ransomware itself, is a viable way of destroying data forever, and any evidence may be lost. Another possibility is, in order to cover up a much larger compromise, ransomware is installed, and everything is formatted to hide what actually happened. Again, there is also the possibility of a disgruntled employee, or even an intruder: which brings us back to 'deployed as a smokescreen'.

**ransomware:purpose="deployed-as-a-penetration-test-or-user-awareness-training"**

Ransomware is very effective in the sense that most people know what its purpose is, and the dangers it may cause. As such, it is an excellent tool that can be used for demonstration purposes, such as a user awareness training. Another possibility is an external pentest, with same purpose.
ransomware:purpose="deployed-as-a-means-of-disruption-destruction"

Last but not least - while ransomware can have several purposes, it can also serve a particularly nasty goal: destroy a company or organisation, or at least take them offline for several days, or even weeks. Again, there are some possibilities, but this may be a rival company in a similar business, again a disgruntled employee, or to disrupt large organisations on a worldwide scale.

retention

retention namespace available in JSON format at this location. The JSON format can be freely reused in your application or automatically enabled in MISP taxonomy.

Add a retention time to events to automatically remove the IDS-flag on ip-dst or ip-src attributes. We calculate the time elapsed based on the date of the event. Supported time units are: d(ays), w(eeks), months), y(ears). The numerical_value is just for sorting in the web-interface and is not used for calculations.

expired

retention:expired

Set when the retention period has expired

1d

retention:1d

1 day

2d

retention:2d

2 days

7d

retention:7d

7 days
2w
retention: 2w
2 weeks
14

1m
retention: 1m
1 month
30

2m
retention: 2m
2 months
60

3m
retention: 3m
3 months
90

6m
retention: 6m
6 months
180

1y
rsit namespace available in JSON format at this location. The JSON format can be freely reused in your application or automatically enabled in MISP taxonomy.

Reference Security Incident Classification Taxonomy

**abusive-content**

Abusive Content.

*rsit:abusive-content="spam"*

Spam

Or 'Unsolicited Bulk Email', this means that the recipient has not granted verifiable permission for the message to be sent and that the message is sent as part of a larger collection of messages, all having a functionally comparable content.

*rsit:abusive-content="harmful-speech"*

Harmful Speech

Discreditation or discrimination of somebody, e.g. cyber stalking, racism or threats against one or more individuals.

*rsit:abusive-content="violence"*

Child Porn/Sexual/Violent Content

Child pornography, glorification of violence, etc.

**malicious-code**

Software that is intentionally included or inserted in a system for a harmful purpose. A user interaction is normally necessary to activate the code.

*rsit:malicious-code="infected-system"*

Infected System

System infected with malware, e.g. PC, smartphone or server infected with a rootkit.
rsit:malicious-code="c2-server"

C2 Server

Command-and-control server contacted by malware on infected systems.

rsit:malicious-code="malware-distribution"

Malware Distribution

URI used for malware distribution, e.g. a download URL included in fake invoice malware spam.

rsit:malicious-code="malware-configuration"

Malware Configuration

URI hosting a malware configuration file, e.g. webinfects for a banking trojan.

information-gathering

Information Gathering.

rsit:information-gathering="scanner"

Scanning

Attacks that send requests to a system to discover weaknesses. This also includes testing processes to gather information on hosts, services and accounts. Examples: fingerd, DNS querying, ICMP, SMTP (EXP, RCPT, ...), port scanning.

rsit:information-gathering="sniffing"

Sniffing

Observing and recording of network traffic (wiretapping).

rsit:information-gathering="social-engineering"

Social Engineering

Gathering information from a human being in a non-technical way (e.g. lies, tricks, bribes, or threats).

intrusion-attempts

Intrusion Attempts.
Exploitation of known Vulnerabilities

An attempt to compromise a system or to disrupt any service by exploiting vulnerabilities with a standardised identifier such as CVE name (e.g. buffer overflow, backdoor, cross site scripting, etc.)

Login attempts

Multiple login attempts (Guessing / cracking of passwords, brute force).

New attack signature

An attack using an unknown exploit.

A successful compromise of a system or application (service). This can have been caused remotely by a known or new vulnerability, but also by an unauthorized local access. Also includes being part of a botnet.

Compromise of a system where the attacker gained administrative privileges.

Compromise of a system using an unprivileged (user/service) account.

Compromise of an application by exploiting (un)known software vulnerabilities, e.g. SQL injection.

Physical intrusion, e.g. into corporate building or data center.
availability

By this kind of an attack a system is bombarded with so many packets that the operations are delayed or the system crashes. DoS examples are ICMP and SYN floods, Teardrop attacks and mailbombing. DDoS often is based on DoS attacks originating from botnets, but also other scenarios exist like DNS Amplification attacks. However, the availability also can be affected by local actions (destruction, disruption of power supply, etc.) – or by Act of God, spontaneous failures or human error, without malice or gross neglect being involved.

rsit:availability="dos"

Denial of Service

Denial of Service attack, e.g. sending specially crafted requests to a web application which causes the application to crash or slow down.

rsit:availability="ddos"

Distributed Denial of Service

Distributed Denial of Service attack, e.g. SYN-Flood or UDP-based reflection/amplification attacks.

rsit:availability="misconfiguration"

Misconfiguration

Software misconfiguration resulting in service availability issues, e.g. DNS server with outdated DNSSEC Root Zone KSK.

rsit:availability="sabotage"

Sabotage

Physical sabotage, e.g cutting wires or malicious arson.

rsit:availability="outage"

Outage

Outage caused e.g. by air condition failure or natural disaster.

information-content-security

Besides a local abuse of data and systems the information security can be endangered by a successful account or application compromise. Furthermore attacks are possible that intercept and access information during transmission (wiretapping, spoofing or hijacking). Human/configuration/software error can also be the cause.
Unauthorised access to information

Unauthorized access to information, e.g. by abusing stolen login credentials for a system or application, intercepting traffic or gaining access to physical documents.

Unauthorised modification of information

Unauthorized modification of information, e.g. by an attacker abusing stolen login credentials for a system or application or a ransomware encrypting data.

Data Loss

Loss of data, e.g. caused by harddisk failure or physical theft.

Fraud

Unauthorized use of resources

Using resources for unauthorized purposes including profit-making ventures, e.g. the use of e-mail to participate in illegal profit chain letters or pyramid schemes.

Copyright

Offering or Installing copies of unlicensed commercial software or other copyright protected materials (Warez).

Masquerade

Type of attack in which one entity illegitimately impersonates the identity of another in order to benefit from it.

Phishing
Masquerading as another entity in order to persuade the user to reveal private credentials.

**vulnerable**

Open resolvers, world readable printers, vulnerability apparent from Nessus etc scans, virus signatures not up-to-date, etc

**rsit:vulnerable**="weak-crypto"

Weak crypto

Publicly accessible services offering weak crypto, e.g. web servers susceptible to POODLE/FREAK attacks.

**rsit:vulnerable**="ddos-amplifier"

DDoS amplifier

Publicly accessible services that can be abused for conducting DDoS reflection/amplification attacks, e.g. DNS open-resolvers or NTP servers with monlist enabled.

**rsit:vulnerable**="potentially-unwanted-accessible"

Potentially unwanted accessible services

Potentially unwanted publicly accessible services, e.g. Telnet, RDP or VNC.

**rsit:vulnerable**="information-disclosure"

Information disclosure

Publicly accessible services potentially disclosing sensitive information, e.g. SNMP or Redis.

**rsit:vulnerable**="vulnerable-system"

Vulnerable system

A system which is vulnerable to certain attacks. Example: misconfigured client proxy settings (example: WPAD), outdated operating system version, etc.

**other**

All incidents which don't fit in one of the given categories should be put into this class. If the number of incidents in this category increases, it is an indicator that the classification scheme must be revised

**rsit:other**="other"

Other
All incidents which don’t fit in one of the given categories should be put into this class.

**test**

Meant for testing.

rsit:test="test"

Test

Meant for testing.

**rt_event_status**

rt_event_status namespace available in JSON format at this location. The JSON format can be freely reused in your application or automatically enabled in MISP taxonomy.

Status of events used in Request Tracker.

**event-status**

rt_event_status:event-status="new"

New

rt_event_status:event-status="open"

Open

rt_event_status:event-status="stalled"

Stalled

rt_event_status:event-status="rejected"

rejected

rt_event_status:event-status="resolved"

Resolved

rt_event_status:event-status="deleted"

Deleted
runtime-packer

runtime-packer namespace available in JSON format at this location. The JSON format can be freely reused in your application or automatically enabled in MISP taxonomy.

Runtime or software packer used to combine compressed data with the decompression code. The decompression code can add additional obfuscations mechanisms including polymorphic-packer or other obfuscation techniques. This taxonomy lists all the known or official packer used for legitimate use or for packing malicious binaries.

portable-executable

runtime-packer:portable-executable=".netshrink"

runtime-packer:portable-executable="armadillo"

netshrink
Armadillo

runtime-packer:portable-executable="aspack"

ASPack

runtime-packer:portable-executable="aspr-asprotect"

ASPR (ASProtect)

runtime-packer:portable-executable="boxedapp-packer"

BoxedApp Packer

runtime-packer:portable-executable="cexe"

CExe

runtime-packer:portable-executable="dotbundle"

dotBundle

runtime-packer:portable-executable="enigma-protector"

Enigma Protector

runtime-packer:portable-executable="exe-bundle"

EXE Bundle
EXE Stealth

eXPressor

FSG

kkrunchy src

MEW

MPRESS

Obsidium

PELock

PESpin

Petite

RLPack Basic

Smart Packer Pro
Themida

UPX

VMProtect

XComp/XPack

elf

cli-assembly

smart-airports-threats

smart-airports-threats namespace available in JSON format at this location. The JSON format can be freely reused in your application or automatically enabled in MISP taxonomy.


human-errors

Configuration errors

Operator/user error

Loss of hardware
Non compliance with policies or procedure

**system-failures**

Failures of devices or systems

Failures or disruptions of communication links (communication networks)

Failures of parts of devices

Failures or disruptions of main supply

Failures or disruptions of the power supply

Malfunctions of parts of devices

Malfunctions of devices or systems

Failures of hardware

Software bugs
natural-and-social-phenomena

Earthquakes

Fires

Extreme weather (e.g. flood, heavy snow, blizzard, high temperatures, fog, sandstorm)

Solar flare

Volcano explosion

Nuclear incident

Dangerous chemical incidents

Pandemic (e.g. Ebola)

Social disruptions (e.g. industrial actions, civil unrest, strikes, military actions, terrorist attacks, political instability)

Shortage of fuel

Space debris and meteorites
third-party-failures

smart-airports-threats:third-party-failures="internet-service-provider"
Internet service provider

smart-airports-threats:third-party-failures="cloud-service-provider"
Cloud service provider (SaaS / PaaS / IaaS / SecaaS)

smart-airports-threats:third-party-failures="utilities-power-or-gas-or-water"
Utilities (power / gas /water)

smart-airports-threats:third-party-failures="remote-maintenance-provider"
Remote maintenance provider

smart-airports-threats:third-party-failures="security-testing-companies"
Security testing companies (i.e. penetration testing/vulnerability assessment)

malicious-actions

smart-airports-threats:malicious-actions="denial-of-service-attacks-via-amplification-reflection"
Denial of Service attacks via amplification/reflection

smart-airports-threats:malicious-actions="denial-of-service-attacks-via-flooding"
Denial of Service via flooding

smart-airports-threats:malicious-actions="denial-of-service-attacks-via-jamming"
Denial of Service via jamming

smart-airports-threats:malicious-actions="malicious-software-on-it-assets-malware"
Malicious software on IT assets (including passenger and staff devices) which can be Worm, Trojan, Virus, Rootkit, Exploitkit...
Malicious software on IT assets such as remote arbitrary code execution (device under attacker control)

exploitation of known or unknown software vulnerabilities such as implementation flaws (flaw in code)

exploitation of known or unknown software vulnerabilities such as design flaws in IT assets (flaw in logic)

exploitation of known or unknown software vulnerabilities such as Advanced Persistent Threats (APT)

misuse of authority or authorisation - unauthorized use of software

misuse of authority or authorisation - unauthorized installation of software

misuse of authority or authorisation - repudiation of actions

misuse of authority or authorisation - abuse of personal data or identity fraud

misuse of authority or authorisation - using information from an unreliable source
misuse of authority or authorisation - unintentional change of data in an information system

misuse of authority or authorisation inadequate design and planning or lack of adoption

misuse of authority data leakage or sharing (exfiltration, discarded, stolen media)

network or interception attacks - manipulation of routing information (including redirection to malicious sites)

network or interception attacks - spoofing

network or interception attacks - unauthorized access to network/services

network or interception attacks - authentication attacks (against insecure protocols or PKI)

network or interception attacks - replay attacks

network or interception attacks - repudiation of actions
network or interception attacks - wiretaps (wired)

network or interception attacks - wireless comms (eavesdropping, interception, jamming, electromagnetic interference)

network or interception attacks - network reconnaissance/information gathering

social attacks phishing or spearphishing

social attacks pretexting

social attacks untrusted links (fake websites/CSRF/XSS)

social attacks baiting

social attacks reverse social engineering

social attacks impersonation

tampering with devices unauthorised modification of data (including compromising smart sensor data or threat image projection)
smart-airports-threats:malicious-actions="tampering-with-devices-unauthorised-modification-of-hardware-or-software"

tampering with devices unauthorised modification of hardware or software (including tampering with kiosk devices, inserting keyloggers, or malware)

smart-airports-threats:malicious-actions="breach-of-physical-access-controls-bypass-authentication"

breach of physical access controls / administrative controls - bypass authentication

smart-airports-threats:malicious-actions="breach-of-physical-access-controls-privilege-escalation"

breach of physical access controls / administrative controls - privilege escalation

smart-airports-threats:malicious-actions="physical-attacks-on-airport-assets-vandalism"

Physical attacks on airport assets - vandalism

smart-airports-threats:malicious-actions="physical-attacks-on-airport-assets-sabotage"

Physical attacks on airport assets - sabotage

smart-airports-threats:malicious-actions="physical-attacks-on-airport-assets-explosive-or-bomb-threats"

Physical attacks on airport assets - explosive or bomb threats

smart-airports-threats:malicious-actions="physical-attacks-on-airport-assets-malicious-tampering"

Physical attacks on airport assets - malicious tampering or control of assets resulting in damage

stealth_malware

stealth_malware namespace available in JSON format at this location. The JSON format can be freely reused in your application or automatically enabled in MISP taxonomy.

type

stealth_malware:type="0"

No OS or system compromise. The malware runs as a normal user process using only official API calls.

stealth_malware:type="I"

The malware modifies constant sections of the kernel and/or processes such as code sections.

stealth_malware:type="II"

The malware does not modify constant sections but only the dynamic sections of the kernel and/or processes such as data sections.

stealth_malware:type="III"

The malware does not modify any sections of the kernel and/or processes but influences the system without modifying the OS. For example using hardware virtualization techniques.

stix-ttp

stix-ttp namespace available in JSON format at this location. The JSON format can be freely reused in your application or automatically enabled in MISP taxonomy.

