

# 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](#).



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**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, StealersHacking 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.



## **CERT-XLM:intrusion="privileged-account-compromise"**

### 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.

## **CERT-XLM:intrusion="unprivileged-account-compromise"**

### 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 intruder did not achieve to escalate his privileges locally.

## **CERT-XLM:intrusion="botnet-member"**

### 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...

## **CERT-XLM:intrusion="domain-compromise"**

### 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.

## **CERT-XLM:intrusion="application-compromise"**

### 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.

## **CERT-XLM:availability="dos"**

### DoS

An attacker attempts to prevent legitimate users from accessing information or services.

## **CERT-XLM:availability="ddos"**

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.

## **CERT-XLM:availability="sabotage"**

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.

## **CERT-XLM:availability="outage"**

Outage (no malice)

Unavailability of the system but done with no malice.

# **information-content-security**

This group is dealing with non-legitimate access or modification to data.

## **CERT-XLM:information-content-security="Unauthorised-information-access"**

Unauthorised access to information

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

## **CERT-XLM:information-content-security="Unauthorised-information-modification"**

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).

## **CERT-XLM:fraud="copyright"**

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 external 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.

## CERT-XLM:conformity="other-conformity"

Other

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

## other

Other

## CERT-XLM:other="other"

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.

## DML:8

### Goals

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## 7

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.

## DML:7

### 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 caliber 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

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 caliber 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.

## **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 its 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

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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

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.

## **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.

# accessnow



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

Access Now

## 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

## 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)

## informed abuse-contact (IP)

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

Informed abuse-contact (IP)

## informed legal department

**action-taken:informed legal department**

Informed legal department

## admiralty-scale



admiralty-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 Admiralty Scale (also called the NATO System) is used to rank the reliability of a source and the credibility of an information.

## source-reliability

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

Completely reliable

Associated numerical value="100"

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

Usually reliable

Associated numerical value="75"

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

Fairly reliable

Associated numerical value="50"

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

Not usually reliable

Associated numerical value="25"

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

Unreliable

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

Reliability cannot be judged

## **information-credibility**

**admiralty-scale:information-credibility="1"**

Confirmed by other sources

Associated numerical value="100"

**admiralty-scale:information-credibility="2"**

Probably true

Associated numerical value="75"

**admiralty-scale:information-credibility="3"**

Possibly true

Associated numerical value="50"

**admiralty-scale:information-credibility="4"**

Doubtful

Associated numerical value="25"

**admiralty-scale:information-credibility="5"**

Improbable

**admiralty-scale:information-credibility="6"**

Truth cannot be judged

## adversary



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

An overview and description of the adversary infrastructure

## infrastructure-status

**adversary:infrastructure-status="unknown"**

Infrastructure ownership and status is unknown

**adversary:infrastructure-status="compromised"**

Infrastructure compromised by or in the benefit of the adversary

**adversary:infrastructure-status="own-and-operated"**

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

**ais-marking:AISConsent="EVERYONE"**

EVERYONE

**ais-marking:AISConsent="USG"**

USG

**ais-marking:AISConsent="NONE"**

NONE

## CISA\_Proprietary

**ais-marking:CISA\_Proprietary="true"**

true

**ais-marking:CISA\_Proprietary="false"**

false

# AISMarking

**ais-marking:AIMarking="Is\_Proprietary"**

Is\_Proprietary

**ais-marking:AIMarking="Not\_Proprietary"**

Not\_Proprietary

## 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.

**analyst-assessment:experience="less-than-1-year"**

Less than 1 year

Associated numerical value="1"

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

Between 1 and 5 years

Associated numerical value="2"

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

Between 5 and 10 years

Associated numerical value="3"

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

Between 10 and 20 years

Associated numerical value="4"

## **analyst-assessment:experience="more-than-20-years"**

More than 20 years

Associated numerical value="5"

## **binary-reversing-arch**

Architecture that the analyst has experience with.

### **analyst-assessment:binary-reversing-arch="x86"**

x86-32 & x86-64

### **analyst-assessment:binary-reversing-arch="arm"**

ARM & ARM-64

### **analyst-assessment:binary-reversing-arch="mips"**

mips & mips-64

### **analyst-assessment:binary-reversing-arch="powerpc"**

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

### **analyst-assessment:os="ios"**

Current IOS

### **analyst-assessment:os="macos"**

Current Apple OS

### **analyst-assessment:os="android"**

Current Android OS

### **analyst-assessment:os="bsd"**

BSD

## **web**

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

### **analyst-assessment:web="ipex"**

Inter-protocol exploitations



## **analyst-assessment:web="common"**

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

## **analyst-assessment:web="js-desobfuscation"**

De-obfuscation of Javascript payloads

## **web-experience**

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

### **analyst-assessment:web-experience="less-than-1-year"**

Less than 1 year

Associated numerical value="1"

### **analyst-assessment:web-experience="between-1-and-5-years"**

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

Associated numerical value="5"

## 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

**binary-class:type="unknown"**

Not yet known

# circl



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

**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

**circl:incident-classification="fastflux"**

Fastflux

**circl:incident-classification="sql-injection"**

SQL Injection

**circl:incident-classification="information-leak"**

Information leak

**circl:incident-classification="scam"**

Scam

**circl:incident-classification="cryptojacking"**

Cryptojacking

**circl:incident-classification="locker"**

Locker

**circl:incident-classification="screenlocker"**

Screenlocker

**circl:incident-classification="wiper"**

Wiper

## **topic**

**circl:topic="finance"**

Finance

**circl:topic="ict"**

ICT

**circl:topic="individual"**

Individual

**circl:topic="industry"**

Industry

**circl:topic="medical"**

Medical

**circl:topic="services"**

Services

**circl:topic="undefined"**

Undefined

## collaborative-intelligence



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

# **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.



Exclusive flag set which means the values or predicate below must be set exclusively.

## 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

## level-7

### **copine-scale:level-7**

Explicit sexual activity: Involves touching, mutual and self-masturbation, oral sex, and intercourse by child, not involving an adult

## level-6

### **copine-scale:level-6**

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

## level-5

## **copine-scale:level-5**

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

## **level-4**

### **copine-scale:level-4**

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

## **level-3**

### **copine-scale:level-3**

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

## **level-2**

### **copine-scale:level-2**

Nudist: Pictures of naked or seminaked children in appropriate nudist settings, and from legitimate sources

## **level-1**

### **copine-scale:level-1**

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

# **csirt\_case\_classification**



csirt\_case\_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.

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.

### **csirt\_case\_classification:incident-category="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.

### **csirt\_case\_classification:incident-category="email"**

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

**csirt\_case\_classification:incident-category="consulting"**

Security consulting unrelated to any confirmed incident

**csirt\_case\_classification:incident-category="policy-violation"**

Violation of various policies

## criticality-classification

**csirt\_case\_classification:criticality-classification="1"**

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

**csirt\_case\_classification:criticality-classification="2"**

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.

**csirt\_case\_classification:criticality-classification="3"**

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.

## sensitivity-classification

**csirt\_case\_classification:sensitivity-classification="1"**

Extremely Sensitive

**csirt\_case\_classification:sensitivity-classification="2"**

Sensitive

**csirt\_case\_classification:sensitivity-classification="3"**

Not Sensitive

## CSSA



cssa 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 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.

## **cssa:origin="other"**

If none of the other origins applies.

## **cssa:origin="unknown"**

Origin of the data unknown.

# 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"

## 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.

### **ddos:type="amplification-attack"**

Amplification attack

### **ddos:type="reflected-spoofed-attack"**

Reflected and Spoofed attack

### **ddos:type="slow-read-attack"**

Slow Read attack

### **ddos:type="flooding-attack"**

Flooding attack

### **ddos:type="post-attack"**

Large POST HTTP attack

## de-vs



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

### **de-vs:Einstufung="STRENG GEHEIM"**

STRENG GEHEIM

Kenntnisnahme durch Unbefugte kann den Bestand oder lebenswichtige Interessen der Bundesrepublik Deutschland oder eines ihrer Länder gefährden.

## **de-vs:Einstufung="GEHEIM"**

GEHEIM

Kenntnisnahme durch Unbefugte kann die Sicherheit der Bundesrepublik Deutschland oder eines ihrer Länder gefährden oder ihren Interessen schweren Schaden zufügen.

## **de-vs:Einstufung="VS-VERTRAULICH"**

VS-VERTRAULICH

Kenntnisnahme durch Unbefugte kann für die Interessen der Bundesrepublik 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](#). 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>

## **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

**dhs-ciip-sectors:DHS-critical-sectors="dib"**

Defense Industrial Base

**dhs-ciip-sectors:DHS-critical-sectors="emergency-services"**

Emergency services

**dhs-ciip-sectors:DHS-critical-sectors="energy"**

energy

**dhs-ciip-sectors:DHS-critical-sectors="financial-services"**

Financial Services

**dhs-ciip-sectors:DHS-critical-sectors="food-agriculture"**

Food and Agriculture

**dhs-ciip-sectors:DHS-critical-sectors="government-facilities"**

Government Facilities

**dhs-ciip-sectors:DHS-critical-sectors="healthcare-public"**

Healthcare and Public Health

**dhs-ciip-sectors:DHS-critical-sectors="it"**

Information Technology

**dhs-ciip-sectors:DHS-critical-sectors="nuclear"**

Nuclear

## **dhs-ciip-sectors:DHS-critical-sectors="transport"**

Transportation Systems

## **dhs-ciip-sectors:DHS-critical-sectors="water"**

Water and water systems

## **sector**

# **diamond-model**



diamond-model 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 Diamond Model for Intrusion Analysis, a phase-based model developed by Lockheed Martin, aims to help categorise 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:classification:us="TS"**

TOP SECRET

**dni-ism:classification:us="U"**

UNCLASSIFIED

## **scicontrols**

**dni-ism:scicontrols="EL"**

ENDSEAL

**dni-ism:scicontrols="EL-EU"**

ECRU

**dni-ism:scicontrols="EL-NK"**

NONBOOK

**dni-ism:scicontrols="HCS"**

HCS

**dni-ism:scicontrols="HCS-O"**

HCS-O

**dni-ism:scicontrols="HCS-P"**

HCS-P

**dni-ism:scicontrols="KDK"**

KLONDIKE

## **dni-ism:scicontrols="KDK-BLFH"**

KDK BLUEFISH

## **dni-ism:scicontrols="KDK-IDIT"**

KDK IDITAROD

## **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

**dni-ism:nonic="SSI"**

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

## **dni-ism:dissem="REL"**

AUTHORIZED FOR RELEASE TO

## **dni-ism:dissem="RELIDO"**

RELEASABLE BY INFORMATION DISCLOSURE OFFICIAL

## **dni-ism:dissem="DSEN"**

DEA SENSITIVE

## **dni-ism:dissem="FISA"**

FOREIGN INTELLIGENCE SURVEILLANCE ACT

## **dni-ism:dissem="DISPLAYONLY"**

AUTHORIZED FOR DISPLAY BUT NOT RELEASE TO

# domain-abuse



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

# 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.

## 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 EUR 1 000 000

## 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 EUR 1 000 000

# **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

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

Rootkit

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

Malware

**ecsirt:malicious-code="botnet-drone"**

Botnet drone

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

Ransomware

**ecsirt:malicious-code="malware-configuration"**

Malware configuration

**ecsirt:malicious-code="c&c"**

C&C

# information-gathering

Information Gathering.

## **ecsirt:information-gathering="scanner"**

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.

## **ecsirt:information-gathering="sniffing"**

Sniffing

Observing and recording of network traffic (wiretapping).

## **ecsirt: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.

## **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

### **ecsirt:intrusions="compromised"**

compromised

### **ecsirt:intrusions="backdoor"**

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.

### **ecsirt:availability="dos"**

DoS

Denial of Service.



## **ecsirt:availability="ddos"**

DDoS

Distributed Denial of Service.

## **ecsirt:availability="sabotage"**

Sabotage

Sabotage.

## **ecsirt:availability="outage"**

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.

## **ecsirt:information-content-security="Unauthorised-information-access"**

Unauthorised access to information

## **ecsirt:information-content-security="Unauthorised-information-modification"**

Unauthorised modification of information

## **ecsirt:information-content-security="dropzone"**

dropzone

# **fraud**

Fraud.

## **ecsirt:fraud="unauthorized-use-of-resources"**

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).

## **ecsirt:fraud="copyright"**

Copyright

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

## **ecsirt:fraud="masquerade"**

Masquerade

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

## **ecsirt:fraud="phishing"**

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

## **ecsirt:vulnerable="vulnerable-service"**

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

## **ecsirt:other="blacklist"**

blacklist

## **ecsirt:other="unknown"**

unknown

## **ecsirt:other="other"**

other

## test

Meant for testing.

**ecsirt:test="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.

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

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.

## **enisa:physical-attack="theft-of-backups"**

Theft of backups

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

## **enisa:physical-attack="information-leak-or-unauthorised-sharing"**

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).

## **enisa:physical-attack="unauthorised-physical-access-or-unauthorised-entry-to-premises"**

Unauthorized physical access / Unauthorised entry to premises

Unapproved access to facility.

## **enisa:physical-attack="coercion-or-extortion-or-corruption"**

Coercion, extortion or corruption

Actions following acts of coercion, extortion or corruption.

## **enisa:physical-attack="damage-from-the-wafare"**

Damage from the warfare

Threats of direct impact of warfare activities.

## **enisa:physical-attack="terrorist-attack"**

Terrorist attack

Threats from terrorists.

## **unintentional-damage**

Threats of unintentional human actions or errors.

### **enisa:unintentional-damage="information-leak-or-sharing-due-to-human-error"**

Information leak /sharing due to human error

Information leak / sharing caused by humans, due to their mistakes.

### **enisa:unintentional-damage="accidental-leaks-or-sharing-of-data-by-employees"**

Accidental leaks/sharing of data by employees

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

### **enisa:unintentional-damage="leaks-of-data-via-mobile-applications"**

Leaks of data via mobile applications

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

### **enisa:unintentional-damage="leaks-of-data-via-web-applications"**

Leaks of data via Web applications

Threat of leaking important information using web applications.

## **enisa:unintentional-damage="leaks-of-information-transferred-by-network"**

Leaks of information transferred by network

Threat of eavesdropping of unsecured network traffic.

## **enisa:unintentional-damage="erroneous-use-or-administration-of-devices-and-systems"**

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.

## **enisa:unintentional-damage="loss-of-information-due-to-maintenance-errors-or-operators-errors"**

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.

## **enisa:unintentional-damage="loss-of-information-due-to-configuration-or-installation error"**

Loss of information due to configuration/ installation error

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

## **enisa:unintentional-damage="increasing-recovery-time"**

Increasing recovery time

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

## **enisa:unintentional-damage="lost-of-information-due-to-user-errors"**

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.

## **enisa:unintentional-damage="using-information-from-an-unreliable-source"**

Using information from an unreliable source

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

## **enisa:unintentional-damage="unintentional-change-of-data-in-an-information-system"**

Unintentional change of data in an information system

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

## **enisa:unintentional-damage="inadequate-design-and-planning-or-improper-adaptation"**

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).

## **enisa:unintentional-damage="damage-caused-by-a-third-party"**

Damage caused by a third party

Threats of damage to IT assets caused by third party.

## **enisa:unintentional-damage="security-failure-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.

## **enisa:unintentional-damage="damages-resulting-from-penetration-testing"**

Damages resulting from penetration testing

Threats to information systems caused by conducting IT penetration tests inappropriately.

## **enisa:unintentional-damage="loss-of-information-in-the-cloud"**

Loss of information in the cloud

Threats of losing information or data stored in the cloud.

## **enisa:unintentional-damage="loss-of-(integrity-of)-sensitive-information"**

Loss of (integrity of) sensitive information

Threats of losing information or data, or changing information classified as sensitive.

## **enisa:unintentional-damage="loss-of-integrity-of-certificates"**

Loss of integrity of certificates

Threat of losing integrity of certificates used for authorisation services

## **enisa:unintentional-damage="loss-of-devices-and-storage-media-and-documents"**

Loss of devices, storage media and documents

Threats of unavailability (losing) of IT assets and documents.

## **enisa:unintentional-damage="loss-of-devices-or-mobile-devices"**

Loss of devices/ mobile devices

Threat of losing mobile devices.

## **enisa:unintentional-damage="loss-of-storage-media"**

Loss of storage media

Threat of losing data-storage media.

## **enisa:unintentional-damage="loss-of-documentation-of-IT-Infrastructure"**

Loss of documentation of IT Infrastructure

Threat of losing important documentation.

## **enisa:unintentional-damage="destruction-of-records"**

Destruction of records

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

## **enisa:unintentional-damage="infection-of-removable-media"**

Infection of removable media

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

## **enisa:unintentional-damage="abuse-of-storage"**

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.



## **enisa:disaster="disaster"**

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

Large scale natural disasters.

## **enisa:disaster="fire"**

Fire

Threat of fire.

## **enisa:disaster="pollution-dust-corrosion"**

Pollution, dust, corrosion

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

## **enisa:disaster="thunderstrike"**

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.

### **enisa:eavesdropping-interception-hijacking="replay-of-messages"**

Replay of messages

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

### **enisa:eavesdropping-interception-hijacking="network-reconnaissance-network-traffic-manipulation-and-information-gathering"**

Network Reconnaissance, Network traffic manipulation and Information gathering

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

### **enisa:eavesdropping-interception-hijacking="man-in-the-middle-session-hijacking"**

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.

## **enisa:legal="violation-of-rules-and-regulations-breach-of-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.

## **enisa:legal="failure-to-meet-contractual-requirements"**

Failure to meet contractual requirements

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

## **enisa:legal="failure-to-meet-contractual-requirements-by-third-party"**

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

## **enisa:legal="unauthorized-use-of-IPR-protected-resources"**

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).