TTPs are representations of the behavior or modus operandi of cyber adversaries.

victim-targeting

stix-ttp:victim-targeting="business-professional-sector"
Business & Professional Services Sector

stix-ttp:victim-targeting="retail-sector"
Retail Sector

stix-ttp:victim-targeting="financial-sector"
Financial Services Sector

stix-ttp:victim-targeting="media-entertainment-sector"
Media & Entertainment Sector
Construction & Engineering Sector

Government & International Organizations

Legal Services

High-Tech & IT Sector

Healthcare Sector

Transportation Sector

Aerospace & Defense Sector

Energy Sector

Food Sector

Natural Resources Sector

Other Sector

Corporate Employee Information
Customer PII

Email Lists/Archives

Financial Data

Intellectual Property

Mobile Phone Contacts

User Credentials

Authentication Cookies

The Targeted Threat Index is a metric for assigning an overall threat ranking score to email messages that deliver malware to a victim's computer. The TTI metric was first introduced at SecTor 2013 by Seth Hardy as part of the talk “RATastrophe: Monitoring a Malware Menagerie” along with Katie Kleemola and Greg Wiseman.

The base value of the score ranges from 0 to 5, based on the sophistication of the email’s social engineering techniques used to get the victim to open the attachment. This score considers the content and presentation of the message as well as the claimed sender identity. This determination also includes the content of any associated files; many times malware is injected into legitimate relevant documents.
targeted-threat-index:targeting-sophistication-base-value="not-targeted"
Not targeted, e.g. spam or financially motivated malware.

targeted-threat-index:targeting-sophistication-base-value="targeted-but-not-customized"
Targeted but not customized. Sent with a message that is obviously false with little to no validation required.
Associated numerical value="1"

targeted-threat-index:targeting-sophistication-base-value="targeted-and-poorly-customized"
Targeted and poorly customized. Content is generally relevant to the target. May look questionable.
Associated numerical value="2"

targeted-threat-index:targeting-sophistication-base-value="targeted-and-customized"
Targeted and customized. May use a real person/organization or content to convince the target the message is legitimate. Content is specifically relevant to the target and looks legitimate.
Associated numerical value="3"

targeted-threat-index:targeting-sophistication-base-value="targeted-and-well-customized"
Targeted and well-customized. Uses a real person/organization and content to convince the target the message is legitimate. Probably directly addressing the recipient. Content is specifically relevant to the target, looks legitimate, and can be externally referenced (e.g. by a website). May be sent from a hacked account.
Associated numerical value="4"

targeted-threat-index:targeting-sophistication-base-value="targeted-and-highly-customized-using-sensitive-data"
Targeted and highly customized using sensitive data. Individually targeted and customized, likely using inside/sensitive information that is directly relevant to the target.
Associated numerical value="5"

technical-sophistication-multiplier
The technical sophistication score is a multiplier ranging from 1 to 2 based on how advanced the associated malware is, including malicious file attachments as well as links to malware hosted on
another system. We use a multiplier because advanced malware requires significantly more effort and time (or money, in the case of commercial solutions) to custom-tune for a particular target.

**targeted-threat-index:technical-sophistication-multiplier=\"the-sample-contains-no code-protection\"**

The sample contains no code protection such as packing, obfuscation (e.g. simple rotation of C2 names or other interesting strings), or anti-reversing tricks.

Associated numerical value="1"

**targeted-threat-index:technical-sophistication-multiplier=\"the-sample-contains-a-simple-method-of-protection\"**

The sample contains a simple method of protection, such as one of the following: code protection using publicly available tools where the reverse method is available, such as UPX packing; simple anti-reversing techniques such as not using import tables, or a call to IsDebuggerPresent(); self-disabling in the presence of AV software.

Associated numerical value="1.25"

**targeted-threat-index:technical-sophistication-multiplier=\"the-sample-contains-multiple-minor-code-protection-techniques\"**

The sample contains multiple minor code protection techniques (anti-reversing tricks, packing, VM / reversing tools detection) that require some low-level knowledge. This level includes malware where code that contains the core functionality of the program is decrypted only in memory.

Associated numerical value="1.5"

**targeted-threat-index:technical-sophistication-multiplier=\"the-sample-contains-minor-code-protection-techniques-plus-one-advanced\"**

The sample contains minor code protection techniques along with at least one advanced protection method such as rootkit functionality or a custom virtualized packer.

Associated numerical value="1.75"

**targeted-threat-index:technical-sophistication-multiplier=\"the-sample-contains-multiple-advanced-protection-techniques\"**

The sample contains multiple advanced protection techniques, e.g. rootkit capability, virtualized packer, multiple anti-reversing techniques, and is clearly designed by a professional software engineering team.

Associated numerical value="2"
tlp namespace available in JSON format at this location. The JSON format can be freely reused in your application or automatically enabled in MISP taxonomy.

The Traffic Light Protocol - or short: TLP - was designed with the objective to create a favorable classification scheme for sharing sensitive information while keeping the control over its distribution at the same time.

Exclusive flag set which means the values or predicate below must be set exclusively.

red

Not for disclosure, restricted to participants only. Sources may use TLP:RED when information cannot be effectively acted upon by additional parties, and could lead to impacts on a party's privacy, reputation, or operations if misused. Recipients may not share TLP:RED information with any parties outside of the specific exchange, meeting, or conversation in which it was originally disclosed. In the context of a meeting, for example, TLP:RED information is limited to those present at the meeting. In most circumstances, TLP:RED should be exchanged verbally or in person.

tlp:red

(TLP:RED) Information exclusively and directly given to (a group of) individual recipients. Sharing outside is not legitimate.

Not for disclosure, restricted to participants only. Sources may use TLP:RED when information cannot be effectively acted upon by additional parties, and could lead to impacts on a party's privacy, reputation, or operations if misused. Recipients may not share TLP:RED information with any parties outside of the specific exchange, meeting, or conversation in which it was originally disclosed. In the context of a meeting, for example, TLP:RED information is limited to those present at the meeting. In most circumstances, TLP:RED should be exchanged verbally or in person.

amber

Limited disclosure, restricted to participants' organizations. Sources may use TLP:AMBER when information requires support to be effectively acted upon, yet carries risks to privacy, reputation, or operations if shared outside of the organizations involved. Recipients may only share TLP:AMBER information with members of their own organization, and with clients or customers who need to know the information to protect themselves or prevent further harm. Sources are at liberty to specify additional intended limits of the sharing; these must be adhered to.

tlp:amber

(TLP:AMBER) Information exclusively given to an organization; sharing limited within the organization to be effectively acted upon.
Limited disclosure, restricted to participants’ organizations. Sources may use TLP:AMBER when information requires support to be effectively acted upon, yet carries risks to privacy, reputation, or operations if shared outside of the organizations involved. Recipients may only share TLP:AMBER information with members of their own organization, and with clients or customers who need to know the information to protect themselves or prevent further harm. Sources are at liberty to specify additional intended limits of the sharing: these must be adhered to.

**green**

Limited disclosure, restricted to the community. Sources may use TLP:GREEN when information is useful for the awareness of all participating organizations as well as with peers within the broader community or sector. Recipients may share TLP:GREEN information with peers and partner organizations within their sector or community, but not via publicly accessible channels. Information in this category can be circulated widely within a particular community. TLP:GREEN information may not be released outside of the community.

**tlp:green**

(TLP:GREEN) Information given to a community or a group of organizations at large. The information cannot be publicly released.

Limited disclosure, restricted to the community. Sources may use TLP:GREEN when information is useful for the awareness of all participating organizations as well as with peers within the broader community or sector. Recipients may share TLP:GREEN information with peers and partner organizations within their sector or community, but not via publicly accessible channels. Information in this category can be circulated widely within a particular community. TLP:GREEN information may not be released outside of the community.

**white**

Disclosure is not limited. Sources may use TLP:WHITE when information carries minimal or no foreseeable risk of misuse, in accordance with applicable rules and procedures for public release. Subject to standard copyright rules, TLP:WHITE information may be distributed without restriction.

**tlp:white**

(TLP:WHITE) Information can be shared publicly in accordance with the law.

Disclosure is not limited. Sources may use TLP:WHITE when information carries minimal or no foreseeable risk of misuse, in accordance with applicable rules and procedures for public release. Subject to standard copyright rules, TLP:WHITE information may be distributed without restriction.

**ex:chr**

**tlp:ex:chr**

(TLP:EX:CHR) Information extended with a specific tag called Chatham House Rule (CHR). When
this specific CHR tag is mentioned, the attribution (the source of information) must not be disclosed. This additional rule is at the discretion of the initial sender who can decide to apply or not the CHR tag.

**tor**

<table>
<thead>
<tr>
<th>Information</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tor namespace available in JSON format at <a href="#">this location</a>. The JSON format can be freely reused in your application or automatically enabled in <a href="#">MISP</a> taxonomy.</td>
<td></td>
</tr>
</tbody>
</table>

Taxonomy to describe Tor network infrastructure

**tor-relay-type**

*tor:*tor-relay-type="entry-guard-relay"

Entry node to the Tor network

*tor:*tor-relay-type="middle-relay"

Tor node relaying traffic between an entry-guard-relay to an exit-relay

*tor:*tor-relay-type="exit-relay"

Tor node relaying traffic outside of the Tor network to the original destination

*tor:*tor-relay-type="bridge-relay"

Entry node to the Tor network - partially unpublished

**type**

<table>
<thead>
<tr>
<th>Information</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type namespace available in JSON format at <a href="#">this location</a>. The JSON format can be freely reused in your application or automatically enabled in <a href="#">MISP</a> taxonomy.</td>
<td></td>
</tr>
</tbody>
</table>

Taxonomy to describe different types of intelligence gathering discipline which can be described the origin of intelligence.

**OSINT**

gathered from open sources

**type:**OSINT

Open Source Intelligence

gathered from open sources
SIGINT

gathered from interception of signals

type:SIGINT

Signal Intelligence

gathered from interception of signals

TECHINT

gathered from analysis of weapons and equipment used by the armed forces of foreign nations, or environmental conditions

type:TECHINT

Technical Intelligence

gathered from analysis of weapons and equipment used by the armed forces of foreign nations, or environmental conditions

CYBINT

gathered from active or passive exploitation (CNE) in the cyberspace

type:CYBINT

Cyberspace Intelligence

gathered from active or passive exploitation (CNE) in the cyberspace

DNINT

gathered from active or passive exploitation (CNE) in the digital network.

type:DNINT

Digital Network Intelligence

gathered from active or passive exploitation (CNE) in the digital network.

HUMINT

gathered from a person in the location in question
Human Intelligence
gathered from a person in the location in question

Medical Intelligence
gathered from analysis of medical records and/or actual physiological examinations to determine health and/or particular ailments/allergic conditions for consideration

Geospatial Intelligence
gathered from satellite, aerial photography, mapping/terrain data

Imagery Intelligence
gathered from satellite and aerial photography

Measurement and signature intelligence
gathered from electro-optical, nuclear survey, geophysical measurements, radar, materials analysis
**FININT**
gathered from analysis of monetary or financial transactions

type:FININT

Financial Intelligence

gathered from analysis of monetary or financial transactions

**use-case-applicability**

use-case-applicability namespace available in JSON format at [this location](#). The JSON format can be freely reused in your application or automatically enabled in MISP taxonomy.

The Use Case Applicability categories reflect standard resolution categories, to clearly display alerting rule configuration problems.

**announced-administrative/user-action**

The process to communicate administrative activities or special user actions was in place and working correctly. Internal sensors are working and detecting privileged or irregular administrative behaviour.

**use-case-applicability:announced-administrative/user-action**

Announced administrative/user action

The process to communicate administrative activities or special user actions was in place and working correctly. Internal sensors are working and detecting privileged or irregular administrative behaviour.

**unannounced-administrative/user-action**

Internal sensors have detected privileged or user activity, which was not previously communicated. This category also includes improper usage.