## **enisa:legal="illegal-usage-of-file-sharing-services"**

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.

## **enisa:legal="abuse-of-personal-data"**

Abuse of personal data

Threat of illegal use of personal data.

## **enisa:legal="judiciary-decisions-or-court-order"**

Judiciary decisions/court order

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

decisions/court order.

## **nefarious-activity-abuse**

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.

### **enisa:nefarious-activity-abuse="identity-theft-identity-fraud-account)"**

Identity theft (Identity Fraud/ Account)

Threat of identity theft action.

### **enisa:nefarious-activity-abuse="credentials-stealing-trojans"**

Credentials-stealing trojans

Threat of identity theft action by malware computer programs.

### **enisa:nefarious-activity-abuse="receiving-unsolicited-e-mail"**

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

**enisa:nefarious-activity-abuse="search-engine-poisoning"**

Search Engine Poisoning

Threat of deliberate manipulation of search engine indexes.

**enisa:nefarious-activity-abuse="exploitation-of-fake-trust-of-social-media"**

Exploitation of fake trust of social media

Threat of malicious activities making use of trusted social media.

**enisa:nefarious-activity-abuse="worms-trojans"**

Worms/ Trojans

Threat of malware computer programs (trojans/worms).

**enisa:nefarious-activity-abuse="rootkits"**

Rootkits

Threat of stealthy types of malware software.

**enisa:nefarious-activity-abuse="mobile-malware"**

Mobile malware

Threat of mobile malware programs.

### **enisa:nefarious-activity-abuse="infected-trusted-mobile-apps"**

Infected trusted mobile apps

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

### **enisa:nefarious-activity-abuse="elevation-of-privileges"**

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.

### **enisa:nefarious-activity-abuse="web-application-attacks-injection-attacks-code-injection-SQL-XSS"**

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.

### **enisa:nefarious-activity-abuse="spyware-or-deceptive-adware"**

Spyware or deceptive adware

Threat of using software that aims to gather information about a person or organization without their knowledge.

### **enisa:nefarious-activity-abuse="viruses"**

Viruses

Threat of infection by viruses.

### **enisa:nefarious-activity-abuse="rogue-security-software-rogueware-scareware"**

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.

### **enisa:nefarious-activity-abuse="ransomware"**

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.

## **enisa:nefarious-activity-abuse="exploits-exploit-kits"**

Exploits/Exploit Kits

Threat to IT assets due to the use of web available exploits or exploits software.

## **enisa:nefarious-activity-abuse="social-engineering"**

Social Engineering

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

## **enisa:nefarious-activity-abuse="phishing-attacks"**

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.

## **enisa:nefarious-activity-abuse="spear-phishing-attacks"**

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.

## **enisa:nefarious-activity-abuse="abuse-of-information-leakage"**

Abuse of Information Leakage

Threat of leaking important information.

## **enisa:nefarious-activity-abuse="leakage-affecting-mobile-privacy-and-mobile-applications"**

Leakage affecting mobile privacy and mobile applications

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

## **enisa:nefarious-activity-abuse="leakage-affecting-web-privacy-and-web-applications"**

Leakage affecting web privacy and web applications

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

## **enisa:nefarious-activity-abuse="leakage-affecting-network-traffic"**

Leakage affecting network traffic

Threat of leaking important information in network traffic.

**enisa:nefarious-activity-abuse="leakage-affecting-cloud-computing"**

Leakage affecting cloud computing

Threat of leaking important information in cloud computing.

**enisa:nefarious-activity-abuse="generation-and-use-of-rogue-certificates"**

Generation and use of rogue certificates

Threat of use of rogue certificates.

**enisa:nefarious-activity-abuse="loss-of-integrity-of-sensitive-information"**

Loss of (integrity of) sensitive information

Threat of loss of sensitive information due to loss of integrity.

**enisa:nefarious-activity-abuse="man-in-the-middle-session-hijacking"**

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.

**enisa:nefarious-activity-abuse="social-engineering-via-signed-malware"**

Social Engineering / signed malware

Threat of install fake trust signed software (malware) e.g. fake OS updates.

**enisa:nefarious-activity-abuse="fake-SSL-certificates"**

Fake SSL certificates

Threat of attack due to malware application signed by a certificate that is typically inherently trusted by an endpoint.

**enisa:nefarious-activity-abuse="manipulation-of-hardware-and-software"**

Manipulation of hardware and software

Threat of unauthorised manipulation of hardware and software.

**enisa:nefarious-activity-abuse="anonymous-proxies"**

Anonymous proxies

Threat of unauthorised manipulation by anonymous proxies.

## **enisa:nefarious-activity-abuse="abuse-of-computing-power-of-cloud-to-launch-attacks-cybercrime-as-a-service)"**

Abuse of computing power of cloud to launch attacks (cybercrime as a service)

Threat of using large computing powers to generate attacks on demand.

## **enisa:nefarious-activity-abuse="abuse-of-vulnerabilities-0-day-vulnerabilities"**

Abuse of vulnerabilities, 0-day vulnerabilities

Threat of attacks using 0-day or known IT assets vulnerabilities.

## **enisa:nefarious-activity-abuse="access-of-web-sites-through-chains-of-HTTP-Proxies-Obfuscation"**

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.

## **enisa:nefarious-activity-abuse="Unauthorised-use-or-administration-of devices-and-systems"**

Unauthorised use or administration of devices and systems

Threat of nefarious action due to unauthorised use of devices and systems.

## **enisa:nefarious-activity-abuse="unauthorised-use-of-software"**

Unauthorised use of software

Threat of nefarious action due to unauthorised use of software.

## **enisa:nefarious-activity-abuse="unauthorized-access-to-the-information-systems-or-networks-like-IMPI-Protocol-DNS-Registrar-Hijacking)"**

Unauthorized access to the information systems-or-networks (IMPI Protocol / DNS Registrar Hijacking)

Threat of unauthorised access to the information systems / network.

## **enisa:nefarious-activity-abuse="network-intrusion"**

Network Intrusion

Threat of unauthorised access to network.

## **enisa:nefarious-activity-abuse="unauthorized-changes-of-records"**

Unauthorized changes of records

Threat of unauthorised changes of information.

**enisa:nefarious-activity-abuse="unauthorized-installation-of-software"**

Unauthorized installation of software

Threat of unauthorised installation of software.

**enisa:nefarious-activity-abuse="Web-based-attacks-drive-by-download-or-malicious-URLs-or-browser-based-attacks"**

Web based attacks (Drive-by download / malicious URLs / Browser based attacks)

Threat of installation of unwanted malware software by misusing websites.

**enisa:nefarious-activity-abuse="compromising-confidential-information-like-data-breaches"**

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.

### **enisa:nefarious-activity-abuse="spear-phishing-attacks-targeted"**

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.

### **enisa:nefarious-activity-abuse="installation-of-sophisticated-and-targeted-malware"**

Installation of sophisticated and targeted malware

Threat of malware delivered by sophisticated and targeted software.

### **enisa:nefarious-activity-abuse="watering-hole-attacks"**

Watering Hole attacks

Threat of malware residing on the websites which a group often uses.

### **enisa:nefarious-activity-abuse="failed-business-process"**

Failed business process

Threat of damage or loss of IT assets due to improperly executed business process.

## **enisa:nefarious-activity-abuse="brute-force"**

Brute force

Threat of unauthorised access via systematically checking all possible keys or passwords until the correct one is found.

## **enisa:nefarious-activity-abuse="abuse-of-authorizations"**

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"

## **estimative-language:likelihood-probability="almost-certain"**

Almost certain(ly) - nearly certain - 95-99%

Associated numerical value="95"

## **confidence-in-analytic-judgment**

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.

### **estimative-language:confidence-in-analytic-judgment="low"**

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.'

### **estimative-language:confidence-in-analytic-judgment="moderate"**

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'.

## **estimative-language:confidence-in-analytic-judgment="high"**

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'.

## **eu-marketop-and-publicadmin**



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

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

## public-admin

**eu-marketop-and-publicadmin:public-admin="public-admin"**

Public Administrations

## eu-nis-sector-and-subsectors



eu-nis-sector-and-subsectors namespace available in JSON format at [this location](#). The JSON format can be freely reused in your application or automatically enabled in [MISP](#) taxonomy.

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**

**eu-nis-sector-and-subsectors:eu-nis-oes-energy="electricity-energy"**

Electricity Sub Sector

**eu-nis-sector-and-subsectors:eu-nis-oes-energy="oil-energy"**

Oil Sub Sector

**eu-nis-sector-and-subsectors:eu-nis-oes-energy="gas-energy"**

Gas Sub Sector

## **eu-nis-oes-transport**

**eu-nis-sector-and-subsectors:eu-nis-oes-transport="air-transport"**

Air Transport Sub Sector

**eu-nis-sector-and-subsectors:eu-nis-oes-transport="rail-transport"**

Rail Transport Sub Sector

**eu-nis-sector-and-subsectors:eu-nis-oes-transport="water-transport"**

Water Transport Sub Sector

**eu-nis-sector-and-subsectors:eu-nis-oes-transport="road-transport"**

Road Transport Sub Sector

## **eu-nis-oes-banking**

**eu-nis-sector-and-subsectors:eu-nis-oes-banking="credit-banking"**

Bank Credit Institutions Sub Sector

## **eu-nis-oes-financial**

**eu-nis-sector-and-subsectors:eu-nis-oes-financial="trading-financial"**

Operators of Financial Trading Sub Sector

**eu-nis-sector-and-subsectors:eu-nis-oes-financial="ccp-financial"**

Financial Central Counterparty Sub Sector

## **eu-nis-oes-health**

**eu-nis-sector-and-subsectors:eu-nis-oes-health="healthcare-health"**

Healthcare Provider Sub Sector

## **eu-nis-oes-water**

**eu-nis-sector-and-subsectors:eu-nis-oes-water="supply-water"**

Water Supply Sub Sector

**eu-nis-sector-and-subsectors:eu-nis-oes-water="distribution-water"**

Water Distribution Sub Sector

## **eu-nis-oes-diginfra**

**eu-nis-sector-and-subsectors:eu-nis-oes-diginfra="ixp-diginfra"**

IXPs Sub Sector

**eu-nis-sector-and-subsectors:eu-nis-oes-diginfra="dns-diginfra"**

DNS Service Provider Sub Sector

## **eu-nis-sector-and-subsectors:eu-nis-oes-diginfra="tld-diginfra"**

TLD Name Registry Sub Sector

## **eu-nis-dsp**

### **eu-nis-sector-and-subsectors:eu-nis-dsp="market-dsp"**

Online Marketplace Sub Sector

### **eu-nis-sector-and-subsectors:eu-nis-dsp="search-dsp"**

Online Search Engine Sub Sector

### **eu-nis-sector-and-subsectors:eu-nis-dsp="cloud-dsp"**

Cloud Computing Service Sub Sector

## **euci**



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

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:dissemination-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.

### europol-incident:malware="distribution"

Distribution

Infecting one or various systems with a specific type of malware.

### europol-incident:malware="c&c"

C&C

Infecting one or various systems with a specific type of malware.

### europol-incident:malware="undetermined"

Undetermined

## availability

### europol-incident:availability="dos-ddos"

DoS/DDoS

Disruption of the processing and response capacity of systems and networks in order to render them inoperative.

## **europol-incident:availability="sabotage"**

Sabotage

Premeditated action to damage a system, interrupt a process, change or delete information, etc.

## **information-gathering**

### **europol-incident:information-gathering="scanning"**

Scanning

Active and passive gathering of information on systems or networks.

### **europol-incident:information-gathering="sniffing"**

Sniffing

Unauthorised monitoring and reading of network traffic.

### **europol-incident:information-gathering="phishing"**

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

# **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"

## **fpf**



fpf 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 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.

### **fpf:degrees-of-identifiability="explicitly-personal"**

Explicitly personal

Name, address, phone number, SSN, government-issued ID (e.g., Jane Smith, 123 Main Street, 555-555-5555)

### **fpf:degrees-of-identifiability="potentially-identifiable"**

Potentially identifiable

Unique device ID, license plate, medical record number, cookie, IP address (e.g., MAC address 68:A8:6D:35:65:03)

### **fpf:degrees-of-identifiability="not-readily-identifiable"**

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.

## **fpf:pseudonymous-data="key-coded"**

Key coded

Clinical or research datasets where only curator retains key (e.g., Jane Smith, diabetes, HgB 15.1 g/dl = Csrk123)

## **fpf:pseudonymous-data="pseudonymous"**

Pseudonymous

Unique, artificial pseudonyms replace direct identifiers (e.g., HIPAA Limited Datasets, John Doe = 5L7T LX619Z) (unique sequence not used anywhere else)

## **fpf:pseudonymous-data="protected-pseudonymous"**

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 been 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.

## **classifiedes-defense**



Exclusive flag set which means the values or predicate below must be set exclusively.

### **fr-classif:classifiedes-defense="TRES\_SECRET\_DEFENSE"**

TRES SECRET DEFENSE

### **fr-classif:classifiedes-defense="SECRET\_DEFENSE"**

SECRET DEFENSE

### **fr-classif:classifiedes-defense="CONFIDENTIEL\_DEFENSE"**

CONFIDENTIEL DEFENSE

## **non-classifiedes-defense**



Exclusive flag set which means the values or predicate below must be set exclusively.

### **fr-classif:non-classifiedes-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



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

**gdpr:special-categories="racial-or-ethnic-origin"**

Racial or ethnic origin

**gdpr:special-categories="political-opinions"**

Political opinions

**gdpr:special-categories="religious-or-philosophical-beliefs"**

Religious or philosophical beliefs

**gdpr:special-categories="trade-union-membership"**

Trade union membership

## **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.

## **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.

## **gdpr:special-categories="health"**

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.

## **gdpr:special-categories="sex-life-or-sexual-orientation"**

Sex life or sexual orientation

Data concerning a natural person's sex life or sexual orientation

# honeypot-basic



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

Updated from Christian Seifert, Ian Welch, Peter Komisarczuk, 'Taxonomy of Honeypots', Technical Report CS-TR-06/12, VICTORIA UNIVERSITY OF WELLINGTON, School of Mathematical and Computing Sciences, June 2006, <http://www.mcs.vuw.ac.nz/comp/Publications/archive/CS-TR-06/CS-TR-06-12.pdf>

## 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.

## **honeypot-basic:interaction-level="high"**

High Interaction Level

Exposed functionality of the honeypot is not limited.

## **honeypot-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

## **honeypot-basic:interaction-level="none"**

No interaction capabilities

No exposed functionality in the honeypot.

## **data-capture**

Describes 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**



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.

Forum of Incident Response and Security Teams (FIRST) Information Exchange Policy (IEP) framework

## **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.

### **iep:provider-attribution="MUST"**

Recipients MUST attribute the Provider when redistributing the information received.

### **iep:provider-attribution="MUST NOT"**

Recipients MUST NOT attribute the Provider when redistributing the information received.

## **obfuscate-affected-parties**

Recipients could be required to obfuscate or anonymize information that could be used to identify the victims before redistributing the information received.

### **iep:obfuscate-affected-parties="MAY"**

Recipients MAY obfuscate information about the specific affected parties.

### **iep:obfuscate-affected-parties="MUST"**

Recipients MUST obfuscate information about the specific affected parties.

### **iep:obfuscate-affected-parties="MUST NOT"**

Recipients MUST NOT obfuscate information about the specific affected parties.

## **unmodified-resale**

States whether the recipient MAY or MUST NOT resell the information received unmodified or in a semantically equivalent format.

## **iep:unmodified-resale="MAY"**

Recipients MAY resell the information received.

## **iep:unmodified-resale="MUST NOT"**

Recipients MUST NOT resell the information received unmodified or in a semantically equivalent format.

## **start-date**

States the UTC date that the IEP is effective from.

## **iep:start-date="\$text"**

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 definitely 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"**

**ifx-vetting:score="1"**

**ifx-vetting:score="2"**

**ifx-vetting:score="3"**

**ifx-vetting:score="4"**

**ifx-vetting:score="5"**

**ifx-vetting:score="6"**

**ifx-vetting:score="7"**

**ifx-vetting:score="8"**

**ifx-vetting:score="9"**

**ifx-vetting:score="10"**

**ifx-vetting:score="11"**

**ifx-vetting:score="12"**

**ifx-vetting:score="13"**

**ifx-vetting:score="14"**

**ifx-vetting:score="15"**

**ifx-vetting:score="16"**

**ifx-vetting:score="17"**

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**ifx-vetting:score="92"**

**ifx-vetting:score="93"**

**ifx-vetting:score="94"**

**ifx-vetting:score="95"**

**ifx-vetting:score="96"**

**ifx-vetting:score="97"**

**ifx-vetting:score="98"**

**ifx-vetting:score="99"**

**ifx-vetting:score="100"**

# 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\\_ITS-HBK-2810.09-02%20%5bNASA%20Information%20Security%20Incident%20Management%5d.pdf#page=9](https://www.nasa.gov/pdf/589502main_ITS-HBK-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 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.

### **incident-disposition:not-an-incident="scan-probe"**

Scan or Probe

Reconnaissance activity which Scanned or Probed for the presence of a vulnerability which may be later exploited to gain unauthorized access.

### **incident-disposition:not-an-incident="failed"**

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.

### **incident-disposition:not-an-incident="refuted"**

Refuted

Any other circumstance where a suspected incident was determined to not be an incident and was Refuted.

## **duplicate**

## **incident-disposition:duplicate="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**

### **infoleak: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

**infoleak:automatic-detection="pgp-message"**

PGP message

**infoleak:automatic-detection="pgp-private-key"**

PGP private key

**infoleak:automatic-detection="certificate"**

Certificate

**infoleak:automatic-detection="rsa-private-key"**

RSA private key

**infoleak:automatic-detection="dsa-private-key"**

DSA private key

**infoleak:automatic-detection="ec-private-key"**

EC private key

**infoleak:automatic-detection="base64"**

Base64

**infoleak:automatic-detection="binary"**

Binary

**infoleak:automatic-detection="hexadecimal"**

Hexadecimal

**infoleak:automatic-detection="bitcoin-address"**

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-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

Associated numerical value="93"

### **infoleak:certainty="75"**

Probable (probability equals 0.75 - 75%)

Probable

Associated numerical value="75"

### **infoleak:certainty="50"**

Chances about even (probability equals 0.50 - 50%)

Chances about even

Associated numerical value="50"

### **infoleak:certainty="30"**

Probably not (probability equals 0.30 - 30%)

Probably not

Associated numerical value="30"

### **infoleak:certainty="7"**

Almost certainly not (probability equals 0.07 - 7%)

Almost certainly not

Associated numerical value="7"

### **infoleak:certainty="0"**

Impossibility (probability equals 0 - 0%)

Impossibility

## **test**

# information-security-indicators



information-security-indicators 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 full set of operational indicators for organizations to use to benchmark their security posture.

## IEX

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).

## **information-security-indicators:IEX="INT.1"**

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.

## **information-security-indicators:IEX="INT.2"**

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).

## **information-security-indicators:IEX="INT.3"**

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.

## **information-security-indicators:IEX="DFC.1"**

Obvious and visible websites defacements

Obvious defacements measures the defacement of homepages and of the most consulted pages of sites.

## **information-security-indicators:IEX="MIS.1"**

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).

## **information-security-indicators:IEX="DOS.1"**

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.

## **information-security-indicators:IMF="LOM.1"**

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.

## **information-security-indicators:IMF="LOG.1"**

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.

## **information-security-indicators:IMF="LOG.2"**

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.

## **information-security-indicators:IMF="LOG.3"**

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.

# IDB

Indicators of this category provide information on the occurrence of incidents regarding internal deviant behaviours (including especially usurpation of rights or of identity).

## **information-security-indicators:IDB="UID.1"**

User impersonation

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).

### **information-security-indicators:IDB="RGH.6"**

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").

### **information-security-indicators:IDB="RGH.7"**

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).

### **information-security-indicators:IDB="MIS.1"**

Server resources misappropriation by an internal source

This indicators measures misappropriation of on-line IT resources for one's own use (personal, association etc.).

### **information-security-indicators:IDB="IAC.1"**

Access to hacking Website

This indicator measures unauthorized access to a hacking Website from an internal workstation

### **information-security-indicators:IDB="LOG.1"**

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

# IWH

Indicators of this category are indicators that concern all categories of incidents.

## **information-security-indicators:IWH="VNP.1"**

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 indicators 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 organizationbased 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.

### **information-security-indicators:VBH="PRC.6"**

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.

### **information-security-indicators:VBH="IAC.1"**

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.

### **information-security-indicators:VBH="IAC.2"**

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.

### **information-security-indicators:VBH="FTR.1"**

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.

### **information-security-indicators:VBH="FTR.2"**

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.

### **information-security-indicators:VBH="FTR.3"**

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.

### **information-security-indicators:VBH="WTI.1"**

Workstations accessed in administrator mode

This indicator measures access to workstations in administrator mode without authorization.

### **information-security-indicators:VBH="WTI.2"**

Personal storage devices used

This indicator measures the use 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).

### **information-security-indicators:VBH="WTI.3"**

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.

### **information-security-indicators:VBH="WTI.4"**

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.

### **information-security-indicators:VBH="WTI.5"**

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.

### **information-security-indicators:VBH="WTI.6"**

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.

### **information-security-indicators:VBH="PSW.1"**

Weak passwords used

The required strength of passwords depends on the organization's security policy, but usable general recommendations in ISO/IEC 27002 [2].

### **information-security-indicators:VBH="PSW.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.

### **information-security-indicators:VBH="PSW.3"**

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.

### **information-security-indicators:VBH="RGH.1"**

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.



## **information-security-indicators:VBH="HUW.1"**

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

## **information-security-indicators:VBH="HUW.2"**

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.

### **information-security-indicators:VTC="PHY.1"**

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.

### **information-security-indicators:VOR="DSC.1"**

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.

### **information-security-indicators:VOR="VNP.1"**

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.

### **information-security-indicators:VOR="VNP.2"**

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).

### **information-security-indicators:VOR="VNR.1"**

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).

# kill-chain



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

### **lifetime:discovering**

Discovering

Discovering

25

## **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-machinen

**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

**maec-malware-behavior:maec-malware-behavior="crack-passwords"**

crack-passwords

**maec-malware-behavior:maec-malware-behavior="defeat-call-graph-generation"**

defeat-call-graph-generation

**maec-malware-behavior:maec-malware-behavior="defeat-emulator"**

defeat-emulator

**maec-malware-behavior:maec-malware-behavior="defeat-flow-oriented-disassembler"**

defeat-flow-oriented-disassembler

**maec-malware-behavior:maec-malware-behavior="defeat-linear-disassembler"**

defeat-linear-disassembler

**maec-malware-behavior:maec-malware-behavior="degrade-security-program"**

degrade-security-program

**maec-malware-behavior:maec-malware-behavior="denial-of-service"**

denial-of-service

**maec-malware-behavior:maec-malware-behavior="destroy-hardware"**

destroy-hardware

**maec-malware-behavior:maec-malware-behavior="detect-debugging"**

detect-debugging

**maec-malware-behavior:maec-malware-behavior="detect-emulator"**

detect-emulator

**maec-malware-behavior:maec-malware-behavior="detect-installed-analysis-tools"**

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:maec-malware-behavior="disable-system-file-overwrite-protection"**

disable-system-file-overwrite-protection

**maec-malware-behavior:maec-malware-behavior="disable-update-services-daemons"**

disable-update-services-daemons

**maec-malware-behavior:maec-malware-behavior="disable-user-account-control"**

disable-user-account-control

**maec-malware-behavior:maec-malware-behavior="drop-retrieve-debug-log-file"**

drop-retrieve-debug-log-file

**maec-malware-behavior:maec-malware-behavior="elevate-privilege"**

elevate-privilege

**maec-malware-behavior:maec-malware-behavior="encrypt-data"**

encrypt-data

**maec-malware-behavior:maec-malware-behavior="encrypt-files"**

encrypt-files

**maec-malware-behavior:maec-malware-behavior="encrypt-self"**

encrypt-self

**maec-malware-behavior:maec-malware-behavior="erase-data"**

erase-data

**maec-malware-behavior:maec-malware-behavior="evade-static-heuristic"**

evade-static-heuristic

**maec-malware-behavior: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"**

move-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**



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.

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-violationk

**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

**maec-malware-capabilities:maec-malware-capability="secondary-operation"**

secondary-operation

**maec-malware-capabilities:maec-malware-capability="security-degradation"**

security-degradation

**maec-malware-capabilities:maec-malware-capability="access-control-degradation"**

access-control-degradation

**maec-malware-capabilities:maec-malware-capability="anti-debugging"**

anti-debugging

**maec-malware-capabilities:maec-malware-capability="anti-disassembly"**

anti-disassembly

**maec-malware-capabilities:maec-malware-capability="anti-emulation"**

anti-emulation

**maec-malware-capabilities:maec-malware-capability="anti-memory-forensics"**

anti-memory-forensics

**maec-malware-capabilities:maec-malware-capability="anti-sandbox"**

anti-sandbox

**maec-malware-capabilities:maec-malware-capability="anti-virus-evasion"**

anti-virus-evasion

**maec-malware-capabilities:maec-malware-capability="anti-vm"**

anti-vm

**maec-malware-capabilities:maec-malware-capability="authentication-credentials-theft"**

authentication-credentials-theft

**maec-malware-capabilities:maec-malware-capability="clean-traces-of-infection"**

clean-traces-of-infection

**maec-malware-capabilities:maec-malware-capability="communicate-with-c2-server"**

communicate-with-c2-servern

**maec-malware-capabilities:maec-malware-capability="compromise-data-availability"**

compromise-data-availability

**maec-malware-capabilities:maec-malware-capability="compromise-system-availability"**

compromise-system-availability

**maec-malware-capabilities:maec-malware-capability="consume-system-resources"**

consume-system-resources

**maec-malware-capabilities:maec-malware-capability="continuous-execution"**

continuous-execution

**maec-malware-capabilities:maec-malware-capability="data-integrity-violation"**

data-integrity-violation

**maec-malware-capabilities:maec-malware-capability="data-obfuscation"**

data-obfuscation

**maec-malware-capabilities:maec-malware-capability="data-staging"**

data-staging

**maec-malware-capabilities:maec-malware-capability="determine-c2-server"**

determine-c2-server

**maec-malware-capabilities:maec-malware-capability="email-spam"**

email-spam

**maec-malware-capabilities:maec-malware-capability="ensure-compatibility"**

ensure-compatibility

**maec-malware-capabilities:maec-malware-capability="environment-awareness"**

environment-awareness

**maec-malware-capabilities:maec-malware-capability="file-infection"**

file-infection

**maec-malware-capabilities:maec-malware-capability="hide-artifacts"**

hide-artifacts

**maec-malware-capabilities:maec-malware-capability="hide-executing-code"**

hide-executing-code

**maec-malware-capabilities:maec-malware-capability="hide-non-executing-code"**

hide-non-executing-code

**maec-malware-capabilities:maec-malware-capability="host-configuration-probing"**

host-configuration-probing

**maec-malware-capabilities:maec-malware-capability="information-gathering-for-improvement"**

information-gathering-for-improvement

**maec-malware-capabilities:maec-malware-capability="input-peripheral-capture"**

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](#). The JSON format can be freely reused in your application or automatically enabled in [MISP taxonomy](#).

Classification based on different categories. Based on <https://www.sans.org/reading-room/whitepapers/incident/malware-101-viruses-32848>

## 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

**malware\_classification:payload-classification="dropper"**

Dropper

## **memory-classification**

**malware\_classification:memory-classification="resident"**

In memory

**malware\_classification:memory-classification="temporary-resident"**

In memory temporarily

**malware\_classification:memory-classification="swapping-mode"**

Only a part loaded in memory temporarily

**malware\_classification:memory-classification="non-resident"**

Not in memory

**malware\_classification:memory-classification="user-process"**

As a user level process

**malware\_classification:memory-classification="kernel-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.

## 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

Associated numerical value="75"

## **misp:confidence-level="fairly-confident"**

Fairly confident

Associated numerical value="50"

## **misp:confidence-level="rarely-confident"**

Rarely confident

Associated numerical value="25"

## **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 tagged

## **misp:tool="misp2stix"**

misp2stix

# 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](#).

MONARC Threats 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.

## **unauthorised-actions**

### **monarc-threat:unauthorised-actions="fraudulent-copying-or-use-of-counterfeit-software"**

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.

### **monarc-threat:unauthorised-actions="corruption-of-data"**

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.

### **monarc-threat:unauthorised-actions="illegal-processing-of-data"**

Illegal processing of data

A person carries out information processing that is forbidden by the law or a regulation.

## **compromise-of-information**

### **monarc-threat:compromise-of-information="remote-spying"**

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.

### **monarc-threat:compromise-of-information="tampering-with-hardware"**

Tampering with hardware

Someone with access to a communication medium or equipment installs an interception or destruction device in it.

### **monarc-threat:compromise-of-information="interception-of-compromising-interference-signals"**

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).

### **monarc-threat:compromise-of-information="theft-or-destruction-of-media-documents-or-equipment"**

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.

### **monarc-threat:compromise-of-information="retrieval-of-recycled-or-discarded media"**

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.

### **monarc-threat:compromise-of-information="malware-infection"**

Malware infection

Unwanted software that is doing operations seeking to harm the company.

### **monarc-threat:compromise-of-information="data-from-untrustworthy-sources"**

Data from untrustworthy sources

Receiving false data or unsuitable equipment from outside sources and using them in the organisation.

### **monarc-threat:compromise-of-information="disclosure"**

Disclosure

Person who voluntarily or negligently disclosure information.

## **loss-of-essential-services**

### **monarc-threat:loss-of-essential-services="failure-of-telecommunication-equipment"**

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 and Platform classification based on Microsoft's implementation of the Computer Antivirus Research Organization (CARO) Naming Scheme and Malware Terminology. Based on <https://www.microsoft.com/en-us/security/portal/mmpc/shared/malwareNaming.aspx>, <https://www.microsoft.com/security/portal/mmpc/shared/glossary.aspx>, <https://www.microsoft.com/security/portal/mmpc/shared/objectivecriteria.aspx>, and <http://www.caro.org/definitions/index.html>. Malware families are extracted from Microsoft SIRs since 2008 based on <https://www.microsoft.com/security/sir/archive/default.aspx> and <https://www.microsoft.com/en-us/security/portal/threat/threats.aspx>. Note that SIRs do NOT include all Microsoft malware families.

## 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="Spoofers"**

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

## **ms-caro-malware:malware-platform="AppleScript"**

compiled Apple scripts

## **ms-caro-malware:malware-platform="ASP"**

Active Server Pages scripts

## **ms-caro-malware:malware-platform="AutoIt"**

AutoIT scripts

## **ms-caro-malware:malware-platform="BAS"**

Basic scripts

## **ms-caro-malware:malware-platform="BAT"**

Basic scripts

## **ms-caro-malware:malware-platform="CorelScript"**

Corelscript scripts

## **ms-caro-malware:malware-platform="HTA"**

HTML Application scripts

## **ms-caro-malware:malware-platform="HTML"**

HTML Application scripts

## **ms-caro-malware:malware-platform="INF"**

Install scripts

## **ms-caro-malware:malware-platform="IRC"**

mIRC/pIRC scripts

## **ms-caro-malware:malware-platform="Java"**

Java binaries (classes)

## **ms-caro-malware:malware-platform="JS"**

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

## **ms-caro-malware:malware-platform="WinHlp"**

Windows Help scripts

## **ms-caro-malware:malware-platform="WinREG"**

Windows registry scripts

## **ms-caro-malware:malware-platform="A97M"**

Access 97, 2000, XP, 2003, 2007, and 2010 macros

## **ms-caro-malware:malware-platform="HE"**

macro scripting

## **ms-caro-malware:malware-platform="O97M"**

Office 97, 2000, XP, 2003, 2007, and 2010 macros - those that affect Word, Excel, and Powerpoint

## **ms-caro-malware:malware-platform="PP97M"**

PowerPoint 97, 2000, XP, 2003, 2007, and 2010 macros

## **ms-caro-malware:malware-platform="V5M"**

Visio5 macros

## **ms-caro-malware:malware-platform="W1M"**

Word1Macro

## **ms-caro-malware:malware-platform="W2M"**

Word2Macro

## **ms-caro-malware:malware-platform="W97M"**

Word 97, 2000, XP, 2003, 2007, and 2010 macros

## **ms-caro-malware:malware-platform="WM"**

Word 95 macros

## **ms-caro-malware:malware-platform="X97M"**

Excel 97, 2000, XP, 2003, 2007, and 2010 macros

## **ms-caro-malware:malware-platform="XF"**

Excel formulas

## **ms-caro-malware:malware-platform="XM"**

Excel 95 macros

## **ms-caro-malware:malware-platform="ASX"**

XML metafile of Windows Media .asf files

## **ms-caro-malware:malware-platform="HC"**

HyperCard Apple scripts

## **ms-caro-malware:malware-platform="MIME"**

MIME packets

## **ms-caro-malware:malware-platform="Netware"**

Novell Netware files

## **ms-caro-malware:malware-platform="QT"**

Quicktime files

## **ms-caro-malware:malware-platform="SB"**

StarBasic (Staroffice XML) files

## **ms-caro-malware:malware-platform="SWF"**

Shockwave Flash files

## **ms-caro-malware:malware-platform="TSQL"**

MS SQL server files

## **ms-caro-malware:malware-platform="XML"**

XML files

# **ms-caro-malware-full**



ms-caro-malware-full 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 and Platform classification based on Microsoft's implementation of the Computer Antivirus Research Organization (CARO) Naming Scheme and Malware Terminology. Based on <https://www.microsoft.com/en-us/security/portal/mmpc/shared/malwarenaming.aspx>, <https://www.microsoft.com/security/portal/mmpc/shared/glossary.aspx>, <https://www.microsoft.com/security/portal/mmpc/shared/objectivecriteria.aspx>, and <http://www.caro.org/definitions/index.html>. Malware families are extracted from Microsoft SIRs since 2008 based on <https://www.microsoft.com/security/sir/archive/default.aspx> and <https://www.microsoft.com/en-us/security/portal/threat/threats.aspx>. Note that SIRs do NOT include all Microsoft malware families.