**use-case-applicability:unannounced-administrative/user-action**

Unannounced administrative/user action

Internal sensors have detected privileged or user activity, which was not previously communicated. This category also includes improper usage.
log-management-rule-configuration-error

This category reflects false alerts that were raised due to configuration errors in the central log management system, often a SIEM, rule.

use-case-applicability:log-management-rule-configuration-error

Log management rule configuration error

This category reflects false alerts that were raised due to configuration errors in the central log management system, often a SIEM, rule.

detection-device/rule-configuration-error

This category reflects rules on detection devices, which are usually passive or active components of network security.

use-case-applicability:detection-device/rule-configuration-error

Detection device/rule configuration error

This category reflects rules on detection devices, which are usually passive or active components of network security.

bad-IOC/rule-pattern-value

Products often require external indicator information or security feeds to be applied on active or passive infrastructure components to create alerts.

use-case-applicability:bad-IOC/rule-pattern-value

Bad IOC/rule pattern value

Products often require external indicator information or security feeds to be applied on active or passive infrastructure components to create alerts.

test-alert

This alert reflects alerts created for testing purposes.

use-case-applicability:test-alert

Test alert

This alert reflects alerts created for testing purposes.
confirmed-attack-with-IR-actions

This alert represents the classic true positives, where all security controls in place were circumvented, a security control was lacking or a misconfiguration of a security element occurred.

use-case-applicability:confirmed-attack-with-IR-actions

Confirmed Attack with IR actions

This alert represents the classic true positives, where all security controls in place were circumvented, a security control was lacking or a misconfiguration of a security element occurred.

confirmed-attack-attempt-without-IR-actions

This category reflects an attempt by a threat actor, which in the end could be prevented by in place security measures but passed security controls associated with the delivery phase of the Cyber Kill Chain.

use-case-applicability:confirmed-attack-attempt-without-IR-actions

Confirmed Attack attempt without IR actions

This category reflects an attempt by a threat actor, which in the end could be prevented by in place security measures but passed security controls associated with the delivery phase of the Cyber Kill Chain.

veris

veris namespace available in JSON format at this location. The JSON format can be freely reused in your application or automatically enabled in MISP taxonomy.

Vocabulary for Event Recording and Incident Sharing (VERIS)

confidence

veris:confidence="High"

High confidence

veris:confidence="Low"

Low confidence

veris:confidence="Medium"

Medium confidence
veris:confidence="None"
No confidence

cost_corrective_action

veris:cost_corrective_action="Difficult and expensive"
Difficult and expensive

veris:cost_corrective_action="Simple and cheap"
Simple and cheap

veris:cost_corrective_action="Something in-between"
Something in-between

veris:cost_corrective_action="Unknown"
Unknown

discovery_method

veris:discovery_method="Ext - actor disclosure"
External - disclosed by threat agent (e.g., public brag, private blackmail)

veris:discovery_method="Ext - audit"
External - security audit or scan

veris:discovery_method="Ext - customer"
External - reported by customer or partner affected by the incident

veris:discovery_method="Ext - emergency response team"
External - Emergency response team

veris:discovery_method="Ext - found documents"
External - Found documents

veris:discovery_method="Ext - fraud detection"
External - fraud detection (e.g., CPP)
External - notified while investigating another incident

Internal - notified by law enforcement or government agency

External - managed security event monitoring service

Discovery method was external and known but not listed

External - Report of suspicious traffic

External - unknown

Discovered by person unaffiliated with victim or threat actor

Internal - host IDS or file integrity monitoring

Any routine maintenance, testing or review of it assets. (Includes inspect of assets, vulnerability scans, etc.)

Internal - All network-based security tool detection (including IPS, IDS, firewalls and other network-based security tools)

Internal - antivirus alert

Internal - employee discovered evidence of a break in
**veris:discovery_method**="Int - data loss prevention"
Internal - Data loss prevention software

**veris:discovery_method**="Int - financial audit"
Internal - financial audit and reconciliation process

**veris:discovery_method**="Int - fraud detection"
Internal - fraud detection mechanism

**veris:discovery_method**="Int - incident response"
Internal - discovered while responding to another (separate) incident

**veris:discovery_method**="Int - infrastructure monitoring"
Internal - Health and welfare monitoring of assets such as utilization, uptime, and SNMP alerts

**veris:discovery_method**="Int - log review"
Internal - log review process or SIEM

**veris:discovery_method**="Int - other"
Discovery method was internal and known but not listed

**veris:discovery_method**="Int - reported by employee"
Internal - reported by employee who saw something odd

**veris:discovery_method**="Int - security alarm"
Internal - physical security system alarm

**veris:discovery_method**="Int - unknown"
Internal - unknown

**veris:discovery_method**="Other"
Other

**veris:discovery_method**="Prt - antivirus"
Partner - Notified by antivirus company but not through AV product
**discovery_method**

- **Prt - audit**
  - Partner - Audit performed by a partner organization

- **Prt - incident response**
  - Partner - notified while investigating another incident

- **Prt - monitoring service**
  - Partner - Reported by a monitoring service

- **Prt - other**
  - Discovery method was partner and known but not listed

- **Prt - unknown**
  - Partner - Unknown

**security_incident**

- **Confirmed**
  - Yes - Confirmed

- **False positive**
  - False positive (response triggered, but no incident)

- **Near miss**
  - Near miss (actions did not compromise asset)

- **Suspected**
  - Suspected

**targeted**

- **NA**
  - Not applicable
**veris:**

**targeted="Opportunistic"**

Opportunistic: victim attacked because they exhibited a weakness the actor knew how to exploit

**targeted="Targeted"**

Targeted: victim chosen as target then actor determined what weaknesses could be exploited

**targeted="Unknown"**

Unknown

**asset:**

**accessibility**

**veris:**

**asset:accessibility="External"**

Publicly accessible

**asset:accessibility="Internal"**

Internally accessible

**asset:accessibility="Isolated"**

Internally isolated or restricted environment

**asset:accessibility="NA"**

Not applicable

**asset:accessibility="Other"**

Accessibility known but not listed

**asset:accessibility="Unknown"**

Unknown

**cloud**

**veris:**

**asset:cloud="Customer attack"**

Penetration of another web site on shared device

**asset:cloud="Hosting error"**

Misconfiguration or error by hosting provider
Lack of security process or procedure by hosting provider

Hypervisor break-out attack

It is known no cloud assets were involved

It is known that a cloud asset was involved and it being a cloud asset did not affect the outcome

Cloud hosting known but not listed

Application vulnerability in partner-developed application

The involvement of cloud assets was not measured

Elevation of privilege by another customer in shared environment

Andorra

United Arab Emirates

Afghanistan
Antigua and Barbuda

Anguilla

Albania

Armenia

Angola

Antarctica

Argentina

American Samoa

Austria

Australia

Aruba

Aland Islands
Azerbaijan

Bosnia and Herzegovina

Barbados

Bangladesh

Belgium

Burkina Faso

Bulgaria

Bahrain

Burundi

Benin

Saint-Barthelemy

Bermuda
Brunei Darussalam

Bolivia

Bonaire, Saint Eustatius and Saba

Brazil

Bahamas

Bhutan

Bouvet Island

Botswana

Belarus

Belize

Canada

Cocos (Keeling) Islands
Congo, Democratic Republic of the

Central African Republic

Congo

Switzerland

Cote d'Ivoire

Cook Islands

Chile

Cameroon

China

Colombia

Costa Rica

Cuba
veris:asset:country="CV"
Cape Verde

veris:asset:country="CW"
Curacao

veris:asset:country="CX"
Christmas Island

veris:asset:country="CY"
Cyprus

veris:asset:country="CZ"
Czech Republic

veris:asset:country="DE"
Germany

veris:asset:country="DJ"
Djibouti

veris:asset:country="DK"
Denmark

veris:asset:country="DM"
Dominica

veris:asset:country="DO"
Dominican Republic

veris:asset:country="DZ"
Algeria

veris:asset:country="EC"
Ecuador
veris:asset:country="EE"
Estonia

veris:asset:country="EG"
Egypt

veris:asset:country="EH"
Western Sahara

veris:asset:country="ER"
Eritrea

veris:asset:country="ES"
Spain

veris:asset:country="ET"
Ethiopia

veris:asset:country="FI"
Finland

veris:asset:country="FJ"
Fiji

veris:asset:country="FK"
Faeroe Islands

veris:asset:country="FM"
Micronesia (Federated States of)

veris:asset:country="FO"
Falkland Islands (Malvinas)

veris:asset:country="FR"
France
Gabon

United Kingdom

Grenada

Georgia

French Guiana

Guernsey

Ghana

Gibraltar

Greenland

Gambia

Guinea

Guadeloupe
Equatorial Guinea

Greece

South Georgia and the South Sandwich Islands

Guatemala

Guam

Guinea-Bissau

Guyana

Hong Kong

Heard Island and McDonald Islands

Honduras

Croatia

Haiti
Hungary

Indonesia

Ireland

Israel

Isle of Man

India

British Virgin Islands

Iraq

Iran (Islamic Republic of)

Iceland

Italy

Jersey
Jamaica

Jordan

Japan

Kenya

Kyrgyzstan

Cambodia

Kiribati

Comoros

Saint Kitts and Nevis

Korea, Democratic People’s Republic of

Korea, Republic of

Kuwait
Cayman Islands

Kazakhstan

Lao People's Democratic Republic

Lebanon

Saint Lucia

Liechtenstein

Sri Lanka

Liberia

Lesotho

Lithuania

Luxembourg

Latvia
Libya

Morocco

Monaco

Moldova, Republic of

Montenegro

Saint Martin (French part)

Madagascar

Marshall Islands

Macedonia, The former Yugoslav Republic of

Mali

Myanmar

Mongolia
Macao
Northern Mariana Islands
Martinique
Mauritania
Montserrat
Malta
Mauritius
Maldives
Malawi
Mexico
Malaysia
Mozambique
Namibia
New Caledonia
Niger
Norfolk Island
Nigeria
Nicaragua
Netherlands
Norway
Nepal
Nauru
Niue
New Zealand
Oman

Other

Panama

Peru

French Polynesia

Papua New Guinea

Philippines

Pakistan

Poland

Saint Pierre and Miquelon

Pitcairn

Puerto Rico
Palestinian Territory, Occupied

Portugal

Palau

Paraguay

Qatar

Reunion

Romania

Serbia

Russian Federation

Rwanda

Saudi Arabia

Solomon Islands
Seychelles

Sudan

Sweden

Singapore

Saint Helena

Slovenia

Svalbard and Jan Mayen Islands

Slovakia

Sierra Leone

San Marino

Senegal

Somalia
Suriname

South Sudan

Sao Tome and Principe

El Salvador

Sint Maarten (Dutch part)

Syrian Arab Republic

Swaziland

Turks and Caicos Islands

Chad

French Southern Territories

Togo

Thailand
veris:asset:country="TJ"
Tajikistan

veris:asset:country="TK"
Tokelau

veris:asset:country="TL"
Timor-Leste

veris:asset:country="TM"
Turkmenistan

veris:asset:country="TN"
Tunisia

veris:asset:country="TO"
Tonga

veris:asset:country="TR"
Turkey

veris:asset:country="TT"
Trinidad and Tobago

veris:asset:country="TV"
Tuvalu

veris:asset:country="TW"
Taiwan, Province of China

veris:asset:country="TZ"
Tanzania, United Republic of

veris:asset:country="UA"
Ukraine
veris:asset:country="UG"
Uganda

veris:asset:country="UM"
United States Minor Outlying Islands

veris:asset:country="US"
United States of America

veris:asset:country="UY"
Uruguay

veris:asset:country="UZ"
Uzbekistan

veris:asset:country="Unknown"
Unknown

veris:asset:country="VA"
Holy See

veris:asset:country="VC"
Saint Vincent and the Grenadines

veris:asset:country="VE"
Venezuela (Bolivarian Republic of)

veris:asset:country="VG"
British Virgin Islands

veris:asset:country="VI"
United States Virgin Islands

veris:asset:country="VN"
Viet Nam
Vanuatu

Wallis and Futuna Islands

Samoa

Yemen

Mayotte

South Africa

Zambia

Zimbabwe

Hosted by 3rd party

Managed by 3rd party

Owned by 3rd party
**veris:asset:governance="Internally isolated"**
Isolated internal asset

**veris:asset:governance="Other"**
Governance known but not listed

**veris:asset:governance="Personally owned"**
Personally owned asset

**veris:asset:governance="Unknown"**
Unknown

**veris:asset:governance="Victim governed"**
The victim owns and controls the asset

**asset:hosting**

**veris:asset:hosting="External"**
Externally hosted (unsure if dedicated or shared)

**veris:asset:hosting="External dedicated"**
Externally hosted in a dedicated environment

**veris:asset:hosting="External shared"**
Externally hosted in a shared environment

**veris:asset:hosting="Internal"**
Internally hosted

**veris:asset:hosting="NA"**
Not applicable

**veris:asset:hosting="Other"**
Hosting known but not listed
**asset:management**

- **veris:asset:management="External"**
  Externally managed

- **veris:asset:management="Internal"**
  Internally managed

- **veris:asset:management="NA"**
  Not applicable

- **veris:asset:management="Other"**
  Ownership known but not listed

- **veris:asset:management="Unknown"**
  Unknown

**asset:ownership**

- **veris:asset:ownership="Customer"**
  Customer owned

- **veris:asset:ownership="Employee"**
  Employee owned

- **veris:asset:ownership="NA"**
  Not applicable

- **veris:asset:ownership="Other"**
  Owner known but not listed

- **veris:asset:ownership="Partner"**
  Partner owned
veris:asset:ownership="Unknown"
Unknown

veris:asset:ownership="Victim"
Victim owned

**impact:iso_currency_code**

veris:impact:iso_currency_code="AED"
AED - UAE Dirham

veris:impact:iso_currency_code="AFN"
AFN - Afghani

veris:impact:iso_currency_code="ALL"
ALL - Lek

veris:impact:iso_currency_code="AMD"
AMD - Armenian Dram

veris:impact:iso_currency_code="ANG"
ANG - Netherlands Antillean Guilder

veris:impact:iso_currency_code="AOA"
AOA - Kwanza

veris:impact:iso_currency_code="ARS"
ARS - Argentine Peso

veris:impact:iso_currency_code="AUD"
AUD - Australian Dollar

veris:impact:iso_currency_code="AWG"
AWG - Aruban Florin
AZN - Azerbaijani Manat

BAM - Convertible Mark

BBD - Barbados Dollar

BDT - Taka

BGN - Bulgarian Lev

BHD - Bahraini Dinar

BIF - Burundi Franc

BMD - Bermudian Dollar

BND - Brunei Dollar

BOB - Boliviano

BRL - Brazilian Real

BSD - Bahamian Dollar
BTN - Ngultrum

BWP - Pula

BYR - Belarussian Ruble

BZD - Belize Dollar

CAD - Canadian Dollar

CDF - Congolese Franc

CHF - Swiss Franc

CLP - Chilean Peso

CNY - Yuan Renminbi

COP - Colombian Peso

CRC - Costa Rican Colon

CUC - Peso Convertible
CUP - Cuban Peso
CVE - Cape Verde Escudo
CZK - Czech Koruna
DJF - Djibouti Franc
DKK - Danish Krone
DOP - Dominican Peso
DZD - Algerian Dinar
EGP - Egyptian Pound
ERN - Nakfa
ETB - Ethiopian Birr
EUR - Euro
FJD - Fiji Dollar
FKP - Falkland Islands Pound