## 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="BrowserModifier"**

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

anymore

### **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="Spoofers"**

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 operatings 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

**ms-caro-malware-full:malware-platform="ALisp"**

ALisp scripts

**ms-caro-malware-full:malware-platform="AmiPro"**

AmiPro script

**ms-caro-malware-full:malware-platform="ANSI"**

American National Standards Institute scripts

**ms-caro-malware-full:malware-platform="AppleScript"**

compiled Apple scripts

**ms-caro-malware-full:malware-platform="ASP"**

Active Server Pages scripts

**ms-caro-malware-full:malware-platform="AutoIt"**

AutoIT scripts

**ms-caro-malware-full:malware-platform="BAS"**

Basic scripts

**ms-caro-malware-full:malware-platform="BAT"**

Basic scripts

**ms-caro-malware-full:malware-platform="CorelScript"**

Corelscript scripts

**ms-caro-malware-full:malware-platform="HTA"**

HTML Application scripts

**ms-caro-malware-full:malware-platform="HTML"**

HTML Application scripts

**ms-caro-malware-full:malware-platform="INF"**

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

## **ms-caro-malware-full:malware-platform="VBA"**

Visual Basic for Applications scripts

## **ms-caro-malware-full:malware-platform="VBS"**

Visual Basic scripts

## **ms-caro-malware-full:malware-platform="WinBAT"**

Winbatch scripts

## **ms-caro-malware-full:malware-platform="WinHlp"**

Windows Help scripts

## **ms-caro-malware-full:malware-platform="WinREG"**

Windows registry scripts

## **ms-caro-malware-full:malware-platform="A97M"**

Access 97, 2000, XP, 2003, 2007, and 2010 macros

## **ms-caro-malware-full:malware-platform="HE"**

macro scripting

## **ms-caro-malware-full:malware-platform="O97M"**

Office 97, 2000, XP, 2003, 2007, and 2010 macros - those that affect Word, Excel, and Powerpoint

## **ms-caro-malware-full:malware-platform="PP97M"**

PowerPoint 97, 2000, XP, 2003, 2007, and 2010 macros

## **ms-caro-malware-full:malware-platform="V5M"**

Visio5 macros

## **ms-caro-malware-full:malware-platform="W1M"**

Word1Macro

## **ms-caro-malware-full:malware-platform="W2M"**

Word2Macro

## **ms-caro-malware-full:malware-platform="W97M"**

Word 97, 2000, XP, 2003, 2007, and 2010 macros

## **ms-caro-malware-full:malware-platform="WM"**

Word 95 macros

## **ms-caro-malware-full:malware-platform="X97M"**

Excel 97, 2000, XP, 2003, 2007, and 2010 macros

## **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.

### **ms-caro-malware-full:malware-family="ZangoSearchAssistant"**

2008 - Adware that monitors the user's Web-browsing activity and displays pop-up advertisements related to the Internet sites the user is viewing.

### **ms-caro-malware-full:malware-family="ZangoShoppingReports"**

2008 - Adware that displays targeted advertising to affected users while they browse the Internet, based on search terms entered into search engines.

### **ms-caro-malware-full:malware-family="FakeXPA"**

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.

### **ms-caro-malware-full:malware-family="FakeSecSen"**

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

### **ms-caro-malware-full:malware-family="Hotbar"**

2008 - Adware that displays a dynamic toolbar and targeted pop-up ads based on its monitoring of Web-browsing activity.

### **ms-caro-malware-full:malware-family="Agent"**

2008 - A generic detection for a number of trojans that may perform different malicious functions. The behaviors exhibited by this family are highly variable

### **ms-caro-malware-full:malware-family="Wimad"**

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.

### **ms-caro-malware-full:malware-family="BaiduSobar"**

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

### **ms-caro-malware-full:malware-family="VB"**

2008 - A detection for various threats written in the Visual Basic programming language.

### **ms-caro-malware-full:malware-family="Antivirus2008"**

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-caro-malware-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-caro-malware-full:malware-family="GhostAdmin"**

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-caro-malware-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-caro-malware-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-caro-malware-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-caro-malware-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-caro-malware-full:malware-family="Chir"**

2008 - A family with a worm component and a virus component. The worm component spreads by email and by exploiting a vulnerability addressed by Microsoft Security Bulletin MS01-020. The virus component may infect .exe, .scr, and HTML files.

### **ms-caro-malware-full:malware-family="Salinity"**

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-caro-malware-full:malware-family="Rbot"**

2008 - A family of backdoor trojans that allows attackers to control the computer through an IRC channel

### **ms-caro-malware-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-caro-malware-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-caro-malware-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-caro-malware-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-caro-malware-full:malware-family="Tracur"**

2008 - A trojan that downloads and executes arbitrary files. It is sometimes distributed by ASX/Wimad.

### **ms-caro-malware-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-caro-malware-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-caro-malware-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="MessengerSkinner"**

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-caro-malware-full:malware-family="Provis"**

2009 - This threat can perform a number of actions of a malicious hacker's choice on your PC.

### **ms-caro-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-caro-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-caro-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-caro-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-caro-malware-full:malware-family="Gmania"**

2009 - A family of trojans that steals online game passwords and sends them to remote sites.

### **ms-caro-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-caro-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-caro-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"**

2009 - A non-Microsoft add-on for Microsoft's Windows Live Messenger, called Messenger Plus!. It comes with an optional sponsor program installation, detected as Spyware:Win32/C2Lop.

### **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 advertisements 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.

### **ms-caro-malware-full:malware-family="FakeAdPro"**

2009 - a program that may display false and misleading alerts regarding errors and malware to entice users to purchase it.

### **ms-caro-malware-full:malware-family="FakeSmoke"**

2009 - a family of trojans consisting of a fake Security Center interface and a fake antivirus program.

### **ms-caro-malware-full:malware-family="FakeBye"**

2009 - A rogue security software family that uses a Korean-language user interface.

### **ms-caro-malware-full:malware-family="Hiloti"**

2009 - a generic detection for a trojan that interferes with an affected user's browsing habits and downloads and executes arbitrary files.

### **ms-caro-malware-full:malware-family="Tikayb"**

2009 - A trojan that attempts to establish a secure network connection to various Web sites without the user's consent.

### **ms-caro-malware-full:malware-family="Ursnif"**

2009 - A family of trojans that steals sensitive information from an affected computer

### **ms-caro-malware-full:malware-family="Rimecud"**

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

### **ms-caro-malware-full:malware-family="Lethic"**

2009 - A trojan that connects to remote servers, which may lead to unauthorized access to an affected system.

### **ms-caro-malware-full:malware-family="CeeInject"**

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.

### **ms-caro-malware-full:malware-family="Cmdow"**

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.



### **ms-caro-malware-full:malware-family="Sohanad"**

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.

### **ms-caro-malware-full:malware-family="I2ISolutions"**

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="Dpoint"**

2009 - 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="Silly\_P2P"**

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.

### **ms-caro-malware-full:malware-family="Vobfus"**

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.

### **ms-caro-malware-full:malware-family="Daurso"**

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.

### **ms-caro-malware-full:malware-family="MyDealAssistant"**

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="Adsubscribe"**

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.

### **ms-caro-malware-full:malware-family="MyCentria"**

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="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"**

2010 VOL09 - A rogue security software family distributed under the names Internet Security 2010, Security Essentials 2010, and others.

### **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-caro-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-caro-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-caro-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-caro-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-caro-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-caro-malware-full:malware-family="SDBot"**

2010 VOL09 - A family of backdoor trojans that allows attackers to control infected computers over an IRC channel.

### **ms-caro-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-caro-malware-full:malware-family="Tofsee"**

2010 VOL09 - A multi-component family of backdoor trojans that act as a spam and traffic relay.

### **ms-caro-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-of-service (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 thirdparty 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

vulnerability addressed by Microsoft Security Bulletin MS10-046.

### **ms-caro-malware-full:malware-family="Swinnag"**

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.

### **ms-caro-malware-full:malware-family="Javrobat"**

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.

### **ms-caro-malware-full:malware-family="Kraddare"**

2013 VOL15 - Adware that displays Korean-language advertisements.

### **ms-caro-malware-full:malware-family="PriceGong"**

2013 VOL15 - An adware program that shows certain deals related to the search terms entered on any web page.

### **ms-caro-malware-full:malware-family="Protlerdob"**

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.

### **ms-caro-malware-full:malware-family="Qhost"**

2013 VOL15 - A generic detection for trojans that modify the HOSTS file on the computer to redirect or limit Internet traffic to certain sites.

### **ms-caro-malware-full:malware-family="Reveton"**

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.

### **ms-caro-malware-full:malware-family="Rongvhin"**

2013 VOL15 - A family of malware that perpetrates click fraud. It might be delivered to the computer via hack tools for the game CrossFire.

### **ms-caro-malware-full:malware-family="Seedabutor"**

2013 VOL15 - A JavaScript trojan that attempts to redirect the browser to another website.

### **ms-caro-malware-full:malware-family="SMSer"**

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.

### **ms-caro-malware-full:malware-family="Tobfy"**

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.

### **ms-caro-malware-full:malware-family="Nitol"**

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.

### **ms-caro-malware-full:malware-family="Oceanmug"**

2013 VOL16 - A trojan that silently downloads and installs other programs without consent.

### **ms-caro-malware-full:malware-family="Proslikefan"**

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.

### **ms-caro-malware-full:malware-family="Rotbrow"**

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.

### **ms-caro-malware-full:malware-family="Sefnit"**

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.

### **ms-caro-malware-full:malware-family="Urntone"**

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.

### **ms-caro-malware-full:malware-family="Wysotot"**

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.

### **ms-caro-malware-full:malware-family="AddLyrics"**

2014 VOL17 - A browser add-on that displays lyrics for songs on YouTube, and displays advertisements in the browser window.

### **ms-caro-malware-full:malware-family="Adpeak"**

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="Slugin"**

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.



## **ms-caro-malware-full:malware-family="CandyOpen"**

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.

## **ms-caro-malware-full:malware-family="Colisi"**

2015 VOL20 - Behavioral detection of certain files acting in a malicious way.

## **ms-caro-malware-full:malware-family="Creprote"**

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.

## **ms-caro-malware-full:malware-family="Diplugem"**

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.

## **ms-caro-malware-full:malware-family="Dipsind"**

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.

## **ms-caro-malware-full:malware-family="Donoff"**

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).

## **ms-caro-malware-full:malware-family="Dorv"**

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.

## **ms-caro-malware-full:malware-family="Dowadmin"**

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, Tamper with root certificate trust, Modifies the system hosts file, Modifies your system DNS settings, Disables anti-virus products, Tamper 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.

# nato



nato namespace 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.

## classification

**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 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.



Exclusive flag set which means the values or predicate below must be set exclusively.

### **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



Exclusive flag set which means the values or predicate below must be set exclusively.

### **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 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](#).

Open Threat Taxonomy v1.1 base on James Tarala of SANS [http://www.auditscripts.com/resources/open\\_threat\\_taxonomy\\_v1.1a.pdf](http://www.auditscripts.com/resources/open_threat_taxonomy_v1.1a.pdf), [https://files.sans.org/summit/Threat\\_Hunting\\_Incident\\_Response\\_Summit\\_2016/PDFs/Using-Open-Tools-to-Convert-Threat-Intelligence-into-Practical-Defenses-James-Tarala-SANS-Institute.pdf](https://files.sans.org/summit/Threat_Hunting_Incident_Response_Summit_2016/PDFs/Using-Open-Tools-to-Convert-Threat-Intelligence-into-Practical-Defenses-James-Tarala-SANS-Institute.pdf), [https://www.youtube.com/watch?v=5rdGOOFC\\_yE](https://www.youtube.com/watch?v=5rdGOOFC_yE), and [https://www.rsaconference.com/writable/presentations/file\\_upload/str-r04\\_using-an-open-source-threat-model-for-prioritized-defense-final.pdf](https://www.rsaconference.com/writable/presentations/file_upload/str-r04_using-an-open-source-threat-model-for-prioritized-defense-final.pdf)

## 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

**open\_threat:threat-name="RES-002"**

Disruption of Fuel Resources - Rating: 2.0

**open\_threat:threat-name="RES-003"**

Disruption of Materials Resources - Rating: 2.0

**open\_threat:threat-name="RES-004"**

Disruption of Electrical Resources - Rating: 4.0

**open\_threat:threat-name="RES-005"**

Disruption of Transportation Services - Rating: 1.0

**open\_threat:threat-name="RES-006"**

Disruption of Communications Services - Rating: 4.0

**open\_threat:threat-name="RES-007"**

Disruption of Emergency Services - Rating: 1.0

**open\_threat:threat-name="RES-008"**

Disruption of Governmental Services - Rating: 1.0

**open\_threat:threat-name="RES-009"**

Supplier Viability - Rating: 2.0

**open\_threat:threat-name="RES-010"**

Supplier Supply Chain Failure - Rating: 2.0

**open\_threat:threat-name="RES-011"**

Logistics Provider Failures - Rating: 1.0

**open\_threat:threat-name="RES-012"**

Logistics Route Disruptions - Rating: 1.0

**open\_threat:threat-name="RES-013"**

Technology Services Manipulation - Rating: 3.0

**open\_threat:threat-name="PER-001"**

Personnel Labor / Skills Shortage - Rating: 5.0

**open\_threat:threat-name="PER-002"**

Loss of Personnel Resources - Rating: 3.0

**open\_threat:threat-name="PER-003"**

Disruption of Personnel Resources - Rating: 3.0

**open\_threat:threat-name="PER-004"**

Social Engineering of Personnel Resources - Rating: 4.0

**open\_threat:threat-name="PER-005"**

Negligent Personnel Resources - Rating: 4.0

**open\_threat:threat-name="PER-006"**

Personnel Mistakes / Errors - Rating: 4.0

**open\_threat:threat-name="PER-007"**

Personnel Inaction - Rating: 3.0

**open\_threat:threat-name="TEC-001"**

Organizational Fingerprinting via Open Sources - Rating:

**open\_threat:threat-name="TEC-002"**

System Fingerprinting via Open Sources - Rating: 2.0

**open\_threat:threat-name="TEC-003"**

System Fingerprinting via Scanning - Rating: 2.0

**open\_threat:threat-name="TEC-004"**

System Fingerprinting via Sniffing - Rating: 2.0

**open\_threat:threat-name="TEC-005"**

Credential Discovery via Open Sources - Rating: 4.0

**open\_threat:threat-name="TEC-006"**

Credential Discovery via Scanning - Rating: 3.0

**open\_threat:threat-name="TEC-007"**

Credential Discovery via Sniffing - Rating: 4.0

**open\_threat:threat-name="TEC-008"**

Credential Discovery via Brute Force - Rating: 4.0

**open\_threat:threat-name="TEC-009"**

Credential Discovery via Cracking - Rating: 4.0

**open\_threat:threat-name="TEC-010"**

Credential Discovery via Guessing - Rating: 2.0

**open\_threat:threat-name="TEC-011"**

Credential Discovery via Pre-Computational Attacks - Rating: 3.0

**open\_threat:threat-name="TEC-012"**

Misuse of System Credentials - Rating: 3.0

**open\_threat:threat-name="TEC-013"**

Escalation of Privilege - Rating: 5.0

**open\_threat:threat-name="TEC-014"**

Abuse of System Privileges - Rating: 4.0

**open\_threat:threat-name="TEC-015"**

Memory Manipulation - Rating: 4.0

**open\_threat:threat-name="TEC-016"**

Cache Poisoning - Rating: 3.0

**open\_threat:threat-name="TEC-017"**

Physical Manipulation of Technical Device - Rating: 2.0

**open\_threat:threat-name="TEC-018"**

Manipulation of Trusted System - Rating: 4.0

**open\_threat:threat-name="TEC-019"**

Cryptanalysis - Rating: 1.0

**open\_threat:threat-name="TEC-020"**

Data Leakage / Theft - Rating: 3.0

**open\_threat:threat-name="TEC-021"**

Denial of Service - Rating: 2.0

**open\_threat:threat-name="TEC-022"**

Maintaining System Persistence - Rating: 5.0

**open\_threat:threat-name="TEC-023"**

Manipulation of Data in Transit / Use - Rating: 2.0

**open\_threat:threat-name="TEC-024"**

Capture of Data in Transit / Use via Sniffing - Rating: 3.0

**open\_threat:threat-name="TEC-025"**

Capture of Data in Transit / Use via Debugging - Rating: 2.0

**open\_threat:threat-name="TEC-026"**

Capture of Data in Transit / Use via Keystroke Logging - Rating: 3.0

**open\_threat:threat-name="TEC-027"**

Replay of Data in Transit / Use - Rating: 2.0

**open\_threat:threat-name="TEC-028"**

Misdelivery of Data - Rating: 2.0

**open\_threat:threat-name="TEC-029"**

Capture of Stored Data - Rating: 3.0

**open\_threat:threat-name="TEC-030"**

Manipulation of Stored Data - Rating: 3.0

**open\_threat:threat-name="TEC-031"**

Application Exploitation via Input Manipulation - Rating: 5.0

**open\_threat:threat-name="TEC-032"**

Application Exploitation via Parameter Injection - Rating: 4.0

**open\_threat:threat-name="TEC-033"**

Application Exploitation via Code Injection - Rating: 4.0

**open\_threat:threat-name="TEC-034"**

Application Exploitation via Command Injection - Rating: 4.0

**open\_threat:threat-name="TEC-035"**

Application Exploitation via Path Traversal - Rating: 3.0

**open\_threat:threat-name="TEC-036"**

Application Exploitation via API Abuse - Rating: 3.0

**open\_threat:threat-name="TEC-037"**

Application Exploitation via Fuzzing - Rating: 3.0

**open\_threat:threat-name="TEC-038"**

Application Exploitation via Reverse Engineering - Rating: 3.0

**open\_threat:threat-name="TEC-039"**

Application Exploitation via Resource Location Guessing - Rating: 2.0

**open\_threat:threat-name="TEC-040"**

Application Exploitation via Source Code Manipulation - Rating: 3.0

**open\_threat:threat-name="TEC-041"**

Application Exploitation via Authentication Bypass - Rating: 2.0



# osint



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

## **osint:source-type="source-code-repository"**

Source code repository

## **osint:source-type="expansion"**

Expansion

## **osint:source-type="automatic-analysis"**

Automatic analysis including dynamic analysis or sandboxes output

## **osint:source-type="automatic-collection"**

Automatic collection including honeypots, spamtraps or equivalent technologies

## **osint:source-type="manual-analysis"**

Manual analysis or investigation

## **osint:source-type="unknown"**

Unknown

## **osint:source-type="other"**

Other source not specified in this list

## **lifetime**

### **osint:lifetime="perpetual"**

Perpetual

Information available publicly on long-term

### **osint:lifetime="ephemeral"**

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"

**osint:certainty="0"**

Impossibility (probability equals 0 - 0%)

Impossibility

# 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

## class

**passivetotal:class="malicious"**

Malicious

## **passivetotal:class="suspicious"**

Suspicious

## **passivetotal:class="non-malicious"**

Non Malicious

## **passivetotal:class="unknown"**

Unknown

# pentest



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

pentest classification.