GBP - Pound Sterling

GEL - Lari

GGP - Guernsey pound

GHS - Ghana Cedi

GIP - Gibraltar Pound

GMD - Dalasi

GNF - Guinea Franc

GTQ - Quetzal

GYD - Guyana Dollar

HKD - Hong Kong Dollar

HNL - Lempira
HRK - Croatian Kuna
HTG - Gourde
HUF - Forint
IDR - Rupiah
ILS - New Israeli Sheqel
IMP - Isle of Man Pound
INR - Indian Rupee
IQD - Iraqi Dinar
IRR - Iranian Rial
ISK - Iceland Krona
JEP - Jersey pound
JMD - Jamaican Dollar
JOD - Jordanian Dinar

JPY - Yen

KES - Kenyan Shilling

KGS - Som

KHR - Riel

KMF - Comoro Franc

KPW - North Korean Won

KRW - South Korean Won

KWD - Kuwaiti Dinar

KYD - Cayman Islands Dollar

KZT - Tenge

LAK - Kip
LBP - Lebanese Pound
LKR - Sri Lanka Rupee
LRD - Liberian Dollar
LSL - Loti
LTL - Lithuanian Litas
LVL - Latvian Lats
LYD - Libyan Dinar
MAD - Moroccan Dirham
MDL - Moldovan Leu
MGA - Malagasy Ariary
MKD - Denar
MMK - Kyat
MNT - Tugrik

MOP - Pataca

MRO - Ouguiya

MUR - Mauritius Rupee

MVR - Rufiyaa

MWK - Kwacha

MXN - Mexican Peso

MYR - Malaysian Ringgit

MZN - Mozambique Metical

NAD - Namibia Dollar

NGN - Naira

NIO - Cordoba Oro
NOK - Norwegian Krone

NPR - Nepalese Rupee

NZD - New Zealand Dollar

OMR - Rial Omani

PAB - Balboa

PEN - Nuevo Sol

PGK - Kina

PHP - Philippine Peso

PKR - Pakistan Rupee

PLN - Zloty

PYG - Guarani

QAR - Qatari Rial
RON - New Romanian Leu

RSD - Serbian Dinar

RUB - Russian Ruble

RWF - Rwanda Franc

SAR - Saudi Riyal

SBD - Solomon Islands Dollar

SCR - Seychelles Rupee

SDG - Sudanese Pound

SEK - Swedish Krona

SGD - Singapore Dollar

SHP - Saint Helena Pound

SLL - Leone
SOS - Somali Shilling

SPL - Seborga Luigino

SRD - Surinam Dollar

STD - Dobra

SVC - El Salvador Colon

SYP - Syrian Pound

SZL - Lilangeni

THB - Baht

TJS - Somoni

TMT - Turkmenistan New Manat

TND - Tunisian Dinar

TOP - Pa'anga
TRY - Turkish Lira

TTD - Trinidad and Tobago Dollar

TVD - Tuvalu Dollar

TWD - New Taiwan Dollar

TZS - Tanzanian Shilling

UAH - Hryvnia

UGX - Uganda Shilling

USD - US Dollar

UYU - Peso Uruguayo

UZS - Uzbekistan Sum

VEF - Bolivar

VND - Dong
VUV - Vatu

WST - Tala

XAF - CFA Franc BEAC

XCD - East Caribbean Dollar

XDR - SDR (Special Drawing Right)

XOF - CFA Franc BCEAO

XPF - CFP Franc

YER - Yemeni Rial

ZAR - South African Rand

ZMK - Zambian Kwacha

ZWD - Zimbabwean Dollar A/06

impact:overall_rating
veris:impact:overall_rating="Catastrophic"
Catastrophic: A business-ending event (don’t choose this if the victim will continue operations)

veris:impact:overall_rating="Damaging"
Damaging: Real and serious effect on the “bottom line” and/or long-term ability to generate revenue

veris:impact:overall_rating="Distracting"
Distracting: Limited “hard costs”, but impact felt through having to deal with the incident rather than conducting normal duties

veris:impact:overall_rating="Insignificant"
Insignificant: Impact absorbed by normal activities

veris:impact:overall_rating="Painful"
Painful: Moderate “hard costs”, and impact felt through having to deal with the incident rather than conducting normal duties has quantifiable indirect costs

veris:impact:overall_rating="Unknown"
Unknown

victim:country

veris:victim:country="AD"
Andorra

veris:victim:country="AE"
United Arab Emirates

veris:victim:country="AF"
Afghanistan

veris:victim:country="AG"
Antigua and Barbuda

veris:victim:country="AI"
Anguilla
Albania

Armenia

Angola

Antarctica

Argentina

American Samoa

Austria

Australia

Aruba

Aland Islands

Azerbaijan

Bosnia and Herzegovina
Barbados

Bangladesh

Belgium

Burkina Faso

Bulgaria

Bahrain

Burundi

Benin

Saint-Barthelemy

Bermuda

Brunei Darussalam

Bolivia
Bonaire, Saint Eustatius and Saba

Brazil

Bahamas

Bhutan

Bouvet Island

Botswana

Belarus

Belize

Canada

Cocos (Keeling) Islands

Congo, Democratic Republic of the

Central African Republic
Congo

Switzerland

Cote d'Ivoire

Cook Islands

Chile

Cameroon

China

Colombia

Costa Rica

Cuba

Cape Verde

Curacao
Christmas Island

Cyprus

Czech Republic

Germany

Djibouti

Denmark

Dominica

Dominican Republic

Algeria

Ecuador

Estonia

Egypt
Western Sahara
Eritrea
Spain
Ethiopia
Finland
Fiji
Faeroe Islands
Micronesia (Federated States of)
Falkland Islands (Malvinas)
France
Gabon
United Kingdom
Grenada

Georgia

French Guiana

Guernsey

Ghana

Gibraltar

Greenland

Gambia

Guinea

Guadeloupe

Equatorial Guinea

Greece
South Georgia and the South Sandwich Islands

Guatemala

Guam

Guinea-Bissau

Guyana

Hong Kong

Heard Island and McDonald Islands

Honduras

Croatia

Haiti

Hungary

Indonesia
Ireland

Israel

Isle of Man

India

British Virgin Islands

Iraq

Iran (Islamic Republic of)

Iceland

Italy

Jersey

Jamaica

Jordan
veris:victim:country="JP"
Japan

veris:victim:country="KE"
Kenya

veris:victim:country="KG"
Kyrgyzstan

veris:victim:country="KH"
Cambodia

veris:victim:country="KI"
Kiribati

veris:victim:country="KM"
Comoros

veris:victim:country="KN"
Saint Kitts and Nevis

veris:victim:country="KP"
Korea, Democratic People's Republic of

veris:victim:country="KR"
Korea, Republic of

veris:victim:country="KW"
Kuwait

veris:victim:country="KY"
Cayman Islands

veris:victim:country="KZ"
Kazakhstan
veris:victim:country="LA"
Lao People's Democratic Republic

veris:victim:country="LB"
Lebanon

veris:victim:country="LC"
Saint Lucia

veris:victim:country="LI"
Liechtenstein

veris:victim:country="LK"
Sri Lanka

veris:victim:country="LR"
Liberia

veris:victim:country="LS"
Lesotho

veris:victim:country="LT"
Lithuania

veris:victim:country="LU"
Luxembourg

veris:victim:country="LV"
Latvia

veris:victim:country="LY"
Libya

veris:victim:country="MA"
Morocco
Monaco

Moldova, Republic of

Montenegro

Saint Martin (French part)

Madagascar

Marshall Islands

Macedonia, The former Yugoslav Republic of

Mali

Myanmar

Mongolia

Macao

Northern Mariana Islands
Martinique
Mauritania
Montserrat
Malta
Mauritius
Maldives
Malawi
Mexico
Malaysia
Mozambique
Namibia
New Caledonia
Niger
Norfolk Island
Nigeria
Nicaragua
Netherlands
Norway
Nepal
Nauru
Niue
New Zealand
Oman
Other
veris:victim:country="PA"
Panama

veris:victim:country="PE"
Peru

veris:victim:country="PF"
French Polynesia

veris:victim:country="PG"
Papua New Guinea

veris:victim:country="PH"
Philippines

veris:victim:country="PK"
Pakistan

veris:victim:country="PL"
Poland

veris:victim:country="PM"
Saint Pierre and Miquelon

veris:victim:country="PN"
Pitcairn

veris:victim:country="PR"
Puerto Rico

veris:victim:country="PS"
Palestinian Territory, Occupied

veris:victim:country="PT"
Portugal
Palau
Paraguay
Qatar
Reunion
Romania
Serbia
Russian Federation
Rwanda
Saudi Arabia
Solomon Islands
Seychelles
Sudan
Sweden

Singapore

Saint Helena

Slovenia

Svalbard and Jan Mayen Islands

Slovakia

Sierra Leone

San Marino

Senegal

Somalia

Suriname

South Sudan
Sao Tome and Principe

El Salvador

Sint Maarten (Dutch part)

Syrian Arab Republic

Swaziland

Turks and Caicos Islands

Chad

French Southern Territories

Togo

Thailand

Tajikistan

Tokelau
veris:victim:country="TL"
Timor-Leste

veris:victim:country="TM"
Turkmenistan

veris:victim:country="TN"
Tunisia

veris:victim:country="TO"
Tonga

veris:victim:country="TR"
Turkey

veris:victim:country="TT"
Trinidad and Tobago

veris:victim:country="TV"
Tuvalu

veris:victim:country="TW"
Taiwan, Province of China

veris:victim:country="TZ"
Tanzania, United Republic of

veris:victim:country="UA"
Ukraine

veris:victim:country="UG"
Uganda

veris:victim:country="UM"
United States Minor Outlying Islands
United States of America

Uruguay

Uzbekistan

Unknown

Holy See

Saint Vincent and the Grenadines

Venezuela (Bolivarian Republic of)

British Virgin Islands

United States Virgin Islands

Viet Nam

Vanuatu

Wallis and Futuna Islands
veris:victim:country="WS"
Samoa

veris:victim:country="YE"
Yemen

veris:victim:country="YT"
Mayotte

veris:victim:country="ZA"
South Africa

veris:victim:country="ZM"
Zambia

veris:victim:country="ZW"
Zimbabwe

victim:employee_count

veris:victim:employee_count="1 to 10"
1 to 10 employees

veris:victim:employee_count="10001 to 25000"
10,001 to 25,000 employees

veris:victim:employee_count="1001 to 10000"
1,001 to 10,000 employees

veris:victim:employee_count="101 to 1000"
101 to 1,000 employees

veris:victim:employee_count="11 to 100"
11 to 100 employees
25,001 to 50,000 employees

50,001 to 100,000 employees

Large organizations (over 1,000 employees)

Over 100,001 employees

Small organizations (1,000 employees or less)

Unknown number of employees

Deterioration and degradation

Electromagnetic interference (EMI)

Electrostatic discharge (ESD)

Earthquake

Fire
Flood

Hazardous material

Humidity

Hurricane

Ice and snow

Landslide

Water leak

Lightning

Meteorite

Other

Particulate matter (e.g., dust, smoke)

Pathogen
Power failure or fluctuation

Extreme temperature

Tornado

Tsunami

Unknown

Vermin

Volcanic eruption

Wind

Poor capacity planning

Classification or labeling error

Data entry error
Disposal error

Gaffe (social or verbal slip)

Loss or misplacement

Maintenance error

Technical malfunction or glitch

Misconfiguration

Misdelivery (send wrong info or to wrong recipient)

Misinformation (unintentionally giving false info)

Omission (something intended, but not done)

Other

Physical accidents (e.g., drops, bumps, spills)

Programming error (flaws or bugs in custom code)
Publishing error (private info to public doc or site)

Unknown

Carelessness

Inadequate or insufficient personnel

Inadequate or insufficient processes

Inadequate or insufficient technology resources

Other

Random error (no reason, no fault)

Unknown

The hacking action resulted in additional permissions

The hacking action exfiltrated data from the victim
The hacking action infiltrated the victim

**action:hacking:variety**

**veris:action:hacking:variety="Abuse of functionality"**
Abuse of functionality

**veris:action:hacking:variety="Brute force"**
Brute force or password guessing attacks

**veris:action:hacking:variety="Buffer overflow"**
Buffer overflow

**veris:action:hacking:variety="CSRF"**
Cross-site request forgery

**veris:action:hacking:variety="Cache poisoning"**
Cache poisoning

**veris:action:hacking:variety="Cryptanalysis"**
Cryptanalysis

**veris:action:hacking:variety="DoS"**
Denial of service

**veris:action:hacking:variety="Footprinting"**
Footprinting and fingerprinting

**veris:action:hacking:variety="Forced browsing"**
Forced browsing or predictable resource location

**veris:action:hacking:variety="Format string attack"**
Format string attack
Fuzz testing

HTTP Response Splitting

HTTP request smuggling

HTTP request splitting

HTTP response smuggling

Integer overflows

LDAP injection

Mail command injection

MitM

Man-in-the-middle attack

Null byte injection

OS commanding

Offline cracking

Offline password or key cracking (e.g., rainbow tables, Hashcat, JtR)
Other

Pass-the-hash

Path traversal

Remote file inclusion

Reverse engineering

Routing detour

SQL injection

SSI injection

Session fixation

Credential or session prediction

Session replay

Soap array abuse
Special element injection

URL redirector abuse

Unknown

Use of Backdoor or C2 channel

Use of stolen authentication credentials

Virtual machine escape

XML attribute blowup

XML entity expansion

XML external entities

XML injection

XPath injection

XQuery injection
Cross-site scripting

**action:hacking:vector**

**veris:action:hacking:vector="3rd party desktop"**
3rd party online desktop sharing (LogMeIn, Go2Assist)

**veris:action:hacking:vector="Backdoor or C2"**
Backdoor or command and control channel

**veris:action:hacking:vector="Command shell"**
Remote shell

**veris:action:hacking:vector="Desktop sharing"**
Graphical desktop sharing (RDP, VNC, PCAnywhere, Citrix)

**veris:action:hacking:vector="Desktop sharing software"**
Superset of 'Desktop sharing' and '3rd party desktop'. Please use in place of the other two

**veris:action:hacking:vector="Other"**
Other

**veris:action:hacking:vector="Partner"**
Partner connection or credential

**veris:action:hacking:vector="Physical access"**
Physical access or connection (i.e., at keyboard or via cable)

**veris:action:hacking:vector="Unknown"**
Unknown

**veris:action:hacking:vector="VPN"**
VPN
The malware action resulted in additional permissions. The malware action exfiltrated data from the victim. The malware action infiltrated the victim.