# approach

This is group is dealing with differents 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>)

## **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/>)

## **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/>)

## **pentest:approach="vulnerability\_scanning"**

Vulnerability scanning is a security technique used to identify security weaknesses in a computer system. (<https://www.techopedia.com/definition/4160/vulnerability-scanning>)

## **pentest:approach="redteam"**

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](https://en.wikipedia.org/wiki/Red_team))

## **scan**

Automated tool that perform network checks

### **pentest:scan="vertical"**

A scan against multiple ports of a single IP.

### **pentest:scan="horizontal"**

A scan against a group of IPs for a single port.

### **pentest:scan="network\_scan"**

It is the discovery of networks and machines with services.

### **pentest:scan="vulnerability"**

Vulnerability scanning is a security technique used to identify security weaknesses in a computer system. (<https://www.techopedia.com/definition/4160/vulnerability-scanning>)

## **exploit**

Exploitation of a vulnerability

### **pentest:exploit="type\_confusion"**

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/>)

### **pentest:exploit="format\_strings"**

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](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](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](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](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](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](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\\_\(computer\\_security\)#](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>)

### **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\\_\(CSRF\)](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](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](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>)

# **network**

This is group is dealing with network vulnerabilities

## **pentest:network="sniffing"**

Sniffing involves capturing, decoding, inspecting and interpreting the information inside a network packet on a TCP/IP network. (<http://www.valencynetworks.com/articles/cyber-security-attacks-network-sniffing.html>)

## **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>)

## **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/>)

## **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>)

## **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>)

## **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](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.

100

## 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.

## **priority-level:severe**

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.

## **priority-level:high**

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.

## **priority-level:medium**

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.

## 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.

## rsit



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 and threats against one or more individuals).

### **rsit: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.

### **rsit:malicious-code="virus"**

Virus

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="worm"**

Worm

see 'virus'

### **rsit:malicious-code="trojan"**

Trojan

see 'virus'

### **rsit:malicious-code="spyware"**

Spyware

see 'virus'

### **rsit:malicious-code="dialer"**

Dialer

see 'virus'

## **rsit:malicious-code="rootkit"**

Rootkit

see 'virus'

## **information-gathering**

Information Gathering.

### **rsit:information-gathering="scanner"**

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.

### **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.

### **rsit: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.)

### **rsit:intrusion-attempts="brute-force"**

Login attempts

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

## **rsit: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.

### **rsit:intrusions="privileged-account-compromise"**

Privileged 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. Also includes being part of a botnet.

### **rsit:intrusions="unprivileged-account-compromise"**

Unprivileged Account Compromise

see 'Privileged Account Compromise'

### **rsit:intrusions="application-compromise"**

Application Compromise

see 'Privileged Account Compromise'

### **rsit:intrusions="bot"**

Bot

see 'Privileged Account Compromise'

## **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.



## **rsit:availability="dos"**

DoS

Denial of Service.

## **rsit:availability="ddos"**

DDoS

Distributed Denial of Service.

## **rsit:availability="sabotage"**

Sabotage

Sabotage.

## **rsit:availability="outage"**

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.

## **rsit:information-content-security="Unauthorised-information-access"**

Unauthorised access to information

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

## **rsit:information-content-security="Unauthorised-information-modification"**

Unauthorised modification of information

see 'Unauthorised access to information'

## fraud

Fraud.

### **rsit:fraud="unauthorized-use-of-resources"**

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).

### **rsit:fraud="copyright"**

Copyright

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

### **rsit:fraud="masquerade"**

Masquerade

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

### **rsit:fraud="phishing"**

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

### **rsit:vulnerable="vulnerable-service"**

Open for abuse

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

**runtime-packer:portable-executable="exe-stealth"**

EXE Stealth

**runtime-packer:portable-executable="expressor"**

eXPressor

**runtime-packer:portable-executable="fsg"**

FSG

**runtime-packer:portable-executable="kkrunchy-src"**

kkrunchy src

**runtime-packer:portable-executable="mew"**

MEW

**runtime-packer:portable-executable="mpress"**

MPRESS

**runtime-packer:portable-executable="obsidium"**

Obsidium

**runtime-packer:portable-executable="pelock"**

PELock

**runtime-packer:portable-executable="pespin"**

PESpin

**runtime-packer:portable-executable="petite"**

Petite

**runtime-packer:portable-executable="rlpack-basic"**

RLPack Basic

**runtime-packer:portable-executable="smart-packer-pro"**

Smart Packer Pro

**runtime-packer:portable-executable="themida"**

Themida

**runtime-packer:portable-executable="upx"**

UPX

**runtime-packer:portable-executable="vmprotect"**

VMProtect

**runtime-packer:portable-executable="xcomp-xpack"**

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.

Threat taxonomy in the scope of securing smart airports by ENISA. <https://www.enisa.europa.eu/publications/securing-smart-airports>

## human-errors

**smart-airports-threats:human-errors="configuration-errors"**

Configuration errors

**smart-airports-threats:human-errors="operator-or-user-error"**

Operator/user error

**smart-airports-threats:human-errors="loss-of-hardware"**

Loss of hardware

**smart-airports-threats:human-errors="non-compliance-with-policies-or-procedure"**

Non compliance with policies or procedure

## **system-failures**

**smart-airports-threats:system-failures="failures-of-devices-or-systems"**

Failures of devices or systems

**smart-airports-threats:system-failures="failures-or-disruptions-of-communication-links"**

Failures or disruptions of communication links (communication networks)

**smart-airports-threats:system-failures="failures-of-parts-of-devices"**

Failures of parts of devices

**smart-airports-threats:system-failures="failures-or-disruptions-of-main-supply"**

Failures or disruptions of main supply

**smart-airports-threats:system-failures="failures-or-disruptions-of-the-power-supply"**

Failures or disruptions of the power supply

**smart-airports-threats:system-failures="malfunctions-of-parts-of-devices"**

Malfunctions of parts of devices

**smart-airports-threats:system-failures="malfunctions-of-devices-or-systems"**

Malfunctions of devices or systems

**smart-airports-threats:system-failures="failures-of-hardware"**

Failures of hardware

**smart-airports-threats:system-failures="software-bugs"**

Software bugs

# natural-and-social-phenomena

**smart-airports-threats:natural-and-social-phenomena="earthquakes"**

Earthquakes

**smart-airports-threats:natural-and-social-phenomena="fires"**

Fires

**smart-airports-threats:natural-and-social-phenomena="extreme-weather"**

Extreme weather (e.g. flood, heavy snow, blizzard, high temperatures, fog, sandstorm)

**smart-airports-threats:natural-and-social-phenomena="solar-flare"**

Solar flare

**smart-airports-threats:natural-and-social-phenomena="volcano-explosion"**

Volcano explosion

**smart-airports-threats:natural-and-social-phenomena="nuclear-incident"**

Nuclear incident

**smart-airports-threats:natural-and-social-phenomena="dangerous-chemical-incidents"**

Dangerous chemical incidents

**smart-airports-threats:natural-and-social-phenomena="pandemic"**

Pandemic (e.g. Ebola)

**smart-airports-threats:natural-and-social-phenomena="social-disruptions"**

Social disruptions (e.g. industrial actions, civil unrest, strikes, military actions, terrorist attacks, political instability)

**smart-airports-threats:natural-and-social-phenomena="shortage-of-fuel"**

Shortage of fuel

**smart-airports-threats:natural-and-social-phenomena="space-debris-and-meteorites"**

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...

## **smart-airports-threats:malicious-actions="malicious-software-on-it-assets-remote-arbitrary-code-execution"**

Malicious software on IT assets such as remote arbitrary code execution (device under attacker control)

## **smart-airports-threats:malicious-actions="exploitation-of-software-vulnerabilities-implementation-flaws"**

exploitation of known or unknown software vulnerabilities such as implementation flaws (flaw in code)

## **smart-airports-threats:malicious-actions="exploitation-of-software-vulnerabilities-design-flaws"**

exploitation of known or unknown software vulnerabilities such as design flaws in IT assets (flaw in logic)

## **smart-airports-threats:malicious-actions="exploitation-of-software-vulnerabilities-apt"**

exploitation of known or unknown software vulnerabilities such as Advanced Persistent Threats (APT)

## **smart-airports-threats:malicious-actions="misuse-of-authority-or-authorisation-unauthorized-use-of-software"**

misuse of authority or authorisation - unauthorized use of software

## **smart-airports-threats:malicious-actions="misuse-of-authority-or-authorisation-unauthorized-installation-of-software"**

misuse of authority or authorisation - unauthorized installation of software

## **smart-airports-threats:malicious-actions="misuse-of-authority-or-authorisation-repudiation-of-actions"**

misuse of authority or authorisation - repudiation of actions

## **smart-airports-threats:malicious-actions="misuse-of-authority-or-authorisation-abuse-of-personal-data"**

misuse of authority or authorisation - abuse of personal data or identity fraud

## **smart-airports-threats:malicious-actions="misuse-of-authority-or-authorisation-using-information-from-an-unreliable-source"**

misuse of authority or authorisation - using information from an unreliable source

**smart-airports-threats:malicious-actions="misuse-of-authority-or-authorisation-unintentional-change-of-data-in-an-information-system"**

misuse of authority or authorisation - unintentional change of data in an information system

**smart-airports-threats:malicious-actions="misuse-of-authority-or-authorisation-inadequate-design-and-planning-or-lack-of-adoption"**

misuse of authority or authorisation inadequate design and planning or lack of adoption

**smart-airports-threats:malicious-actions="misuse-of-authority-or-authorisation-data-leakage-or-sharing"**

misuse of authority data leakage or sharing (exfiltration, discarded, stolen media)

**smart-airports-threats:malicious-actions="network-or-interception-attacks-manipulation-of-routing-information"**

network or interception attacks - manipulation of routing information (including redirection to malicious sites)

**smart-airports-threats:malicious-actions="network-or-interception-attacks-spoofing"**

network or interception attacks - spoofing

**smart-airports-threats:malicious-actions="network-or-interception-attacks-unauthorized-access"**

network or interception attacks - unauthorized access to network/services

**smart-airports-threats:malicious-actions="network-or-interception-attacks-authentication-attacks"**

network or interception attacks - authentication attacks (against insecure protocols or PKI)

**smart-airports-threats:malicious-actions="network-or-interception-attacks-replay-attacks"**

network or interception attacks - replay attacks

**smart-airports-threats:malicious-actions="network-or-interception-attacks-repudiation-of-actions"**

network or interception attacks - repudiation of actions

**smart-airports-threats:malicious-actions="network-or-interception-attacks-wiretaps"**

network or interception attacks - wiretaps (wired)

**smart-airports-threats:malicious-actions="network-or-interception-attacks-wireless-comms"**

network or interception attacks - wireless comms (eavesdropping, interception, jamming, electromagnetic interference)

**smart-airports-threats:malicious-actions="network-or-interception-attacks-network-reconnaissance-information-gathering"**

network or interception attacks - network reconnaissance/information gathering

**smart-airports-threats:malicious-actions="social-attacks-phishing-spearphishing"**

social attacks phishing or spearphishing

**smart-airports-threats:malicious-actions="social-attacks-pretexting"**

social attacks pretexting

**smart-airports-threats:malicious-actions="social-attacks-untrusted-links"**

social attacks untrusted links (fake websites/CSRF/XSS)

**smart-airports-threats:malicious-actions="social-attacks-baiting"**

social attacks baiting

**smart-airports-threats:malicious-actions="social-attacks-reverse-social-engineering"**

social attacks reverse social engineering

**smart-airports-threats:malicious-actions="social-attacks-impersonation"**

social attacks impersonation

**smart-airports-threats:malicious-actions="tampering-with-devices-unauthorised-modification-of-data"**

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](#).

Classification based on malware stealth techniques. Described in <https://vxheaven.org/lib/pdf/Introducing%20Stealth%20Malware%20Taxonomy.pdf>

## 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

**stix-ttp:victim-targeting="construction-engineering-sector"**

Construction & Engineering Sector

**stix-ttp:victim-targeting="government-international-organizations-sector"**

Government & International Organizations

**stix-ttp:victim-targeting="legal-sector"**

Legal Services

**stix-ttp:victim-targeting="hightech-it-sector"**

High-Tech & IT Sector

**stix-ttp:victim-targeting="healthcare-sector"**

Healthcare Sector

**stix-ttp:victim-targeting="transportation-sector"**

Transportation Sector

**stix-ttp:victim-targeting="aerospace-defence-sector"**

Aerospace & Defense Sector

**stix-ttp:victim-targeting="energy-sector"**

Energy Sector

**stix-ttp:victim-targeting="food-sector"**

Food Sector

**stix-ttp:victim-targeting="natural-resources-sector"**

Natural Resources Sector

**stix-ttp:victim-targeting="other-sector"**

Other Sector

**stix-ttp:victim-targeting="corporate-employee-information"**

Corporate Employee Information

**stix-ttp:victim-targeting="customer-pii"**

Customer PII

**stix-ttp:victim-targeting="email-lists-archives"**

Email Lists/Archives

**stix-ttp:victim-targeting="financial-data"**

Financial Data

**stix-ttp:victim-targeting="intellectual-property"**

Intellectual Property

**stix-ttp:victim-targeting="mobile-phone-contacts"**

Mobile Phone Contacts

**stix-ttp:victim-targeting="user-credentials"**

User Credentials

**stix-ttp:victim-targeting="authentication-cookies"**

Authentication Cookies

## targeted-threat-index



targeted-threat-index 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 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.

## targeting-sophistication-base-value

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



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



tor 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 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

## 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)

**veris:discovery\_method="Ext - incident response"**

External - Notified while investigating another incident

**veris:discovery\_method="Ext - law enforcement"**

Internal - notified by law enforcement or government agency

**veris:discovery\_method="Ext - monitoring service"**

External - managed security event monitoring service

**veris:discovery\_method="Ext - other"**

Discovery method was external and known but not listed

**veris:discovery\_method="Ext - suspicious traffic"**

External - Report of suspicious traffic

**veris:discovery\_method="Ext - unknown"**

External - unknown

**veris:discovery\_method="Ext - unrelated 3rd party"**

Discovered by person unaffiliated with victim or threat actor

**veris:discovery\_method="Int - HIDS"**

Internal - host IDS or file integrity monitoring

**veris:discovery\_method="Int - IT review"**

Any routine maintenance, testing or review of it assets. (Includes inspect of assets, vulnerability scans, etc.)