System or network utilities (e.g., PsTools, Netcat) Adware Backdoor (enable remote access) Brute force attack Command and control (C2) Capture data from application or system process Capture data stored on system disk
Click fraud or Bitcoin mining

Client-side or browser attack (e.g., redirection, XSS, MitB)

Destroy or corrupt stored data

Disable or interfere with security controls

DoS attack

Downloader (pull updates or other malware)

Exploit vulnerability in code (vs misconfig or weakness)

Export data to another site or system

Malware which compromises a legitimate file rather than creating new files

Other

Packet sniffer (capture data from network)

Password dumper (extract credential hashes)
Ram scraper or memory parser (capture data from volatile memory)

Ransomware (encrypt or seize stored data)

Rootkit (maintain local privileges and stealth)

SQL injection attack

Scan or footprint network

Send spam

Spyware, keylogger or form-grabber (capture user input or activity)

Unknown

Worm (propagate to other systems or devices)

Directly installed or inserted by threat agent (after system access)

Downloaded and installed by local malware
Email via user-executed attachment

Email via automatic execution

Email via embedded link

Email but sub-variety (attachment, autoexecute, link, etc) not known

Instant Messaging

Network propagation

Other

Remotely injected by agent (i.e. via SQLi)

Removable storage media or devices

Included in automated software update

Unknown

Web via user-executed or downloaded content
Web via auto-executed or "drive-by" infection

**action:misuse:result**

**veris:action:misuse:result="Elevate"**
The misuse action resulted in additional permissions

**veris:action:misuse:result="Exfiltrate"**
The misuse action exfiltrated data from the victim

**veris:action:misuse:result="Infiltrate"**
The misuse action infiltrated the victim

**action:misuse:variety**

**veris:action:misuse:variety="Data mishandling"**
Handling of data in an unapproved manner

**veris:action:misuse:variety="Email misuse"**
Inappropriate use of email or IM

**veris:action:misuse:variety="Illicit content"**
Storage or distribution of illicit content

**veris:action:misuse:variety="Knowledge abuse"**
Abuse of private or entrusted knowledge

**veris:action:misuse:variety="Net misuse"**
Inappropriate use of network or Web access

**veris:action:misuse:variety="Other"**
Abuse of physical access to asset

Abuse of system access privileges

Use of unapproved hardware or devices

Use of unapproved software or services

Unapproved workaround or shortcut

Unknown

Local network access within corporate facility

Non-corporate facilities or networks

Other

Physical access within corporate facility

Remote access connection to corporate network (i.e. VPN)
The physical action resulted in additional permissions

The physical action exfiltrated data from the victim

The physical action infiltrated the victim

Assault (threats or acts of physical violence)

Bypassed physical barriers or controls

Connection

Destruction (deliberate damaging or disabling)

Disabled physical barriers or controls

Other

Installing card skimming device
Snooping (sneak about to gain info or access)

Surveillance (monitoring and observation)

Tampering (alter physical form or function)

Theft (taking assets without permission)

Unknown

Wiretapping (Physical tap to comms line)

Other

Partner facility or area

Partner vehicle (e.g., delivery truck)

Personal residence

Personal vehicle
Held privileged access to location

Public facility or area

Public vehicle (e.g., plane, taxi)

The location was uncontrolled (public)

Unknown

Victim outdoor grounds

Victim public or customer area (e.g., lobby, storefront)

Victim high security area (e.g., server room, R&D labs)

Victim private or work area (e.g., office space)

Given temporary visitor access

The social action resulted in additional permissions
The social action exfiltrated data from the victim

The social action infiltrated the victim

**action:social:**

**target**

**veris:action:social:**

- target="Auditor"
  Auditor

- target="Call center"
  Call center staff

- target="Cashier"
  Cashier, teller or waiter

- target="Customer"
  Customer (B2C)

- target="Developer"
  Software developer

- target="End-user"
  End-user or regular employee

- target="Executive"
  Executive or upper management

- target="Finance"
  Finance or accounting staff

- target="Former employee"
  Former employee
Security guard

Helpdesk staff

Human resources staff

Maintenance or janitorial staff

Manager or supervisor

Other

Partner (B2B)

System or network administrator

Unknown

Baiting (planting infected media)

Bribery or solicitation
Elicitation (subtle extraction of info through conversation)

Extortion or blackmail

Forgery or counterfeiting (fake hardware, software, documents, etc)

Influence tactics (Leveraging authority or obligation, framing, etc)

Other

Phishing (or any type of *ishing)

Pretexting (dialogue leveraging invented scenario)

Propaganda or disinformation

Online scam or hoax (e.g., scareware, 419 scam, auction fraud)

Spam (unsolicited or undesired email and advertisements)

Unknown

action:social:vector
Documents

Email

Instant messaging

In-person

Other

Phone

Removable storage media

SMS or texting

Social media or networking

Software

Unknown

Website
The hacking action resulted in additional permissions

The hacking action exfiltrated data from the victim

The hacking action infiltrated the victim

Andorra

United Arab Emirates

Afghanistan

Antigua and Barbuda

Anguilla

Albania

Armenia

Angola
Antarctica

Argentina

American Samoa

Austria

Australia

Aruba

Aland Islands

Azerbaijan

Bosnia and Herzegovina

Barbados

Bangladesh

Belgium
Burkina Faso

Bulgaria

Bahrain

Burundi

Benin

Saint-Barthelemy

Bermuda

Brunei Darussalam

Bolivia

Bonaire, Saint Eustatius and Saba

Brazil

Bahamas
Bhutan

Bouvet Island

Botswana

Belarus

Belize

Canada

Cocos (Keeling) Islands

Congo, Democratic Republic of the

Central African Republic

Congo

Switzerland

Cote d'Ivoire
Cook Islands
Chile
Cameroon
China
Colombia
Costa Rica
Cuba
Cape Verde
Curacao
Christmas Island
Cyprus
Czech Republic
Germany
Djibouti
Denmark
Dominica
Dominican Republic
Algeria
Ecuador
Estonia
Egypt
Western Sahara
Eritrea
Spain
Ethiopia

Finland

Fiji

Faeroe Islands

Micronesia (Federated States of)

Falkland Islands (Malvinas)

France

Gabon

United Kingdom

Grenada

Georgia

French Guiana
Guernsey

Ghana

Gibraltar

Greenland

Gambia

Guinea

Guadeloupe

Equatorial Guinea

Greece

South Georgia and the South Sandwich Islands

Guatemala

Guam
Guinea-Bissau

Guyana

Hong Kong

Heard Island and McDonald Islands

Honduras

Croatia

Haiti

Hungary

Indonesia

Ireland

Israel

Isle of Man
India

British Virgin Islands

Iraq

Iran (Islamic Republic of)

Iceland

Italy

Jersey

Jamaica

Jordan

Japan

Kenya

Kyrgyzstan
Cambodia
Kiribati
Comoros
Saint Kitts and Nevis
Korea, Democratic People’s Republic of
Korea, Republic of
Kuwait
Cayman Islands
Kazakhstan
Lao People’s Democratic Republic
Lebanon
Saint Lucia
Liechtenstein
Sri Lanka
Liberia
Lesotho
Lithuania
Luxembourg
Latvia
Libya
Morocco
Monaco
Moldova, Republic of
Montenegro
Saint Martin (French part)

Madagascar

Marshall Islands

Macedonia, The former Yugoslav Republic of

Mali

Myanmar

Mongolia

Macao

Northern Mariana Islands

Martinique

Mauritania

Montserrat
Malta
Mauritius
Maldives
Malawi
Mexico
Malaysia
Mozambique
Namibia
New Caledonia
Niger
Norfolk Island
Nigeria
Nicaragua

Netherlands

Norway

Nepal

Nauru

Niue

New Zealand

Oman

Other

Panama

Peru

French Polynesia
Papua New Guinea

Philippines

Pakistan

Poland

Saint Pierre and Miquelon

Pitcairn

Puerto Rico

Palestinian Territory, Occupied

Portugal

Palau

Paraguay

Qatar
Reunion

Romania

Serbia

Russian Federation

Rwanda

Saudi Arabia

Solomon Islands

Seychelles

Sudan

Sweden

Singapore

Saint Helena
Slovenia

Svalbard and Jan Mayen Islands

Slovakia

Sierra Leone

San Marino

Senegal

Somalia

Suriname

South Sudan

Sao Tome and Principe

El Salvador

Sint Maarten (Dutch part)
Syrian Arab Republic

Swaziland

Turks and Caicos Islands

Chad

French Southern Territories

Togo

Thailand

Tajikistan

Tokelau

Timor-Leste

Turkmenistan

Tunisia
Tonga
Turkey
Trinidad and Tobago
Tuvalu
Taiwan, Province of China
Tanzania, United Republic of
Ukraine
Uganda
United States Minor Outlying Islands
United States of America
Uruguay
Uzbekistan
Unknown

Holy See

Saint Vincent and the Grenadines

Venezuela (Bolivarian Republic of)

British Virgin Islands

United States Virgin Islands

Viet Nam

Vanuatu

Wallis and Futuna Islands

Samoa

Yemen

Mayotte
South Africa

Zambia

Zimbabwe

actor:external:motive

Convenience of expediency

Espionage or competitive advantage

Fear or duress

Financial or personal gain

Fun, curiosity, or pride

Grudge or personal offense

Ideology or protest

Not Applicable (unintentional action)
Other

Aid in a different attack

Unknown

Relative or acquaintance of employee

Activist group

Auditor

Competitor

Customer (B2C)

Force majeure (nature and chance)

Former employee (no longer had access)

Nation-state
**veris:actor:external:variety=Organized crime**
Organized or professional criminal group

**veris:actor:external:variety=Other**
Other

**veris:actor:external:variety=State-affiliated**
State-sponsored or affiliated group

**veris:actor:external:variety=Terrorist**
Terrorist group

**veris:actor:external:variety=Unaffiliated**
Unaffiliated person(s)

**veris:actor:external:variety=Unknown**
Unknown

**actor:internal:job_change**

**veris:actor:internal:job_change=Demoted**
Recently demoted or hours reduced

**veris:actor:internal:job_change=Hired**
Recently hired

**veris:actor:internal:job_change=Job eval**
Recent poor job evaluation

**veris:actor:internal:job_change=Lateral move**
Lateral move

**veris:actor:internal:job_change=Let go**
Fired, laid off, or let go
veris:actor:internal:job_change="Other"

Other

veris:actor:internal:job_change="Passed over"

Recently passed over for promotion

veris:actor:internal:job_change="Personal issues"

Personal issues

veris:actor:internal:job_change="Promoted"

Recently promoted

veris:actor:internal:job_change="Reprimanded"

Recently reprimanded

veris:actor:internal:job_change="Resigned"

Preparing to resign or recently resigned

veris:actor:internal:job_change="Unknown"

Unknown

actor:internal:motive

veris:actor:internal:motive="Convenience"

Convenience of expediency

veris:actor:internal:motive="Espionage"

Espionage or competitive advantage

veris:actor:internal:motive="Fear"

Fear or duress

veris:actor:internal:motive="Financial"

Financial or personal gain
Fun, curiosity, or pride

Grudge or personal offense

Ideology or protest

Not Applicable (unintentional action)

Other

Aid in a different attack

Unknown

Auditor

Call center staff

Cashier, teller, or waiter

Software developer
A doctor or a nurse

End-user or regular employee

Executive or upper management

Finance or accounting staff

Security guard

Helpdesk staff

Human resources staff

Maintenance or janitorial staff

Manager or supervisor

Other

System or network administrator

Unknown
actor:partner:country

veris:actor:partner:country="AD"
Andorra

veris:actor:partner:country="AE"
United Arab Emirates

veris:actor:partner:country="AF"
Afghanistan

veris:actor:partner:country="AG"
Antigua and Barbuda

veris:actor:partner:country="AI"
Anguilla

veris:actor:partner:country="AL"
Albania

veris:actor:partner:country="AM"
Armenia

veris:actor:partner:country="AO"
Angola

veris:actor:partner:country="AQ"
Antarctica

veris:actor:partner:country="AR"
Argentina

veris:actor:partner:country="AS"
American Samoa
Austria

Australia

Aruba

Aland Islands

Azerbaijan

Bosnia and Herzegovina

Barbados

Bangladesh

Belgium

Burkina Faso

Bulgaria

Bahrain
Burundi

Benin

Saint-Barthelemy

Bermuda

Brunei Darussalam

Bolivia

Bonaire, Saint Eustatius and Saba

Brazil

Bahamas

Bhutan

Bouvet Island

Botswana
Belarus

Belize

Canada

Cocos (Keeling) Islands

Congo, Democratic Republic of the

Central African Republic

Congo

Switzerland

Cote d'Ivoire

Cook Islands

Chile

Cameroon
China

Colombia

Costa Rica

Cuba

Cape Verde

Curacao

Christmas Island

Cyprus

Czech Republic

Germany

Djibouti

Denmark
Dominica

Dominican Republic

Algeria

Ecuador

Estonia

Egypt

Western Sahara

Eritrea

Spain

Ethiopia

Finland

Fiji
Faeroe Islands

Micronesia (Federated States of)