**veris:discovery\_method="Int - NIDS"**

Internal - All network-based security tool detection (including IPS, IDS, firewalls and other network-based security tools)

**veris:discovery\_method="Int - antivirus"**

Internal - antivirus alert

**veris:discovery\_method="Int - break in discovered"**

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

### **veris:discovery\_method="Prt - audit"**

Partner - Audit performed by a partner organization

### **veris:discovery\_method="Prt - incident response"**

Partner - notified while investigating another incident

### **veris:discovery\_method="Prt - monitoring service"**

Partner - Reported by a monitoring service

### **veris:discovery\_method="Prt - other"**

Discovery method was partner and known but not listed

### **veris:discovery\_method="Prt - unknown"**

Partner - Unknown

### **veris:discovery\_method="Unknown"**

Unknown

## **security\_incident**

### **veris:security\_incident="Confirmed"**

Yes - Confirmed

### **veris:security\_incident="False positive"**

False positive (response triggered, but no incident)

### **veris:security\_incident="Near miss"**

Near miss (actions did not compromise asset)

### **veris:security\_incident="Suspected"**

Suspected

## targeted

**veris:targeted="NA"**

Not applicable

**veris:targeted="Opportunistic"**

Opportunistic: victim attacked because they exhibited a weakness the actor knew how to exploit

**veris:targeted="Targeted"**

Targeted: victim chosen as target then actor determined what weaknesses could be exploited

**veris:targeted="Unknown"**

Unknown

## asset:accessibility

**veris:asset:accessibility="External"**

Publicly accessible

**veris:asset:accessibility="Internal"**

Internally accessible

**veris:asset:accessibility="Isolated"**

Internally isolated or restricted environment

**veris:asset:accessibility="NA"**

Not applicable

**veris:asset:accessibility="Other"**

Accessibility known but not listed

**veris:asset:accessibility="Unknown"**

Unknown

## asset:cloud

### **veris:asset:cloud="Customer attack"**

Penetration of another web site on shared device

### **veris:asset:cloud="Hosting error"**

Misconfiguration or error by hosting provider

### **veris:asset:cloud="Hosting governance"**

Lack of security process or procedure by hosting provider

### **veris:asset:cloud="Hypervisor"**

Hypervisor break-out attack

### **veris:asset:cloud="NA"**

It is known no cloud assets were involved

### **veris:asset:cloud="No"**

It is known that a cloud asset was involved and it being a cloud asset did not affect the outcome

### **veris:asset:cloud="Other"**

Cloud hosting known but not listed

### **veris:asset:cloud="Partner application"**

Application vulnerability in partner-developed application

### **veris:asset:cloud="Unknown"**

The involvement of cloud assets was not measured

### **veris:asset:cloud="User breakout"**

Elevation of privilege by another customer in shared environment

## **asset:country**

### **veris:asset:country="AD"**

Andorra

**veris:asset:country="AE"**

United Arab Emirates

**veris:asset:country="AF"**

Afghanistan

**veris:asset:country="AG"**

Antigua and Barbuda

**veris:asset:country="AI"**

Anguilla

**veris:asset:country="AL"**

Albania

**veris:asset:country="AM"**

Armenia

**veris:asset:country="AO"**

Angola

**veris:asset:country="AQ"**

Antarctica

**veris:asset:country="AR"**

Argentina

**veris:asset:country="AS"**

American Samoa

**veris:asset:country="AT"**

Austria

**veris:asset:country="AU"**

Australia

**veris:asset:country="AW"**

Aruba

**veris:asset:country="AX"**

Aland Islands

**veris:asset:country="AZ"**

Azerbaijan

**veris:asset:country="BA"**

Bosnia and Herzegovina

**veris:asset:country="BB"**

Barbados

**veris:asset:country="BD"**

Bangladesh

**veris:asset:country="BE"**

Belgium

**veris:asset:country="BF"**

Burkina Faso

**veris:asset:country="BG"**

Bulgaria

**veris:asset:country="BH"**

Bahrain

**veris:asset:country="BI"**

Burundi

**veris:asset:country="BJ"**

Benin

**veris:asset:country="BL"**

Saint-Barthelemy

**veris:asset:country="BM"**

Bermuda

**veris:asset:country="BN"**

Brunei Darussalam

**veris:asset:country="BO"**

Bolivia

**veris:asset:country="BQ"**

Bonaire, Saint Eustatius and Saba

**veris:asset:country="BR"**

Brazil

**veris:asset:country="BS"**

Bahamas

**veris:asset:country="BT"**

Bhutan

**veris:asset:country="BV"**

Bouvet Island

**veris:asset:country="BW"**

Botswana

**veris:asset:country="BY"**

Belarus

**veris:asset:country="BZ"**

Belize

**veris:asset:country="CA"**

Canada

**veris:asset:country="CC"**

Cocos (Keeling) Islands

**veris:asset:country="CD"**

Congo, Democratic Republic of the

**veris:asset:country="CF"**

Central African Republic

**veris:asset:country="CG"**

Congo

**veris:asset:country="CH"**

Switzerland

**veris:asset:country="CI"**

Cote d'Ivoire

**veris:asset:country="CK"**

Cook Islands

**veris:asset:country="CL"**

Chile

**veris:asset:country="CM"**

Cameroon

**veris:asset:country="CN"**

China

**veris:asset:country="CO"**

Colombia

**veris:asset:country="CR"**

Costa Rica

**veris:asset:country="CU"**

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

**veris:asset:country="GA"**

Gabon

**veris:asset:country="GB"**

United Kingdom

**veris:asset:country="GD"**

Grenada

**veris:asset:country="GE"**

Georgia

**veris:asset:country="GF"**

French Guiana

**veris:asset:country="GG"**

Guernsey

**veris:asset:country="GH"**

Ghana

**veris:asset:country="GI"**

Gibraltar

**veris:asset:country="GL"**

Greenland

**veris:asset:country="GM"**

Gambia

**veris:asset:country="GN"**

Guinea

**veris:asset:country="GP"**

Guadeloupe

**veris:asset:country="GQ"**

Equatorial Guinea

**veris:asset:country="GR"**

Greece

**veris:asset:country="GS"**

South Georgia and the South Sandwich Islands

**veris:asset:country="GT"**

Guatemala

**veris:asset:country="GU"**

Guam

**veris:asset:country="GW"**

Guinea-Bissau

**veris:asset:country="GY"**

Guyana

**veris:asset:country="HK"**

Hong Kong

**veris:asset:country="HM"**

Heard Island and McDonal Islands

**veris:asset:country="HN"**

Honduras

**veris:asset:country="HR"**

Croatia

**veris:asset:country="HT"**

Haiti

**veris:asset:country="HU"**

Hungary

**veris:asset:country="ID"**

Indonesia

**veris:asset:country="IE"**

Ireland

**veris:asset:country="IL"**

Israel

**veris:asset:country="IM"**

Isle of Man

**veris:asset:country="IN"**

India

**veris:asset:country="IO"**

British Virgin Islands

**veris:asset:country="IQ"**

Iraq

**veris:asset:country="IR"**

Iran (Islamic Republic of)

**veris:asset:country="IS"**

Iceland

**veris:asset:country="IT"**

Italy

**veris:asset:country="JE"**

Jersey

**veris:asset:country="JM"**

Jamaica

**veris:asset:country="JO"**

Jordan

**veris:asset:country="JP"**

Japan

**veris:asset:country="KE"**

Kenya

**veris:asset:country="KG"**

Kyrgyzstan

**veris:asset:country="KH"**

Cambodia

**veris:asset:country="KI"**

Kiribati

**veris:asset:country="KM"**

Comoros

**veris:asset:country="KN"**

Saint Kitts and Nevis

**veris:asset:country="KP"**

Korea, Democratic People's Republic of

**veris:asset:country="KR"**

Korea, Republic of

**veris:asset:country="KW"**

Kuwait

**veris:asset:country="KY"**

Cayman Islands

**veris:asset:country="KZ"**

Kazakhstan

**veris:asset:country="LA"**

Lao People's Democratic Republic

**veris:asset:country="LB"**

Lebanon

**veris:asset:country="LC"**

Saint Lucia

**veris:asset:country="LI"**

Liechtenstein

**veris:asset:country="LK"**

Sri Lanka

**veris:asset:country="LR"**

Liberia

**veris:asset:country="LS"**

Lesotho

**veris:asset:country="LT"**

Lithuania

**veris:asset:country="LU"**

Luxembourg

**veris:asset:country="LV"**

Latvia

**veris:asset:country="LY"**

Libya

**veris:asset:country="MA"**

Morocco

**veris:asset:country="MC"**

Monaco

**veris:asset:country="MD"**

Moldova, Republic of

**veris:asset:country="ME"**

Montenegro

**veris:asset:country="MF"**

Saint Martin (French part)

**veris:asset:country="MG"**

Madagascar

**veris:asset:country="MH"**

Marshall Islands

**veris:asset:country="MK"**

Macedonia, The former Yugoslav Republic of

**veris:asset:country="ML"**

Mali

**veris:asset:country="MM"**

Myanmar

**veris:asset:country="MN"**

Mongolia

**veris:asset:country="MO"**

Macao

**veris:asset:country="MP"**

Northern Mariana Islands

**veris:asset:country="MQ"**

Martinique

**veris:asset:country="MR"**

Mauritania

**veris:asset:country="MS"**

Montserrat

**veris:asset:country="MT"**

Malta

**veris:asset:country="MU"**

Mauritius

**veris:asset:country="MV"**

Maldives

**veris:asset:country="MW"**

Malawi

**veris:asset:country="MX"**

Mexico



**veris:asset:country="MY"**

Malaysia

**veris:asset:country="MZ"**

Mozambique

**veris:asset:country="NA"**

Namibia

**veris:asset:country="NC"**

New Caledonia

**veris:asset:country="NE"**

Niger

**veris:asset:country="NF"**

Norfolk Island

**veris:asset:country="NG"**

Nigeria

**veris:asset:country="NI"**

Nicaragua

**veris:asset:country="NL"**

Netherlands

**veris:asset:country="NO"**

Norway

**veris:asset:country="NP"**

Nepal

**veris:asset:country="NR"**

Nauru

**veris:asset:country="NU"**

Niue

**veris:asset:country="NZ"**

New Zealand

**veris:asset:country="OM"**

Oman

**veris:asset:country="Other"**

Other

**veris:asset:country="PA"**

Panama

**veris:asset:country="PE"**

Peru

**veris:asset:country="PF"**

French Polynesia

**veris:asset:country="PG"**

Papua New Guinea

**veris:asset:country="PH"**

Philippines

**veris:asset:country="PK"**

Pakistan

**veris:asset:country="PL"**

Poland

**veris:asset:country="PM"**

Saint Pierre and Miquelon

**veris:asset:country="PN"**

Pitcairn

**veris:asset:country="PR"**

Puerto Rico

**veris:asset:country="PS"**

Palestinian Territory, Occupied

**veris:asset:country="PT"**

Portugal

**veris:asset:country="PW"**

Palau

**veris:asset:country="PY"**

Paraguay

**veris:asset:country="QA"**

Qatar

**veris:asset:country="RE"**

Reunion

**veris:asset:country="RO"**

Romania

**veris:asset:country="RS"**

Serbia

**veris:asset:country="RU"**

Russian Federation

**veris:asset:country="RW"**

Rwanda

**veris:asset:country="SA"**

Saudi Arabia

**veris:asset:country="SB"**

Solomon Islands

**veris:asset:country="SC"**

Seychelles

**veris:asset:country="SD"**

Sudan

**veris:asset:country="SE"**

Sweden

**veris:asset:country="SG"**

Singapore

**veris:asset:country="SH"**

Saint Helena

**veris:asset:country="SI"**

Slovenia

**veris:asset:country="SJ"**

Svalbard and Jan Mayen Islands

**veris:asset:country="SK"**

Slovakia

**veris:asset:country="SL"**

Sierra Leone

**veris:asset:country="SM"**

San Marino

**veris:asset:country="SN"**

Senegal

**veris:asset:country="SO"**

Somalia

**veris:asset:country="SR"**

Suriname

**veris:asset:country="SS"**

South Sudan

**veris:asset:country="ST"**

Sao Tome and Principe

**veris:asset:country="SV"**

El Salvador

**veris:asset:country="SX"**

Sint Maarten (Dutch part)