Falkland Islands (Malvinas)

France

Gabon

United Kingdom

Grenada

Georgia

French Guiana

Guernsey

Ghana

Gibraltar
Greenland

Gambia

Guinea

Guadeloupe

Equatorial Guinea

Greece

South Georgia and the South Sandwich Islands

Guatemala

Guam

Guinea-Bissau

Guyana

Hong Kong
Heard Island and McDonald Islands

Honduras

Croatia

Haiti

Hungary

Indonesia

Ireland

Israel

Isle of Man

India

British Virgin Islands

Iraq
Iran (Islamic Republic of)
Iceland
Italy
Jersey
Jamaica
Jordan
Japan
Kenya
Kyrgyzstan
Cambodia
Kiribati
Comoros
Saint Kitts and Nevis

Korea, Democratic People’s Republic of

Korea, Republic of

Kuwait

Cayman Islands

Kazakhstan

Lao People’s Democratic Republic

Lebanon

Saint Lucia

Liechtenstein

Sri Lanka

Liberia
Lesotho

Lithuania

Luxembourg

Latvia

Libya

Morocco

Monaco

Moldova, Republic of

Montenegro

Saint Martin (French part)

Madagascar

Marshall Islands
Macedonia, The former Yugoslav Republic of

Mali

Myanmar

Mongolia

Macao

Northern Mariana Islands

Martinique

Mauritania

Montserrat

Malta

Mauritius

Maldives
Malawi

Mexico

Malaysia

Mozambique

Namibia

New Caledonia

Niger

Norfolk Island

Nigeria

Nicaragua

Netherlands

Norway
Nepal

Nauru

Niue

New Zealand

Oman

Other

Panama

Peru

French Polynesia

Papua New Guinea

Philippines

Pakistan
Poland
Saint Pierre and Miquelon
Pitcairn
Puerto Rico
Palestinian Territory, Occupied
Portugal
Palau
Paraguay
Qatar
Reunion
Romania
Serbia
Russian Federation

Rwanda

Saudi Arabia

Solomon Islands

Seychelles

Sudan

Sweden

Singapore

Saint Helena

Slovenia

Svalbard and Jan Mayen Islands

Slovakia
Sierra Leone
San Marino
Senegal
Somalia
Suriname
South Sudan
Sao Tome and Principe
El Salvador
Sint Maarten (Dutch part)
Syrian Arab Republic
Swaziland
Turks and Caicos Islands
Chad

French Southern Territories

Togo

Thailand

Tajikistan

Tokelau

Timor-Leste

Turkmenistan

Tunisia

Tonga

Turkey

Trinidad and Tobago
Tuvalu
Taiwan, Province of China
Tanzania, United Republic of
Ukraine
Uganda
United States Minor Outlying Islands
United States of America
Uruguay
Uzbekistan
Unknown
Holy See
Saint Vincent and the Grenadines
Venezuela (Bolivarian Republic of)

British Virgin Islands

United States Virgin Islands

Viet Nam

Vanuatu

Wallis and Futuna Islands

Samoa

Yemen

Mayotte

South Africa

Zambia

Zimbabwe
actor:partner:motive

veris:actor:partner:motive="Convenience"
Convenience of expediency

veris:actor:partner:motive="Espionage"
Espionage or competitive advantage

veris:actor:partner:motive="Fear"
Fear or duress

veris:actor:partner:motive="Financial"
Financial or personal gain

veris:actor:partner:motive="Fun"
Fun, curiosity, or pride

veris:actor:partner:motive="Grudge"
Grudge or personal offense

veris:actor:partner:motive="Ideology"
Ideology or protest

veris:actor:partner:motive="NA"
Not Applicable (unintentional action)

veris:actor:partner:motive="Other"
Other

veris:actor:partner:motive="Secondary"
Aid in a different attack

veris:actor:partner:motive="Unknown"
Unknown
**asset:assets:variety**

**veris:asset:assets:variety="E - Other"**
Embedded - Variety known but not listed

**veris:asset:assets:variety="E - Telematics"**
Embedded - A dedicated device that affects the real world

**veris:asset:assets:variety="E - Telemetry"**
Embedded - A dedicated device that collects data about the physical world

**veris:asset:assets:variety="E - Unknown"**
Embedded - Variety not known

**veris:asset:assets:variety="M - Disk drive"**
Media - Hard disk drive

**veris:asset:assets:variety="M - Disk media"**
Media - Disk media (e.g., CDs, DVDs)

**veris:asset:assets:variety="M - Documents"**
Media - Documents

**veris:asset:assets:variety="M - Fax"**
Media - The output of a fax machine

**veris:asset:assets:variety="M - Flash drive"**
Media - Flash drive or card

**veris:asset:assets:variety="M - Other"**
Media - Variety known but not listed

**veris:asset:assets:variety="M - Payment card"**
Media - Payment card (e.g., magstripe, EMV)
veris:asset:assets:variety="M - Smart card"
Media - Identity smart card

veris:asset:assets:variety="M - Tapes"
Media - Backup tapes

veris:asset:assets:variety="M - Unknown"
Media - Variety not known

veris:asset:assets:variety="N - Access reader"
Network - Access control reader (e.g., badge, biometric)

veris:asset:assets:variety="N - Broadband"
Network - Mobile broadband network

veris:asset:assets:variety="N - Camera"
Network - Camera or surveillance system

veris:asset:assets:variety="N - Firewall"
Network - Firewall

veris:asset:assets:variety="N - HSM"
Network - Hardware security module (HSM)

veris:asset:assets:variety="N - IDS"
Network - IDS or IPs

veris:asset:assets:variety="N - LAN"
Network - Wired LAN

veris:asset:assets:variety="N - NAS"
Network - Network area storage (NAS)

veris:asset:assets:variety="N - Other"
Network - Variety known but not listed
Network - Private branch exchange (PBX)

Network - Programmable logic controller (PLC)

Network - Private WAN

Network - Public WAN

Network - Remote terminal unit (RTU)

Network - Router or switch

Network - Storage area network (SAN)

Network - Telephone

Network - Variety not known

Network - VoIP adapter

Network - Wireless LAN

Asset type known but not User Device, Server, Public Terminal, Server, People, Network, or Media
veris:asset:assets:variety="P - Auditor"
People - Auditor

veris:asset:assets:variety="P - Call center"
People - Call center

veris:asset:assets:variety="P - Cashier"
People - Cashier

veris:asset:assets:variety="P - Customer"
People - Customer

veris:asset:assets:variety="P - Developer"
People - Developer

veris:asset:assets:variety="P - End-user"
People - End-user

veris:asset:assets:variety="P - Executive"
People - Executive

veris:asset:assets:variety="P - Finance"
People - Finance

veris:asset:assets:variety="P - Former employee"
People - Former employee

veris:asset:assets:variety="P - Guard"
People - Guard

veris:asset:assets:variety="P - Helpdesk"
People - Helpdesk

veris:asset:assets:variety="P - Human resources"
People - Human resources
People - Maintenance

People - Manager

People - Variety known but not listed

People - Partner

People - Administrator

People - Variety not known

Server - Authentication

Server - Backup

Server - Code repository

Servers maintaining or deploying configurations or patches to other assets

Server - Distributed control system (DCS)

Server - DHCP
veris:asset:assets:variety="S - DNS"
Server - DNS

veris:asset:assets:variety="S - Database"
Server - Database

veris:asset:assets:variety="S - Directory"
Server - Directory (LDAP, AD)

veris:asset:assets:variety="S - File"
Server - File

veris:asset:assets:variety="S - ICS"
Server - Industrial Control System (ICS).Includes Supervisory Control And Data Acquisition (SCADA) systems.

veris:asset:assets:variety="S - Log"
Server - Log or event management

veris:asset:assets:variety="S - Mail"
Server - Mail

veris:asset:assets:variety="S - Mainframe"
Server - Mainframe

veris:asset:assets:variety="S - Other"
Server - Variety known but not listed

veris:asset:assets:variety="S - POS controller"
Server - POS controller

veris:asset:assets:variety="S - Payment switch"
Server - Payment switch or gateway

veris:asset:assets:variety="S - Print"
Server - Print
Server - Proxy

Server - Remote access

Server - Variety not known

Server - Virtual Host

Server - Web application

Public Terminal - Automated Teller Machine (ATM)

Public Terminal - Gas "pay-at-the-pump" terminal

Public Terminal - Self-service kiosk

Public Terminal - Variety known but not listed

Public Terminal - Detached PIN pad or card reader

Public Terminal - Variety not known

User Device - Authentication token or device
veris:asset:assets:variety="U - Desktop"
User Device - Desktop or workstation

veris:asset:assets:variety="U - Laptop"
User Device - Laptop

veris:asset:assets:variety="U - Media"
User Device - Media player or recorder

veris:asset:assets:variety="U - Mobile phone"
User Device - Mobile phone or smartphone

veris:asset:assets:variety="U - Other"
User Device - Variety known but not listed

veris:asset:assets:variety="U - POS terminal"
User Device - POS terminal

veris:asset:assets:variety="U - Peripheral"
User Device - Peripheral (e.g., printer, copier, fax)

veris:asset:assets:variety="U - Tablet"
User Device - Tablet

veris:asset:assets:variety="U - Telephone"
User Device - Telephone

veris:asset:assets:variety="U - Unknown"
User Device - Variety not known

veris:asset:assets:variety="U - VoIP phone"
User Device - VoIP phone

veris:asset:assets:variety="Unknown"
Unknown type of asset
attribute:availability:variety

veris:attribute:availability:variety="Acceleration"
Acceleration

veris:attribute:availability:variety="Degradation"
Performance degradation

veris:attribute:availability:variety="Destruction"
Destruction

veris:attribute:availability:variety="Interruption"
Interruption

veris:attribute:availability:variety="Loss"
Loss

veris:attribute:availability:variety="Obscuration"
Conversion or obscuration

veris:attribute:availability:variety="Other"
Other

veris:attribute:availability:variety="Unknown"
Unknown

attribute:confidentiality:data_disclosure

veris:attribute:confidentiality:data_disclosure="No"
No

veris:attribute:confidentiality:data_disclosure="Potentially"
Potentially (at risk)

veris:attribute:confidentiality:data_disclosure="Unknown"
Unknown
Yes (confirmed)

**attribute:confidentiality:data_victim**

- **veris:attribute:confidentiality:data_victim="Customer"**
  Customer

- **veris:attribute:confidentiality:data_victim="Employee"**
  Employee

- **veris:attribute:confidentiality:data_victim="Other"**
  Other

- **veris:attribute:confidentiality:data_victim="Partner"**
  Partner

- **veris:attribute:confidentiality:data_victim="Patient"**
  Patient

- **veris:attribute:confidentiality:data_victim="Student"**
  Student

- **veris:attribute:confidentiality:data_victim="Unknown"**
  Unknown

**attribute:confidentiality:state**

- **veris:attribute:confidentiality:state="Other"**
  Data state known but not listed.

- **veris:attribute:confidentiality:state="Printed"**
  Data printed in human-readable format

- **veris:attribute:confidentiality:state="Processed"**
  Processed
veris:attribute:confidentiality:state="Stored"
Stored

veris:attribute:confidentiality:state="Stored encrypted"
Stored encrypted

veris:attribute:confidentiality:state="Stored unencrypted"
Stored unencrypted

veris:attribute:confidentiality:state="Transmitted"
Transmitted

veris:attribute:confidentiality:state="Transmitted encrypted"
Transmitted encrypted

veris:attribute:confidentiality:state="Transmitted unencrypted"
Transmitted unencrypted

veris:attribute:confidentiality:state="Unknown"
Data stat not known

attribute:integrity:variety

veris:attribute:integrity:variety="Alter behavior"
Influence or alter human behavior

veris:attribute:integrity:variety="Created account"
Created new user account

veris:attribute:integrity:variety="Defacement"
Deface content

veris:attribute:integrity:variety="Fraudulent transaction"
Initiate fraudulent transaction
Hardware tampering or physical alteration

Log tampering or modification

Misrepresentation

Modified configuration or services

Modified stored data or content

Modified privileges or permissions

Other

Repurposed asset for unauthorized function

Software installation or code modification

Unknown

Major
veris:impact:loss:rating="Minor"
Minor

veris:impact:loss:rating="Moderate"
Moderate

veris:impact:loss:rating="None"
None

veris:impact:loss:rating="Unknown"
Unknown

impact:loss:variety

veris:impact:loss:variety="Asset and fraud"
Asset and fraud-related losses

veris:impact:loss:variety="Brand damage"
Brand and market damage

veris:impact:loss:variety="Business disruption"
Business disruption

veris:impact:loss:variety="Competitive advantage"
Loss of competitive advantage

veris:impact:loss:variety="Legal and regulatory"
Legal and regulatory costs

veris:impact:loss:variety="Operating costs"
Increased operating costs

veris:impact:loss:variety="Other"
Impact variety known but not listed.
Response and recovery costs

**timeline:compromise:unit**

* veris:timeline:compromise:unit="Days"
  Days

* veris:timeline:compromise:unit="Hours"
  Hours

* veris:timeline:compromise:unit="Minutes"
  Minutes

* veris:timeline:compromise:unit="Months"
  Months

* veris:timeline:compromise:unit="NA"
  Compromise does not apply in the context of the security event.