**veris:asset:country="SY"**

Syrian Arab Republic

**veris:asset:country="SZ"**

Swaziland

**veris:asset:country="TC"**

Turks and Caicos Islands

**veris:asset:country="TD"**

Chad

**veris:asset:country="TF"**

French Southern Territories

**veris:asset:country="TG"**

Togo

**veris:asset:country="TH"**

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

**veris:asset:country="VU"**

Vanuatu

**veris:asset:country="WF"**

Wallis and Futuna Islands

**veris:asset:country="WS"**

Samoa

**veris:asset:country="YE"**

Yemen

**veris:asset:country="YT"**

Mayotte

**veris:asset:country="ZA"**

South Africa

**veris:asset:country="ZM"**

Zambia

**veris:asset:country="ZW"**

Zimbabwe

**asset:governance**

**veris:asset:governance="3rd party hosted"**

Hosted by 3rd party



**veris:asset:governance="3rd party managed"**

Managed by 3rd party

**veris:asset:governance="3rd party owned"**

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

**veris:asset:hosting="Unknown"**

Unknown

## **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

**veris:impact:iso\_currency\_code="AZN"**

AZN - Azerbaijanian Manat

**veris:impact:iso\_currency\_code="BAM"**

BAM - Convertible Mark

**veris:impact:iso\_currency\_code="BBD"**

BBD - Barbados Dollar

**veris:impact:iso\_currency\_code="BDT"**

BDT - Taka

**veris:impact:iso\_currency\_code="BGN"**

BGN - Bulgarian Lev

**veris:impact:iso\_currency\_code="BHD"**

BHD - Bahraini Dinar

**veris:impact:iso\_currency\_code="BIF"**

BIF - Burundi Franc

**veris:impact:iso\_currency\_code="BMD"**

BMD - Bermudian Dollar

**veris:impact:iso\_currency\_code="BND"**

BND - Brunei Dollar

**veris:impact:iso\_currency\_code="BOB"**

BOB - Boliviano

**veris:impact:iso\_currency\_code="BRL"**

BRL - Brazilian Real

**veris:impact:iso\_currency\_code="BSD"**

BSD - Bahamian Dollar

**veris:impact:iso\_currency\_code="BTN"**

BTN - Ngultrum

**veris:impact:iso\_currency\_code="BWP"**

BWP - Pula

**veris:impact:iso\_currency\_code="BYR"**

BYR - Belarussian Ruble

**veris:impact:iso\_currency\_code="BZD"**

BZD - Belize Dollar

**veris:impact:iso\_currency\_code="CAD"**

CAD - Canadian Dollar

**veris:impact:iso\_currency\_code="CDF"**

CDF - Congolese Franc

**veris:impact:iso\_currency\_code="CHF"**

CHF - Swiss Franc

**veris:impact:iso\_currency\_code="CLP"**

CLP - Chilean Peso

**veris:impact:iso\_currency\_code="CNY"**

CNY - Yuan Renminbi

**veris:impact:iso\_currency\_code="COP"**

COP - Colombian Peso

**veris:impact:iso\_currency\_code="CRC"**

CRC - Costa Rican Colon

**veris:impact:iso\_currency\_code="CUC"**

CUC - Peso Convertible

**veris:impact:iso\_currency\_code="CUP"**

CUP - Cuban Peso

**veris:impact:iso\_currency\_code="CVE"**

CVE - Cape Verde Escudo

**veris:impact:iso\_currency\_code="CZK"**

CZK - Czech Koruna

**veris:impact:iso\_currency\_code="DJF"**

DJF - Djibouti Franc

**veris:impact:iso\_currency\_code="DKK"**

DKK - Danish Krone

**veris:impact:iso\_currency\_code="DOP"**

DOP - Dominican Peso

**veris:impact:iso\_currency\_code="DZD"**

DZD - Algerian Dinar

**veris:impact:iso\_currency\_code="EGP"**

EGP - Egyptian Pound

**veris:impact:iso\_currency\_code="ERN"**

ERN - Nakfa

**veris:impact:iso\_currency\_code="ETB"**

ETB - Ethiopian Birr

**veris:impact:iso\_currency\_code="EUR"**

EUR - Euro

**veris:impact:iso\_currency\_code="FJD"**

FJD - Fiji Dollar

**veris:impact:iso\_currency\_code="FKP"**

FKP - Falkland Islands Pound

**veris:impact:iso\_currency\_code="GBP"**

GBP - Pound Sterling

**veris:impact:iso\_currency\_code="GEL"**

GEL - Lari

**veris:impact:iso\_currency\_code="GGP"**

GGP - Guernsey pound

**veris:impact:iso\_currency\_code="GHS"**

GHS - Ghana Cedi

**veris:impact:iso\_currency\_code="GIP"**

GIP - Gibraltar Pound

**veris:impact:iso\_currency\_code="GMD"**

GMD - Dalasi

**veris:impact:iso\_currency\_code="GNF"**

GNF - Guinea Franc

**veris:impact:iso\_currency\_code="GTQ"**

GTQ - Quetzal

**veris:impact:iso\_currency\_code="GYD"**

GYD - Guyana Dollar

**veris:impact:iso\_currency\_code="HKD"**

HKD - Hong Kong Dollar

**veris:impact:iso\_currency\_code="HNL"**

HNL - Lempira

**veris:impact:iso\_currency\_code="HRK"**

HRK - Croatian Kuna

**veris:impact:iso\_currency\_code="HTG"**

HTG - Gourde

**veris:impact:iso\_currency\_code="HUF"**

HUF - Forint

**veris:impact:iso\_currency\_code="IDR"**

IDR - Rupiah

**veris:impact:iso\_currency\_code="ILS"**

ILS - New Israeli Sheqel

**veris:impact:iso\_currency\_code="IMP"**

IMP - Isle of Man Pound

**veris:impact:iso\_currency\_code="INR"**

INR - Indian Rupee

**veris:impact:iso\_currency\_code="IQD"**

IQD - Iraqi Dinar

**veris:impact:iso\_currency\_code="IRR"**

IRR - Iranian Rial

**veris:impact:iso\_currency\_code="ISK"**

ISK - Iceland Krona



**veris:impact:iso\_currency\_code="JEP"**

JEP - Jersey pound

**veris:impact:iso\_currency\_code="JMD"**

JMD - Jamaican Dollar

**veris:impact:iso\_currency\_code="JOD"**

JOD - Jordanian Dinar

**veris:impact:iso\_currency\_code="JPY"**

JPY - Yen

**veris:impact:iso\_currency\_code="KES"**

KES - Kenyan Shilling

**veris:impact:iso\_currency\_code="KGS"**

KGS - Som

**veris:impact:iso\_currency\_code="KHR"**

KHR - Riel

**veris:impact:iso\_currency\_code="KMF"**

KMF - Comoro Franc

**veris:impact:iso\_currency\_code="KPW"**

KPW - North Korean Won

**veris:impact:iso\_currency\_code="KRW"**

KRW - South Korean Won

**veris:impact:iso\_currency\_code="KWD"**

KWD - Kuwaiti Dinar

**veris:impact:iso\_currency\_code="KYD"**

KYD - Cayman Islands Dollar

**veris:impact:iso\_currency\_code="KZT"**

KZT - Tenge

**veris:impact:iso\_currency\_code="LAK"**

LAK - Kip

**veris:impact:iso\_currency\_code="LBP"**

LBP - Lebanese Pound

**veris:impact:iso\_currency\_code="LKR"**

LKR - Sri Lanka Rupee

**veris:impact:iso\_currency\_code="LRD"**

LRD - Liberian Dollar

**veris:impact:iso\_currency\_code="LSL"**

LSL - Loti

**veris:impact:iso\_currency\_code="LTL"**

LTL - Lithuanian Litas

**veris:impact:iso\_currency\_code="LVL"**

LVL - Latvian Lats

**veris:impact:iso\_currency\_code="LYD"**

LYD - Libyan Dinar

**veris:impact:iso\_currency\_code="MAD"**

MAD - Moroccan Dirham

**veris:impact:iso\_currency\_code="MDL"**

MDL - Moldovan Leu

**veris:impact:iso\_currency\_code="MGA"**

MGA - Malagasy Ariary

**veris:impact:iso\_currency\_code="MKD"**

MKD - Denar

**veris:impact:iso\_currency\_code="MMK"**

MMK - Kyat

**veris:impact:iso\_currency\_code="MNT"**

MNT - Tugrik

**veris:impact:iso\_currency\_code="MOP"**

MOP - Pataca

**veris:impact:iso\_currency\_code="MRO"**

MRO - Ouguiya

**veris:impact:iso\_currency\_code="MUR"**

MUR - Mauritius Rupee

**veris:impact:iso\_currency\_code="MVR"**

MVR - Rufiyaa

**veris:impact:iso\_currency\_code="MWK"**

MWK - Kwacha

**veris:impact:iso\_currency\_code="MXN"**

MXN - Mexican Peso

**veris:impact:iso\_currency\_code="MYR"**

MYR - Malaysian Ringgit

**veris:impact:iso\_currency\_code="MZN"**

MZN - Mozambique Metical

**veris:impact:iso\_currency\_code="NAD"**

NAD - Namibia Dollar

**veris:impact:iso\_currency\_code="NGN"**

NGN - Naira

**veris:impact:iso\_currency\_code="NIO"**

NIO - Cordoba Oro

**veris:impact:iso\_currency\_code="NOK"**

NOK - Norwegian Krone

**veris:impact:iso\_currency\_code="NPR"**

NPR - Nepalese Rupee

**veris:impact:iso\_currency\_code="NZD"**

NZD - New Zealand Dollar

**veris:impact:iso\_currency\_code="OMR"**

OMR - Rial Omani

**veris:impact:iso\_currency\_code="PAB"**

PAB - Balboa

**veris:impact:iso\_currency\_code="PEN"**

PEN - Nuevo Sol

**veris:impact:iso\_currency\_code="PGK"**

PGK - Kina

**veris:impact:iso\_currency\_code="PHP"**

PHP - Philippine Peso

**veris:impact:iso\_currency\_code="PKR"**

PKR - Pakistan Rupee

**veris:impact:iso\_currency\_code="PLN"**

PLN - Zloty

**veris:impact:iso\_currency\_code="PYG"**

PYG - Guarani

**veris:impact:iso\_currency\_code="QAR"**

QAR - Qatari Rial

**veris:impact:iso\_currency\_code="RON"**

RON - New Romanian Leu

**veris:impact:iso\_currency\_code="RSD"**

RSD - Serbian Dinar

**veris:impact:iso\_currency\_code="RUB"**

RUB - Russian Ruble

**veris:impact:iso\_currency\_code="RWF"**

RWF - Rwanda Franc

**veris:impact:iso\_currency\_code="SAR"**

SAR - Saudi Riyal

**veris:impact:iso\_currency\_code="SBD"**

SBD - Solomon Islands Dollar

**veris:impact:iso\_currency\_code="SCR"**

SCR - Seychelles Rupee

**veris:impact:iso\_currency\_code="SDG"**

SDG - Sudanese Pound

**veris:impact:iso\_currency\_code="SEK"**

SEK - Swedish Krona

**veris:impact:iso\_currency\_code="SGD"**

SGD - Singapore Dollar

**veris:impact:iso\_currency\_code="SHP"**

SHP - Saint Helena Pound

**veris:impact:iso\_currency\_code="SLL"**

SLL - Leone

**veris:impact:iso\_currency\_code="SOS"**

SOS - Somali Shilling

**veris:impact:iso\_currency\_code="SPL"**

SPL - Seborga Luigino

**veris:impact:iso\_currency\_code="SRD"**

SRD - Surinam Dollar

**veris:impact:iso\_currency\_code="STD"**

STD - Dobra

**veris:impact:iso\_currency\_code="SVC"**

SVC - El Salvador Colon

**veris:impact:iso\_currency\_code="SYP"**

SYP - Syrian Pound

**veris:impact:iso\_currency\_code="SZL"**

SZL - Lilangeni

**veris:impact:iso\_currency\_code="THB"**

THB - Baht

**veris:impact:iso\_currency\_code="TJS"**

TJS - Somoni

**veris:impact:iso\_currency\_code="TMT"**

TMT - Turkmenistan New Manat

**veris:impact:iso\_currency\_code="TND"**

TND - Tunisian Dinar

**veris:impact:iso\_currency\_code="TOP"**

TOP - Pa'anga

**veris:impact:iso\_currency\_code="TRY"**

TRY - Turkish Lira

**veris:impact:iso\_currency\_code="TTD"**

TTD - Trinidad and Tobago Dollar

**veris:impact:iso\_currency\_code="TVD"**

TVD - Tuvalu Dollar

**veris:impact:iso\_currency\_code="TWD"**

TWD - New Taiwan Dollar

**veris:impact:iso\_currency\_code="TZS"**

TZS - Tanzanian Shilling

**veris:impact:iso\_currency\_code="UAH"**

UAH - Hryvnia

**veris:impact:iso\_currency\_code="UGX"**

UGX - Uganda Shilling

**veris:impact:iso\_currency\_code="USD"**

USD - US Dollar

**veris:impact:iso\_currency\_code="UYU"**

UYU - Peso Uruguayo

**veris:impact:iso\_currency\_code="UZS"**

UZS - Uzbekistan Sum

**veris:impact:iso\_currency\_code="VEF"**

VEF - Bolivar

**veris:impact:iso\_currency\_code="VND"**

VND - Dong

**veris:impact:iso\_currency\_code="VUV"**

VUV - Vatu

**veris:impact:iso\_currency\_code="WST"**

WST - Tala

**veris:impact:iso\_currency\_code="XAF"**

XAF - CFA Franc BEAC

**veris:impact:iso\_currency\_code="XCD"**

XCD - East Caribbean Dollar

**veris:impact:iso\_currency\_code="XDR"**

XDR - SDR (Special Drawing Right)

**veris:impact:iso\_currency\_code="XOF"**

XOF - CFA Franc BCEAO

**veris:impact:iso\_currency\_code="XPF"**

XPF - CFP Franc

**veris:impact:iso\_currency\_code="YER"**

YER - Yemeni Rial

**veris:impact:iso\_currency\_code="ZAR"**

ZAR - South African Rand

**veris:impact:iso\_currency\_code="ZMK"**

ZMK - Zambian Kwacha



**veris:impact:iso\_currency\_code="ZWD"**

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

**veris:victim:country="AL"**

Albania

**veris:victim:country="AM"**

Armenia

**veris:victim:country="AO"**

Angola

**veris:victim:country="AQ"**

Antarctica

**veris:victim:country="AR"**

Argentina

**veris:victim:country="AS"**

American Samoa

**veris:victim:country="AT"**

Austria

**veris:victim:country="AU"**

Australia

**veris:victim:country="AW"**

Aruba

**veris:victim:country="AX"**

Aland Islands

**veris:victim:country="AZ"**

Azerbaijan

**veris:victim:country="BA"**

Bosnia and Herzegovina

**veris:victim:country="BB"**

Barbados

**veris:victim:country="BD"**

Bangladesh

**veris:victim:country="BE"**

Belgium

**veris:victim:country="BF"**

Burkina Faso

**veris:victim:country="BG"**

Bulgaria

**veris:victim:country="BH"**

Bahrain

**veris:victim:country="BI"**

Burundi

**veris:victim:country="BJ"**

Benin

**veris:victim:country="BL"**

Saint-Barthelemy

**veris:victim:country="BM"**

Bermuda

**veris:victim:country="BN"**

Brunei Darussalam

**veris:victim:country="BO"**

Bolivia

**veris:victim:country="BQ"**

Bonaire, Saint Eustatius and Saba

**veris:victim:country="BR"**

Brazil

**veris:victim:country="BS"**

Bahamas

**veris:victim:country="BT"**

Bhutan

**veris:victim:country="BV"**

Bouvet Island

**veris:victim:country="BW"**

Botswana

**veris:victim:country="BY"**

Belarus

**veris:victim:country="BZ"**

Belize

**veris:victim:country="CA"**

Canada

**veris:victim:country="CC"**

Cocos (Keeling) Islands

**veris:victim:country="CD"**

Congo, Democratic Republic of the

**veris:victim:country="CF"**

Central African Republic

**veris:victim:country="CG"**

Congo

**veris:victim:country="CH"**

Switzerland

**veris:victim:country="CI"**

Cote d'Ivoire

**veris:victim:country="CK"**

Cook Islands

**veris:victim:country="CL"**

Chile

**veris:victim:country="CM"**

Cameroon

**veris:victim:country="CN"**

China

**veris:victim:country="CO"**

Colombia

**veris:victim:country="CR"**

Costa Rica

**veris:victim:country="CU"**

Cuba

**veris:victim:country="CV"**

Cape Verde

**veris:victim:country="CW"**

Curacao

**veris:victim:country="CX"**

Christmas Island

**veris:victim:country="CY"**

Cyprus

**veris:victim:country="CZ"**

Czech Republic

**veris:victim:country="DE"**

Germany

**veris:victim:country="DJ"**

Djibouti

**veris:victim:country="DK"**

Denmark

**veris:victim:country="DM"**

Dominica

**veris:victim:country="DO"**

Dominican Republic

**veris:victim:country="DZ"**

Algeria

**veris:victim:country="EC"**

Ecuador

**veris:victim:country="EE"**

Estonia

**veris:victim:country="EG"**

Egypt

**veris:victim:country="EH"**

Western Sahara

**veris:victim:country="ER"**

Eritrea

**veris:victim:country="ES"**

Spain

**veris:victim:country="ET"**

Ethiopia

**veris:victim:country="FI"**

Finland

**veris:victim:country="FJ"**

Fiji

**veris:victim:country="FK"**

Faeroe Islands

**veris:victim:country="FM"**

Micronesia (Federated States of)

**veris:victim:country="FO"**

Falkland Islands (Malvinas)

**veris:victim:country="FR"**

France

**veris:victim:country="GA"**

Gabon

**veris:victim:country="GB"**

United Kingdom

**veris:victim:country="GD"**

Grenada

**veris:victim:country="GE"**

Georgia

**veris:victim:country="GF"**

French Guiana

**veris:victim:country="GG"**

Guernsey

**veris:victim:country="GH"**

Ghana

**veris:victim:country="GI"**

Gibraltar

**veris:victim:country="GL"**

Greenland

**veris:victim:country="GM"**

Gambia

**veris:victim:country="GN"**

Guinea

**veris:victim:country="GP"**

Guadeloupe



**veris:victim:country="GQ"**

Equatorial Guinea

**veris:victim:country="GR"**

Greece

**veris:victim:country="GS"**

South Georgia and the South Sandwich Islands

**veris:victim:country="GT"**

Guatemala

**veris:victim:country="GU"**

Guam

**veris:victim:country="GW"**

Guinea-Bissau

**veris:victim:country="GY"**

Guyana

**veris:victim:country="HK"**

Hong Kong

**veris:victim:country="HM"**

Heard Island and McDonal Islands

**veris:victim:country="HN"**

Honduras

**veris:victim:country="HR"**

Croatia

**veris:victim:country="HT"**

Haiti

**veris:victim:country="HU"**

Hungary

**veris:victim:country="ID"**

Indonesia

**veris:victim:country="IE"**

Ireland

**veris:victim:country="IL"**

Israel

**veris:victim:country="IM"**

Isle of Man

**veris:victim:country="IN"**

India

**veris:victim:country="IO"**

British Virgin Islands

**veris:victim:country="IQ"**

Iraq

**veris:victim:country="IR"**

Iran (Islamic Republic of)

**veris:victim:country="IS"**

Iceland

**veris:victim:country="IT"**

Italy

**veris:victim:country="JE"**

Jersey

**veris:victim:country="JM"**

Jamaica

**veris:victim:country="JO"**

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

**veris:victim:country="MC"**

Monaco

**veris:victim:country="MD"**

Moldova, Republic of

**veris:victim:country="ME"**

Montenegro

**veris:victim:country="MF"**

Saint Martin (French part)

**veris:victim:country="MG"**

Madagascar

**veris:victim:country="MH"**

Marshall Islands

**veris:victim:country="MK"**

Macedonia, The former Yugoslav Republic of

**veris:victim:country="ML"**

Mali

**veris:victim:country="MM"**

Myanmar

**veris:victim:country="MN"**

Mongolia

**veris:victim:country="MO"**

Macao

**veris:victim:country="MP"**

Northern Mariana Islands

**veris:victim:country="MQ"**

Martinique

**veris:victim:country="MR"**

Mauritania

**veris:victim:country="MS"**

Montserrat

**veris:victim:country="MT"**

Malta

**veris:victim:country="MU"**

Mauritius

**veris:victim:country="MV"**

Maldives

**veris:victim:country="MW"**

Malawi

**veris:victim:country="MX"**

Mexico

**veris:victim:country="MY"**

Malaysia

**veris:victim:country="MZ"**

Mozambique

**veris:victim:country="NA"**

Namibia

**veris:victim:country="NC"**

New Caledonia

**veris:victim:country="NE"**

Niger

**veris:victim:country="NF"**

Norfolk Island

**veris:victim:country="NG"**

Nigeria

**veris:victim:country="NI"**

Nicaragua

**veris:victim:country="NL"**

Netherlands

**veris:victim:country="NO"**

Norway

**veris:victim:country="NP"**

Nepal

**veris:victim:country="NR"**

Nauru

**veris:victim:country="NU"**

Niue

**veris:victim:country="NZ"**

New Zealand

**veris:victim:country="OM"**

Oman

**veris:victim:country="Other"**

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

**veris:victim:country="PW"**

Palau

**veris:victim:country="PY"**

Paraguay

**veris:victim:country="QA"**

Qatar

**veris:victim:country="RE"**

Reunion

**veris:victim:country="RO"**

Romania

**veris:victim:country="RS"**

Serbia

**veris:victim:country="RU"**

Russian Federation

**veris:victim:country="RW"**

Rwanda

**veris:victim:country="SA"**

Saudi Arabia

**veris:victim:country="SB"**

Solomon Islands

**veris:victim:country="SC"**

Seychelles

**veris:victim:country="SD"**

Sudan

**veris:victim:country="SE"**

Sweden

**veris:victim:country="SG"**

Singapore

**veris:victim:country="SH"**

Saint Helena

**veris:victim:country="SI"**

Slovenia

**veris:victim:country="SJ"**

Svalbard and Jan Mayen Islands

**veris:victim:country="SK"**

Slovakia

**veris:victim:country="SL"**

Sierra Leone

**veris:victim:country="SM"**

San Marino

**veris:victim:country="SN"**

Senegal

**veris:victim:country="SO"**

Somalia

**veris:victim:country="SR"**

Suriname

**veris:victim:country="SS"**

South Sudan

**veris:victim:country="ST"**

Sao Tome and Principe

**veris:victim:country="SV"**

El Salvador

**veris:victim:country="SX"**

Sint Maarten (Dutch part)

**veris:victim:country="SY"**

Syrian Arab Republic

**veris:victim:country="SZ"**

Swaziland

**veris:victim:country="TC"**

Turks and Caicos Islands

**veris:victim:country="TD"**

Chad

**veris:victim:country="TF"**

French Southern Territories

**veris:victim:country="TG"**

Togo

**veris:victim:country="TH"**

Thailand

**veris:victim:country="TJ"**

Tajikistan

**veris:victim:country="TK"**

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

**veris:victim:country="US"**

United States of America

**veris:victim:country="UY"**

Uruguay

**veris:victim:country="UZ"**

Uzbekistan

**veris:victim:country="Unknown"**

Unknown

**veris:victim:country="VA"**

Holy See

**veris:victim:country="VC"**

Saint Vincent and the Grenadines

**veris:victim:country="VE"**

Venezuela (Bolivarian Republic of)

**veris:victim:country="VG"**

British Virgin Islands

**veris:victim:country="VI"**

United States Virgin Islands

**veris:victim:country="VN"**

Viet Nam

**veris:victim:country="VU"**

Vanuatu

**veris:victim:country="WF"**

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

**veris:victim:employee\_count="25001 to 50000"**

25,001 to 50,000 employees

**veris:victim:employee\_count="50001 to 100000"**

50,001 to 100,000 employees

**veris:victim:employee\_count="Large"**

Large organizations (over 1,000 employees)

**veris:victim:employee\_count="Over 100000"**

Over 100,000 employees

**veris:victim:employee\_count="Small"**

Small organizations (1,000 employees or less)

**veris:victim:employee\_count="Unknown"**

Unknown number of employees

**action:environmental:variety**

**veris:action:environmental:variety="Deterioration"**

Deterioration and degradation

**veris:action:environmental:variety="EMI"**

Electromagnetic interference (EMI)

**veris:action:environmental:variety="ESD"**

Electrostatic discharge (ESD)

**veris:action:environmental:variety="Earthquake"**

Earthquake

**veris:action:environmental:variety="Fire"**

Fire

**veris:action:environmental:variety="Flood"**

Flood

**veris:action:environmental:variety="Hazmat"**

Hazardous material

**veris:action:environmental:variety="Humidity"**

Humidity

**veris:action:environmental:variety="Hurricane"**

Hurricane

**veris:action:environmental:variety="Ice"**

Ice and snow

**veris:action:environmental:variety="Landslide"**

Landslide

**veris:action:environmental:variety="Leak"**

Water leak

**veris:action:environmental:variety="Lightning"**

Lightning

**veris:action:environmental:variety="Meteorite"**

Meteorite

**veris:action:environmental:variety="Other"**

Other



**veris:action:environmental:variety="Particulates"**

Particulate matter (e.g., dust, smoke)