* veris:timeline:compromise:unit="Never"
  Never

* veris:timeline:compromise:unit="Seconds"
  Seconds

* veris:timeline:compromise:unit="Unknown"
  Unknown

* veris:timeline:compromise:unit="Weeks"
  Weeks

* veris:timeline:compromise:unit="Years"
  Years
**timeline:containment:unit**

Veris:timeline:containment:unit="Days"
Days

Veris:timeline:containment:unit="Hours"
Hours

Veris:timeline:containment:unit="Minutes"
Minutes

Veris:timeline:containment:unit="Months"
Months

Veris:timeline:containment:unit="NA"
Containment does not apply in the context of the security event.

Veris:timeline:containment:unit="Never"
Never

Veris:timeline:containment:unit="Seconds"
Seconds

Veris:timeline:containment:unit="Unknown"
Unknown

Veris:timeline:containment:unit="Weeks"
Weeks

Veris:timeline:containment:unit="Years"
Years

**timeline:discovery:unit**

Veris:timeline:discovery:unit="Days"
Days
Discovery does not apply in the context of the security event.

Never

Unknown

Weeks

Years

days

Hours
Minutes

Months

Exfiltration does not apply in the context of the security event.

Never

Seconds

Unknown

Weeks

Years

AED - UAE Dirham

AFN - Afghani

ALL - Lek
veris:victim:revenue:iso_currency_code="AMD"
AMD - Armenian Dram

veris:victim:revenue:iso_currency_code="ANG"
ANG - Netherlands Antillean Guilder

veris:victim:revenue:iso_currency_code="AOA"
AOA - Kwanza

veris:victim:revenue:iso_currency_code="ARS"
ARS - Argentine Peso

veris:victim:revenue:iso_currency_code="AUD"
AUD - Australian Dollar

veris:victim:revenue:iso_currency_code="AWG"
AWG - Aruban Florin

veris:victim:revenue:iso_currency_code="AZN"
AZN - Azerbaijani Manat

veris:victim:revenue:iso_currency_code="BAM"
BAM - Convertible Mark

veris:victim:revenue:iso_currency_code="BBD"
BBD - Barbados Dollar

veris:victim:revenue:iso_currency_code="BDT"
BDT - Taka

veris:victim:revenue:iso_currency_code="BGN"
BGN - Bulgarian Lev

veris:victim:revenue:iso_currency_code="BHD"
BHD - Bahraini Dinar
veris:victim:revenue:iso_currency_code="BIF"
BIF - Burundi Franc

veris:victim:revenue:iso_currency_code="BMD"
BMD - Bermudian Dollar

veris:victim:revenue:iso_currency_code="BND"
BND - Brunei Dollar

veris:victim:revenue:iso_currency_code="BOB"
BOB - Boliviano

veris:victim:revenue:iso_currency_code="BRL"
BRL - Brazilian Real

veris:victim:revenue:iso_currency_code="BSD"
BSD - Bahamian Dollar

veris:victim:revenue:iso_currency_code="BTN"
BTN - Ngultrum

veris:victim:revenue:iso_currency_code="BWP"
BWP - Pula

veris:victim:revenue:iso_currency_code="BYR"
BYR - Belarussian Ruble

veris:victim:revenue:iso_currency_code="BZD"
BZD - Belize Dollar

veris:victim:revenue:iso_currency_code="CAD"
CAD - Canadian Dollar

veris:victim:revenue:iso_currency_code="CDF"
CDF - Congolese Franc
veris:victim:revenue:iso_currency_code="CHF"
CHF - Swiss Franc

veris:victim:revenue:iso_currency_code="CLP"
CLP - Chilean Peso

veris:victim:revenue:iso_currency_code="CNY"
CNY - Yuan Renminbi

veris:victim:revenue:iso_currency_code="COP"
COP - Colombian Peso

veris:victim:revenue:iso_currency_code="CRC"
CRC - Costa Rican Colon

veris:victim:revenue:iso_currency_code="CUC"
CUC - Peso Convertible

veris:victim:revenue:iso_currency_code="CUP"
CUP - Cuban Peso

veris:victim:revenue:iso_currency_code="CVE"
CVE - Cape Verde Escudo

veris:victim:revenue:iso_currency_code="CZK"
CZK - Czech Koruna

veris:victim:revenue:iso_currency_code="DJF"
DJF - Djibouti Franc

veris:victim:revenue:iso_currency_code="DKK"
DKK - Danish Krone

veris:victim:revenue:iso_currency_code="DOP"
DOP - Dominican Peso
DZD - Algerian Dinar
EGP - Egyptian Pound
ERN - Nakfa
ETB - Ethiopian Birr
EUR - Euro
FJD - Fiji Dollar
FKP - Falkland Islands Pound
GBP - Pound Sterling
GEL - Lari
GGP - Guernsey pound
GHS - Ghana Cedi
GIP - Gibraltar Pound
veris:victim:revenue:iso_currency_code="GMD"
GMD - Dalasi

veris:victim:revenue:iso_currency_code="GNF"
GNF - Guinea Franc

veris:victim:revenue:iso_currency_code="GTQ"
GTQ - Quetzal

veris:victim:revenue:iso_currency_code="GYD"
GYD - Guyana Dollar

veris:victim:revenue:iso_currency_code="HKD"
HKD - Hong Kong Dollar

veris:victim:revenue:iso_currency_code="HNL"
HNL - Lempira

veris:victim:revenue:iso_currency_code="HRK"
HRK - Croatian Kuna

veris:victim:revenue:iso_currency_code="HTG"
HTG - Gourde

veris:victim:revenue:iso_currency_code="HUF"
HUF - Forint

veris:victim:revenue:iso_currency_code="IDR"
IDR - Rupiah

veris:victim:revenue:iso_currency_code="ILS"
ILS - New Israeli Sheqel

veris:victim:revenue:iso_currency_code="IMP"
IMP - Isle of Man Pound
INR - Indian Rupee

IQD - Iraqi Dinar

IRR - Iranian Rial

ISK - Iceland Krona

JEP - Jersey pound

JMD - Jamaican Dollar

JOD - Jordanian Dinar

JPY - Yen

KES - Kenyan Shilling

KGS - Som

KHR - Riel

KMF - Comoro Franc
veris:victim:revenue:iso_currency_code="KPW"
KPW - North Korean Won

veris:victim:revenue:iso_currency_code="KRW"
KRW - South Korean Won

veris:victim:revenue:iso_currency_code="KWD"
KWD - Kuwaiti Dinar

veris:victim:revenue:iso_currency_code="KYD"
KYD - Cayman Islands Dollar

veris:victim:revenue:iso_currency_code="KZT"
KZT - Tenge

veris:victim:revenue:iso_currency_code="LAK"
LAK - Kip

veris:victim:revenue:iso_currency_code="LBP"
LBP - Lebanese Pound

veris:victim:revenue:iso_currency_code="LKR"
LKR - Sri Lanka Rupee

veris:victim:revenue:iso_currency_code="LRD"
LRD - Liberian Dollar

veris:victim:revenue:iso_currency_code="LSL"
LSL - Loti

veris:victim:revenue:iso_currency_code="LTL"
LTL - Lithuanian Litas

veris:victim:revenue:iso_currency_code="LVL"
LVL - Latvian Lats
LYD - Libyan Dinar

MAD - Moroccan Dirham

MDL - Moldovan Leu

MGA - Malagasy Ariary

MKD - Denar

MMK - Kyat

MNT - Tugrik

MOP - Pataca

MRO - Ouguiya

MUR - Mauritius Rupee

MVR - Rufiyaa

MWK - Kwacha
**veris:victim:revenue:iso_currency_code="MXN"**
MXN - Mexican Peso

**veris:victim:revenue:iso_currency_code="MYR"**
MYR - Malaysian Ringgit

**veris:victim:revenue:iso_currency_code="MZN"**
MZN - Mozambique Metical

**veris:victim:revenue:iso_currency_code="NAD"**
NAD - Namibia Dollar

**veris:victim:revenue:iso_currency_code="NGN"**
NGN - Naira

**veris:victim:revenue:iso_currency_code="NIO"**
NIO - Cordoba Oro

**veris:victim:revenue:iso_currency_code="NOK"**
NOK - Norwegian Krone

**veris:victim:revenue:iso_currency_code="NPR"**
NPR - Nepalese Rupee

**veris:victim:revenue:iso_currency_code="NZD"**
NZD - New Zealand Dollar

**veris:victim:revenue:iso_currency_code="OMR"**
OMR - Rial Omani

**veris:victim:revenue:iso_currency_code="PAB"**
PAB - Balboa

**veris:victim:revenue:iso_currency_code="PEN"**
PEN - Nuevo Sol
PGK - Kina

PHP - Philippine Peso

PKR - Pakistan Rupee

PLN - Zloty

PYG - Guarani

QAR - Qatari Rial

RON - New Romanian Leu

RSD - Serbian Dinar

RUB - Russian Ruble

RWF - Rwanda Franc

SAR - Saudi Riyal

SBD - Solomon Islands Dollar
SCR - Seychelles Rupee

SDG - Sudanese Pound

SEK - Swedish Krona

SGD - Singapore Dollar

SHP - Saint Helena Pound

SLL - Leone

SOS - Somali Shilling

SPL - Seborga Luigino

SRD - Surinam Dollar

STD - Dobra

SVC - El Salvador Colon

SYP - Syrian Pound
veris:victim:revenue:iso_currency_code="SZL"
SZL - Lilangeni

veris:victim:revenue:iso_currency_code="THB"
THB - Baht

veris:victim:revenue:iso_currency_code="TJS"
TJS - Somoni

veris:victim:revenue:iso_currency_code="TMT"
TMT - Turkmenistan New Manat

veris:victim:revenue:iso_currency_code="TND"
TND - Tunisian Dinar

veris:victim:revenue:iso_currency_code="TOP"
TOP - Pa‘anga

veris:victim:revenue:iso_currency_code="TRY"
TRY - Turkish Lira

veris:victim:revenue:iso_currency_code="TTD"
TTD - Trinidad and Tobago Dollar

veris:victim:revenue:iso_currency_code="TVD"
TVD - Tuvalu Dollar

veris:victim:revenue:iso_currency_code="TWD"
TWD - New Taiwan Dollar

veris:victim:revenue:iso_currency_code="TZS"
TZS - Tanzanian Shilling

veris:victim:revenue:iso_currency_code="UAH"
UAH - Hryvnia
veris:victim:revenue:iso_currency_code="UGX"
UGX - Uganda Shilling

veris:victim:revenue:iso_currency_code="USD"
USD - US Dollar

veris:victim:revenue:iso_currency_code="UYU"
UYU - Peso Uruguayo

veris:victim:revenue:iso_currency_code="UZS"
UZS - Uzbekistan Sum

veris:victim:revenue:iso_currency_code="VEF"
VEF - Bolivar

veris:victim:revenue:iso_currency_code="VND"
VND - Dong

veris:victim:revenue:iso_currency_code="VUV"
VUV - Vatu

veris:victim:revenue:iso_currency_code="WST"
WST - Tala

veris:victim:revenue:iso_currency_code="XAF"
XAF - CFA Franc BEAC

veris:victim:revenue:iso_currency_code="XCD"
XCD - East Caribbean Dollar

veris:victim:revenue:iso_currency_code="XDR"
XDR - SDR (Special Drawing Right)

veris:victim:revenue:iso_currency_code="XOF"
XOF - CFA Franc BCEAO
veris:victim:revenue:iso_currency_code="XPF"
XPF - CFP Franc

veris:victim:revenue:iso_currency_code="YER"
YER - Yemeni Rial

veris:victim:revenue:iso_currency_code="ZAR"
ZAR - South African Rand

veris:victim:revenue:iso_currency_code="ZMK"
ZMK - Zambian Kwacha

veris:victim:revenue:iso_currency_code="ZWD"
ZWD - Zimbabwean Dollar A/06

attribute:availability:duration:unit

veris:attribute:availability:duration:unit="Days"
Days

veris:attribute:availability:duration:unit="Hours"
Hours

veris:attribute:availability:duration:unit="Minutes"
Minutes

veris:attribute:availability:duration:unit="Months"
Months

veris:attribute:availability:duration:unit="NA"
NA

veris:attribute:availability:duration:unit="Never"
Never
Seconds

Unknown

Weeks

Years

Bank account data

Classified information

Copyrighted material

Authentication credentials (e.g., pwds, OTPs, biometrics)

Digital certificate

Sensitive internal data (e.g., plans, reports, emails)

Medical records
Other

Payment card data (e.g., PAN, PIN, CVV2, Expiration)

Personal or identifying information (e.g., addr, ID#, credit score)

Trade secrets

Source code

System information (e.g., config info, open services)

Unknown

Virtual currency

vocabulaire-des-probabilites-estimatives namespace available in JSON format at this location. The JSON format can be freely reused in your application or automatically enabled in MISP taxonomy.

Ce vocabulaire attribue des valeurs en pourcentage à certains énoncés de probabilité

degre-de-probabilite

Le tableau suivant attribue des valeurs en pourcentage à certains énoncés de probabilité. Les pourcentages sont tirés de l'ouvrage de Sherman Kent intitulé « Words of Estimative Probability » publié par le Centre for the Study of Intelligence de la CIA en 1964. 0% exprime une impossibilité et 100% exprime une certitude.
vocabulaire-des-probabilites-estimatives:degré-de-probabilité="presque-aucune-chance"

Presque aucune chance - Quasi impossible Presque impossible Minces chances Très douteux Très peu probable Très improbable Improbable Peu de chances - 7 % (marge d'erreur d'environ 5 %)

vocabulaire-des-probabilites-estimatives:degré-de-probabilité="probablement-pas"

Probablement pas - Invraisemblable Peu probable - 30 % (marge d'erreur d'environ 10 %)

vocabulaire-des-probabilites-estimatives:degré-de-probabilité="chances-à-peu-près-égales"

Chances à peu près égales - une chance sur deux - 50% (marge d'erreur d'environ 10 %)

vocabulaire-des-probabilites-estimatives:degré-de-probabilité="probable"

Probable - Vraisemblable Probable - 75 % (marge d'erreur d'environ 12 %)

vocabulaire-des-probabilites-estimatives:degré-de-probabilité="quasi-certaine"

Quasi certaine - Certain Presque certain Très probable - 93% (marge d'erreur d'environ 6 %)

workflow

workflow namespace available in JSON format at this location. The JSON format can be freely reused in your application or automatically enabled in MISP taxonomy.

Workflow support language is a common language to support intelligence analysts to perform their analysis on data and information.

todo

Todo are the actions to be performed by one or more analyst(s) to apply cognitive methods, evaluation(s), weightening information, to validate hypothesis or complete additional tasks to improve the overall information or data being tagged with a todo.

workflow:todo="expansion"

Expansion need to be applied to expand the information tagged

workflow:todo="review"

Additional review is required to reach a certain level of validation of the information tagged
workflow:todo="review-for-privacy"
Additional review is required to ensure privacy of the information tagged

workflow:todo="review-before-publication"
Review is required before publishing the information tagged

workflow:todo="release-requested"
Release of the information tagged is requested (often after the review process)

workflow:todo="review-for-false-positive"
Review the the information tagged to limit the number of false-positives and potentially remove any IDS/automation flag to avoid automation of the false-positives

workflow:todo="review-the-source-credibility"
Review the source credibility and add the corresponding marking like admiralty-scale on the origin

workflow:todo="add-missing-misp-galaxy-cluster-values"
Add potential MISP galaxy cluster values missing about the information tagged

workflow:todo="create-missing-misp-galaxy-cluster"
Create missing MISP galaxy cluster about the information tagged

workflow:todo="create-missing-misp-galaxy"
Create missing MISP galaxy at large about the information tagged (e.g. a new category of malware or activity)

workflow:todo="add-context"
Add contextual information about the information tagged

workflow:todo="add-tagging"
Add adequate tagging and classification about the information tagged

workflow:todo="check-passive-dns-for-shared-hosting"
Check Passive DNS (or similar techniques) to review if the information tagged is used within shared hosting
Review the classification of the information tagged to ensure adequate marking of the information before publication.

Review the grammar of the information tagged to improve the overall quality.

Element that should not be deleted (without asking).

Describe cyber adversary behavior using MITRE ATT&CK.

Used to point an additional task that can not be describe by the rest of the taxonomy and need to be done.

State are the different states of the information or data being tagged.

Incomplete means that the information tagged is incomplete and has potential to be completed by other analysts, technical processes or the current analysts performing the analysis.

Complete means that the information tagged reach a state of completeness with the current capabilities of the analyst.

Draft means the information tagged can be released as a preliminary version or outline.

Mapping of taxonomies

Analysts relying on taxonomies don’t always know the appropriate namespace to use but know which value to use for classification. The MISP mapping taxonomy allows to map a single classification into a series of machine-tag synonyms.

Table 1. Mapping table - Adware
Adware
veris:action:malware:variety="Adware"
malware_classification:malware-category="Adware"
ms-caro-malware:malware-type="Adware"

Table 2. Mapping table - **Brute Force**

<table>
<thead>
<tr>
<th>Brute Force</th>
</tr>
</thead>
</table>

ecsirt:intrusion-attempts="brute-force"
veris:action:malware:variety="Brute force"
europol-event:brute-force-attempt
enisa:nefarious-activity-abuse="brute-force"

Table 3. Mapping table - **DDoS**

<table>
<thead>
<tr>
<th>DDoS</th>
</tr>
</thead>
</table>

rsit:availability="dos"
rsit:availability="ddos"
rsit:vulnerable="ddos-amplifier"
ecsirt:availability="ddos"
europol-incident:availability="dos-ddos"
ms-caro-malware:malware-type="DDoS"
circl:incident-classification="denial-of-service"
enisa:nefarious-activity-abuse="denial-of-service"

Table 4. Mapping table - **Downloader**

Downloader

<table>
<thead>
<tr>
<th>Downloader</th>
</tr>
</thead>
</table>

veris:action:malware:variety="Downloader"
malware_classification:malware-category="Downloader"

Table 5. Mapping table - **Remote Access Tool**

Remote Access Tool

<table>
<thead>
<tr>
<th>Remote Access Tool</th>
</tr>
</thead>
</table>

enisa:nefarious-activity-abuse="remote-access-tool"
ms-caro-malware:malware-type="RemoteAccess"

Table 6. Mapping table - **SQLi**

SQLi

<table>
<thead>
<tr>
<th>SQLi</th>
</tr>
</thead>
</table>

circl:incident-classification="sql-injection"
veris:action:malware:variety="SQL injection"
veris:action:hacking:variety="SQLi"
enisa:nefarious-activity-abuse="web-application-attacks-injection-attacks-code-injection-SQL-XSS"
Table 7. Mapping table - Spyware

Spyware
veris:action:malware:variety="Spyware/Keylogger"
malware_classification:malware-category="Spyware"
ms-caro-malware:malware-type="Spyware"
enisa:nefarious-activity-abuse="spyware-or-deceptive-adware"

Table 8. Mapping table - Trojan

Trojan
malware_classification:malware-category="Trojan"
ms-caro-malware:malware-type="Trojan"
ecsirt:malicious-code="trojan"

Table 9. Mapping table - Virus

Virus
malware_classification:malware-category="Virus"
ms-caro-malware:malware-type="Virus"
ecsirt:malicious-code="virus"

Table 10. Mapping table - Worm

Worm
veris:action:malware:variety="Worm"
malware_classification:malware-category="Worm"
ms-caro-malware:malware-type="Worm"
ecsirt:malicious-code="worm"

Table 11. Mapping table - backdoor

backdoor
ecsirt:intrusions="backdoor"
veris:action:malware:variety="Backdoor"
ms-caro-malware:malware-type="Backdoor"

Table 12. Mapping table - brute force

brute force
rsit:intrusion-attempts="brute-force"
ecsirt:intrusion-attempts="brute-force"
veris:action:malware:variety="Brute force"
europol-event:brute-force-attempt
Table 13. Mapping table - c&c

<table>
<thead>
<tr>
<th>c&amp;c</th>
</tr>
</thead>
<tbody>
<tr>
<td>rsit:malicious-code=&quot;c2-server&quot;</td>
</tr>
<tr>
<td>ecsirt:malicious-code=&quot;c&amp;c&quot;</td>
</tr>
<tr>
<td>europol-incident:malware=&quot;c&amp;c&quot;</td>
</tr>
<tr>
<td>europol-event:c&amp;c-server-hosting</td>
</tr>
<tr>
<td>veris:action:malware:variety=&quot;C2&quot;</td>
</tr>
</tbody>
</table>

Table 14. Mapping table - content

<table>
<thead>
<tr>
<th>content</th>
</tr>
</thead>
<tbody>
<tr>
<td>rsit:abusive-content=&quot;harmful-speech&quot;</td>
</tr>
<tr>
<td>rsit:abusive-content=&quot;violence&quot;</td>
</tr>
<tr>
<td>rsit:fraud=&quot;copyright&quot;</td>
</tr>
<tr>
<td>rsit:fraud=&quot;masquerade&quot;</td>
</tr>
</tbody>
</table>

Table 15. Mapping table - exploit

<table>
<thead>
<tr>
<th>exploit</th>
</tr>
</thead>
<tbody>
<tr>
<td>rsit:intrusion-attempts=&quot;exploit&quot;</td>
</tr>
<tr>
<td>veris:action:malware:variety=&quot;Exploit vuln&quot;</td>
</tr>
<tr>
<td>ecsirt:intrusion-attempts=&quot;exploit&quot;</td>
</tr>
<tr>
<td>europol-event:exploit</td>
</tr>
<tr>
<td>europol-incident:intrusion=&quot;exploitation-vulnerability&quot;</td>
</tr>
<tr>
<td>ms-caro-malware:malware-type=&quot;Exploit&quot;</td>
</tr>
</tbody>
</table>

Table 16. Mapping table - malware

<table>
<thead>
<tr>
<th>malware</th>
</tr>
</thead>
<tbody>
<tr>
<td>rsit:malicious-code=&quot;malware-distribution&quot;</td>
</tr>
<tr>
<td>rsit:malicious-code=&quot;malware-configuration&quot;</td>
</tr>
<tr>
<td>ecsirt:malicious-code=&quot;malware&quot;</td>
</tr>
<tr>
<td>circl:incident-classification=&quot;malware&quot;</td>
</tr>
</tbody>
</table>

Table 17. Mapping table - other

<table>
<thead>
<tr>
<th>other</th>
</tr>
</thead>
<tbody>
<tr>
<td>rsit:other=&quot;other&quot;</td>
</tr>
</tbody>
</table>

Table 18. Mapping table - phishing

<table>
<thead>
<tr>
<th>phishing</th>
</tr>
</thead>
<tbody>
<tr>
<td>rsit:fraud=&quot;phishing&quot;</td>
</tr>
</tbody>
</table>
### Table 19. Mapping table - ransomware

<table>
<thead>
<tr>
<th>Ransomware</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ransomware</td>
</tr>
<tr>
<td>Ecsirt: Malicious Code = &quot;Ransomware&quot;</td>
</tr>
<tr>
<td>Enisa: Nefarious Activity Abuse = &quot;Ransomware&quot;</td>
</tr>
<tr>
<td>Malware Classification: Malware Category = &quot;Ransomware&quot;</td>
</tr>
<tr>
<td>Ms-Caro-Malware: Malware Type = &quot;Ransom&quot;</td>
</tr>
<tr>
<td>Veris: Action: Malware: Variety = &quot;Ransomware&quot;</td>
</tr>
</tbody>
</table>

### Table 20. Mapping table - rootkit

<table>
<thead>
<tr>
<th>Rootkit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rootkit</td>
</tr>
<tr>
<td>Veris: Action: Malware: Variety = &quot;Rootkit&quot;</td>
</tr>
<tr>
<td>Enisa: Nefarious Activity Abuse = &quot;Rootkits&quot;</td>
</tr>
<tr>
<td>Malware Classification: Malware Category = &quot;Rootkit&quot;</td>
</tr>
</tbody>
</table>

### Table 21. Mapping table - scan

<table>
<thead>
<tr>
<th>Scan</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scan</td>
</tr>
<tr>
<td>Rsit: Information Gathering = &quot;Scanner&quot;</td>
</tr>
<tr>
<td>Circl: Incident Classification = &quot;Scan&quot;</td>
</tr>
<tr>
<td>Ecsirt: Information Gathering = &quot;Scanner&quot;</td>
</tr>
<tr>
<td>Europol-incident: Information-gathering = &quot;Scanning&quot;</td>
</tr>
</tbody>
</table>

### Table 22. Mapping table - scan network

<table>
<thead>
<tr>
<th>Scan Network</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scan Network</td>
</tr>
<tr>
<td>Veris: Action: Malware: Variety = &quot;Scan network&quot;</td>
</tr>
<tr>
<td>Europol-Event: Network-scanning</td>
</tr>
</tbody>
</table>

### Table 23. Mapping table - spam

<table>
<thead>
<tr>
<th>Spam</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spam</td>
</tr>
<tr>
<td>Rsit: Abusive Content = &quot;Spam&quot;</td>
</tr>
<tr>
<td>Circl: Incident Classification = &quot;Spam&quot;</td>
</tr>
<tr>
<td>Ecsirt: Abusive Content = &quot;Spam&quot;</td>
</tr>
<tr>
<td>Enisa: Nefarious Activity Abuse = &quot;Spam&quot;</td>
</tr>
<tr>
<td>Europol-Event: Spam</td>
</tr>
</tbody>
</table>
Table 24. Mapping table - **test**

<table>
<thead>
<tr>
<th>test</th>
</tr>
</thead>
<tbody>
<tr>
<td>rsit:test=&quot;test&quot;</td>
</tr>
</tbody>
</table>

Table 25. Mapping table - **tlp-amber**

<table>
<thead>
<tr>
<th>tlp-amber</th>
</tr>
</thead>
<tbody>
<tr>
<td>tlp:amber</td>
</tr>
<tr>
<td>iep:traffic-light-protocol=&quot;AMBER&quot;</td>
</tr>
</tbody>
</table>

Table 26. Mapping table - **tlp-green**

<table>
<thead>
<tr>
<th>tlp-green</th>
</tr>
</thead>
<tbody>
<tr>
<td>tlp:green</td>
</tr>
<tr>
<td>iep:traffic-light-protocol=&quot;GREEN&quot;</td>
</tr>
</tbody>
</table>

Table 27. Mapping table - **tlp-red**

<table>
<thead>
<tr>
<th>tlp-red</th>
</tr>
</thead>
<tbody>
<tr>
<td>tlp:red</td>
</tr>
<tr>
<td>iep:traffic-light-protocol=&quot;RED&quot;</td>
</tr>
</tbody>
</table>

Table 28. Mapping table - **tlp-white**

<table>
<thead>
<tr>
<th>tlp-white</th>
</tr>
</thead>
<tbody>
<tr>
<td>tlp:white</td>
</tr>
<tr>
<td>iep:traffic-light-protocol=&quot;WHITE&quot;</td>
</tr>
</tbody>
</table>

Table 29. Mapping table - **xss**

<table>
<thead>
<tr>
<th>xss</th>
</tr>
</thead>
<tbody>
<tr>
<td>circl:incident-classification=&quot;XSS&quot;</td>
</tr>
<tr>
<td>europol-event:xss</td>
</tr>
</tbody>
</table>