**veris:action:environmental:variety="Pathogen"**

Pathogen

**veris:action:environmental:variety="Power failure"**

Power failure or fluctuation

**veris:action:environmental:variety="Temperature"**

Extreme temperature

**veris:action:environmental:variety="Tornado"**

Tornado

**veris:action:environmental:variety="Tsunami"**

Tsunami

**veris:action:environmental:variety="Unknown"**

Unknown

**veris:action:environmental:variety="Vermin"**

Vermin

**veris:action:environmental:variety="Volcano"**

Volcanic eruption

**veris:action:environmental:variety="Wind"**

Wind

**action:error:variety**

**veris:action:error:variety="Capacity shortage"**

Poor capacity planning

**veris:action:error:variety="Classification error"**

Classification or labeling error

**veris:action:error:variety="Data entry error"**

Data entry error

**veris:action:error:variety="Disposal error"**

Disposal error

**veris:action:error:variety="Gaffe"**

Gaffe (social or verbal slip)

**veris:action:error:variety="Loss"**

Loss or misplacement

**veris:action:error:variety="Maintenance error"**

Maintenance error

**veris:action:error:variety="Malfunction"**

Technical malfunction or glitch

**veris:action:error:variety="Misconfiguration"**

Misconfiguration

**veris:action:error:variety="Misdelivery"**

Misdelivery (send wrong info or to wrong recipient)

**veris:action:error:variety="Misinformation"**

Misinformation (unintentionally giving false info)

**veris:action:error:variety="Omission"**

Omission (something intended, but not done)

**veris:action:error:variety="Other"**

Other

## **veris:action:error:variety="Physical accidents"**

Physical accidents (e.g., drops, bumps, spills)

## **veris:action:error:variety="Programming error"**

Programming error (flaws or bugs in custom code)

## **veris:action:error:variety="Publishing error"**

Publishing error (private info to public doc or site)

## **veris:action:error:variety="Unknown"**

Unknown

## **action:error:vector**

### **veris:action:error:vector="Carelessness"**

Carelessness

### **veris:action:error:vector="Inadequate personnel"**

Inadequate or insufficient personnel

### **veris:action:error:vector="Inadequate processes"**

Inadequate or insufficient processes

### **veris:action:error:vector="Inadequate technology"**

Inadequate or insufficient technology resources

### **veris:action:error:vector="Other"**

Other

### **veris:action:error:vector="Random error"**

Random error (no reason, no fault)

### **veris:action:error:vector="Unknown"**

Unknown

## **action:hacking:result**

**veris:action:hacking:result="Elevate"**

The hacking action resulted in additional permissions

**veris:action:hacking:result="Exfiltrate"**

The hacking action exfiltrated data from the victim

**veris:action:hacking:result="Infiltrate"**

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

**veris:action:hacking:variety="Fuzz testing"**

Fuzz testing

**veris:action:hacking:variety="HTTP Response Splitting"**

HTTP Response Splitting

**veris:action:hacking:variety="HTTP request smuggling"**

HTTP request smuggling

**veris:action:hacking:variety="HTTP request splitting"**

HTTP request splitting

**veris:action:hacking:variety="HTTP response smuggling"**

HTTP response smuggling

**veris:action:hacking:variety="Integer overflows"**

Integer overflows

**veris:action:hacking:variety="LDAP injection"**

LDAP injection

**veris:action:hacking:variety="Mail command injection"**

Mail command injection

**veris:action:hacking:variety="MitM"**

Man-in-the-middle attack

**veris:action:hacking:variety="Null byte injection"**

Null byte injection

**veris:action:hacking:variety="OS commanding"**

OS commanding

**veris:action:hacking:variety="Offline cracking"**

Offline password or key cracking (e.g., rainbow tables, Hashcat, JtR)

**veris:action:hacking:variety="Other"**

Other

**veris:action:hacking:variety="Pass-the-hash"**

Pass-the-hash

**veris:action:hacking:variety="Path traversal"**

Path traversal

**veris:action:hacking:variety="RFI"**

Remote file inclusion

**veris:action:hacking:variety="Reverse engineering"**

Reverse engineering

**veris:action:hacking:variety="Routing detour"**

Routing detour

**veris:action:hacking:variety="SQLi"**

SQL injection

**veris:action:hacking:variety="SSI injection"**

SSI injection

**veris:action:hacking:variety="Session fixation"**

Session fixation

**veris:action:hacking:variety="Session prediction"**

Credential or session prediction

**veris:action:hacking:variety="Session replay"**

Session replay

**veris:action:hacking:variety="Soap array abuse"**

Soap array abuse

**veris:action:hacking:variety="Special element injection"**

Special element injection

**veris:action:hacking:variety="URL redirector abuse"**

URL redirector abuse

**veris:action:hacking:variety="Unknown"**

Unknown

**veris:action:hacking:variety="Use of backdoor or C2"**

Use of Backdoor or C2 channel

**veris:action:hacking:variety="Use of stolen creds"**

Use of stolen authentication credentials

**veris:action:hacking:variety="Virtual machine escape"**

Virtual machine escape

**veris:action:hacking:variety="XML attribute blowup"**

XML attribute blowup

**veris:action:hacking:variety="XML entity expansion"**

XML entity expansion

**veris:action:hacking:variety="XML external entities"**

XML external entities

**veris:action:hacking:variety="XML injection"**

XML injection

**veris:action:hacking:variety="XPath injection"**

XPath injection

**veris:action:hacking:variety="XQuery injection"**

XQuery injection

**veris:action:hacking:variety="XSS"**

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

**veris:action:hacking:vector="Web application"**

Web application

## **action:malware:result**

**veris:action:malware:result="Elevate"**

The malware action resulted in additional permissions

**veris:action:malware:result="Exfiltrate"**

The malware action exfiltrated data from the victim

**veris:action:malware:result="Infiltrate"**

The malware action infiltrated the victim

## **action:malware:variety**

**veris:action:malware:variety="Adminware"**

System or network utilities (e.g., PsTools, Netcat)

**veris:action:malware:variety="Adware"**

Adware

**veris:action:malware:variety="Backdoor"**

Backdoor (enable remote access)

**veris:action:malware:variety="Brute force"**

Brute force attack

**veris:action:malware:variety="C2"**

Command and control (C2)

### **veris:action:malware:variety="Capture app data"**

Capture data from application or system process

### **veris:action:malware:variety="Capture stored data"**

Capture data stored on system disk

### **veris:action:malware:variety="Click fraud"**

Click fraud or Bitcoin mining

### **veris:action:malware:variety="Client-side attack"**

Client-side or browser attack (e.g., redirection, XSS, MitB)

### **veris:action:malware:variety="Destroy data"**

Destroy or corrupt stored data

### **veris:action:malware:variety="Disable controls"**

Disable or interfere with security controls

### **veris:action:malware:variety="DoS"**

DoS attack

### **veris:action:malware:variety="Downloader"**

Downloader (pull updates or other malware)

### **veris:action:malware:variety="Exploit vuln"**

Exploit vulnerability in code (vs misconfig or weakness)

### **veris:action:malware:variety="Export data"**

Export data to another site or system

### **veris:action:malware:variety="Modify data"**

Malware which compromises a legitimate file rather than creating new files

### **veris:action:malware:variety="Other"**

Other

## **veris:action:malware:variety="Packet sniffer"**

Packet sniffer (capture data from network)

## **veris:action:malware:variety="Password dumper"**

Password dumper (extract credential hashes)

## **veris:action:malware:variety="Ram scraper"**

Ram scraper or memory parser (capture data from volatile memory)

## **veris:action:malware:variety="Ransomware"**

Ransomware (encrypt or seize stored data)

## **veris:action:malware:variety="Rootkit"**

Rootkit (maintain local privileges and stealth)

## **veris:action:malware:variety="SQL injection"**

SQL injection attack

## **veris:action:malware:variety="Scan network"**

Scan or footprint network

## **veris:action:malware:variety="Spam"**

Send spam

## **veris:action:malware:variety="Spyware/Keylogger"**

Spyware, keylogger or form-grabber (capture user input or activity)

## **veris:action:malware:variety="Unknown"**

Unknown

## **veris:action:malware:variety="Worm"**

Worm (propagate to other systems or devices)

## **action:malware:vector**

**veris:action:malware:vector="Direct install"**

Directly installed or inserted by threat agent (after system access)

**veris:action:malware:vector="Download by malware"**

Downloaded and installed by local malware

**veris:action:malware:vector="Email attachment"**

Email via user-executed attachment

**veris:action:malware:vector="Email autoexecute"**

Email via automatic execution

**veris:action:malware:vector="Email link"**

Email via embedded link

**veris:action:malware:vector="Email unknown"**

Email but sub-variety (attachment, autoexecute, link, etc) not known

**veris:action:malware:vector="Instant messaging"**

Instant Messaging

**veris:action:malware:vector="Network propagation"**

Network propagation

**veris:action:malware:vector="Other"**

Other

**veris:action:malware:vector="Remote injection"**

Remotely injected by agent (i.e. via SQLi)

**veris:action:malware:vector="Removable media"**

Removable storage media or devices

**veris:action:malware:vector="Software update"**

Included in automated software update

**veris:action:malware:vector="Unknown"**

Unknown

**veris:action:malware:vector="Web download"**

Web via user-executed or downloaded content

**veris:action:malware:vector="Web drive-by"**

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"**

Other

## **veris:action:misuse:variety="Possession abuse"**

Abuse of physical access to asset

## **veris:action:misuse:variety="Privilege abuse"**

Abuse of system access privileges

## **veris:action:misuse:variety="Unapproved hardware"**

Use of unapproved hardware or devices

## **veris:action:misuse:variety="Unapproved software"**

Use of unapproved software or services

## **veris:action:misuse:variety="Unapproved workaround"**

Unapproved workaround or shortcut

## **veris:action:misuse:variety="Unknown"**

Unknown

## **action:misuse:vector**

### **veris:action:misuse:vector="LAN access"**

Local network access within corporate facility

### **veris:action:misuse:vector="Non-corporate"**

Non-corporate facilities or networks

### **veris:action:misuse:vector="Other"**

Other

### **veris:action:misuse:vector="Physical access"**

Physical access within corporate facility

## **veris:action:misuse:vector="Remote access"**

Remote access connection to corporate network (i.e. VPN)

## **veris:action:misuse:vector="Unknown"**

Unknown

## **action:physical:result**

### **veris:action:physical:result="Elevate"**

The physical action resulted in additional permissions

### **veris:action:physical:result="Exfiltrate"**

The physical action exfiltrated data from the victim

### **veris:action:physical:result="Infiltrate"**

The physical action infiltrated the victim

## **action:physical:variety**

### **veris:action:physical:variety="Assault"**

Assault (threats or acts of physical violence)

### **veris:action:physical:variety="Bypassed controls"**

Bypassed physical barriers or controls

### **veris:action:physical:variety="Connection"**

Connection

### **veris:action:physical:variety="Destruction"**

Destruction (deliberate damaging or disabling)

### **veris:action:physical:variety="Disabled controls"**

Disabled physical barriers or controls

### **veris:action:physical:variety="Other"**

Other

## **veris:action:physical:variety="Skimmer"**

Installing card skimming device

## **veris:action:physical:variety="Snooping"**

Snooping (sneak about to gain info or access)

## **veris:action:physical:variety="Surveillance"**

Surveillance (monitoring and observation)

## **veris:action:physical:variety="Tampering"**

Tampering (alter physical form or function)

## **veris:action:physical:variety="Theft"**

Theft (taking assets without permission)

## **veris:action:physical:variety="Unknown"**

Unknown

## **veris:action:physical:variety="Wiretapping"**

Wiretapping (Physical tap to comms line)

## **action:physical:vector**

### **veris:action:physical:vector="Other"**

Other

### **veris:action:physical:vector="Partner facility"**

Partner facility or area

### **veris:action:physical:vector="Partner vehicle"**

Partner vehicle (e.g., delivery truck)

### **veris:action:physical:vector="Personal residence"**

Personal residence



## **veris:action:physical:vector="Personal vehicle"**

Personal vehicle

## **veris:action:physical:vector="Privileged access"**

Held privileged access to location

## **veris:action:physical:vector="Public facility"**

Public facility or area

## **veris:action:physical:vector="Public vehicle"**

Public vehicle (e.g., plane, taxi)

## **veris:action:physical:vector="Uncontrolled location"**

The location was uncontrolled (public)

## **veris:action:physical:vector="Unknown"**

Unknown

## **veris:action:physical:vector="Victim grounds"**

Victim outdoor grounds

## **veris:action:physical:vector="Victim public area"**

Victim public or customer area (e.g., lobby, storefront)

## **veris:action:physical:vector="Victim secure area"**

Victim high security area (e.g., server room, R&D labs)

## **veris:action:physical:vector="Victim work area"**

Victim private or work area (e.g., office space)

## **veris:action:physical:vector="Visitor privileges"**

Given temporary visitor access

## **action:social:result**

## **veris:action:social:result="Elevate"**

The social action resulted in additional permissions

## **veris:action:social:result="Exfiltrate"**

The social action exfiltrated data from the victim

## **veris:action:social:result="Infiltrate"**

The social action infiltrated the victim

## **action:social:target**

### **veris:action:social:target="Auditor"**

Auditor

### **veris:action:social:target="Call center"**

Call center staff

### **veris:action:social:target="Cashier"**

Cashier, teller or waiter

### **veris:action:social:target="Customer"**

Customer (B2C)

### **veris:action:social:target="Developer"**

Software developer

### **veris:action:social:target="End-user"**

End-user or regular employee

### **veris:action:social:target="Executive"**

Executive or upper management

### **veris:action:social:target="Finance"**

Finance or accounting staff

**veris:action:social:target="Former employee"**

Former employee

**veris:action:social:target="Guard"**

Security guard

**veris:action:social:target="Helpdesk"**

Helpdesk staff

**veris:action:social:target="Human resources"**

Human resources staff

**veris:action:social:target="Maintenance"**

Maintenance or janitorial staff

**veris:action:social:target="Manager"**

Manager or supervisor

**veris:action:social:target="Other"**

Other

**veris:action:social:target="Partner"**

Partner (B2B)

**veris:action:social:target="System admin"**

System or network administrator

**veris:action:social:target="Unknown"**

Unknown

**action:social:variety**

**veris:action:social:variety="Baiting"**

Baiting (planting infected media)

## **veris:action:social:variety="Bribery"**

Bribery or solicitation

## **veris:action:social:variety="Elicitation"**

Elicitation (subtle extraction of info through conversation)

## **veris:action:social:variety="Extortion"**

Extortion or blackmail

## **veris:action:social:variety="Forgery"**

Forgery or counterfeiting (fake hardware, software, documents, etc)

## **veris:action:social:variety="Influence"**

Influence tactics (Leveraging authority or obligation, framing, etc)

## **veris:action:social:variety="Other"**

Other

## **veris:action:social:variety="Phishing"**

Phishing (or any type of \*ishing)

## **veris:action:social:variety="Pretexting"**

Pretexting (dialogue leveraging invented scenario)

## **veris:action:social:variety="Propaganda"**

Propaganda or disinformation

## **veris:action:social:variety="Scam"**

Online scam or hoax (e.g., scareware, 419 scam, auction fraud)

## **veris:action:social:variety="Spam"**

Spam (unsolicited or undesired email and advertisements)

## **veris:action:social:variety="Unknown"**

Unknown

## **action:social:vector**

**veris:action:social:vector="Documents"**

Documents

**veris:action:social:vector="Email"**

Email

**veris:action:social:vector="IM"**

Instant messaging

**veris:action:social:vector="In-person"**

In-person

**veris:action:social:vector="Other"**

Other

**veris:action:social:vector="Phone"**

Phone

**veris:action:social:vector="Removable media"**

Removable storage media

**veris:action:social:vector="SMS"**

SMS or texting

**veris:action:social:vector="Social media"**

Social media or networking

**veris:action:social:vector="Software"**

Software

**veris:action:social:vector="Unknown"**

Unknown

**veris:action:social:vector="Website"**

Website

## **action:unknown:result**

**veris:action:unknown:result="Elevate"**

The hacking action resulted in additional permissions

**veris:action:unknown:result="Exfiltrate"**

The hacking action exfiltrated data from the victim

**veris:action:unknown:result="Infiltrate"**

The hacking action infiltrated the victim

## **actor:external:country**

**veris:actor:external:country="AD"**

Andorra

**veris:actor:external:country="AE"**

United Arab Emirates

**veris:actor:external:country="AF"**

Afghanistan

**veris:actor:external:country="AG"**

Antigua and Barbuda

**veris:actor:external:country="AI"**

Anguilla

**veris:actor:external:country="AL"**

Albania

**veris:actor:external:country="AM"**

Armenia

**veris:actor:external:country="AO"**

Angola

**veris:actor:external:country="AQ"**

Antarctica

**veris:actor:external:country="AR"**

Argentina

**veris:actor:external:country="AS"**

American Samoa

**veris:actor:external:country="AT"**

Austria

**veris:actor:external:country="AU"**

Australia

**veris:actor:external:country="AW"**

Aruba

**veris:actor:external:country="AX"**

Aland Islands

**veris:actor:external:country="AZ"**

Azerbaijan

**veris:actor:external:country="BA"**

Bosnia and Herzegovina

**veris:actor:external:country="BB"**

Barbados

**veris:actor:external:country="BD"**

Bangladesh

**veris:actor:external:country="BE"**

Belgium

**veris:actor:external:country="BF"**

Burkina Faso

**veris:actor:external:country="BG"**

Bulgaria

**veris:actor:external:country="BH"**

Bahrain

**veris:actor:external:country="BI"**

Burundi

**veris:actor:external:country="BJ"**

Benin

**veris:actor:external:country="BL"**

Saint-Barthelemy

**veris:actor:external:country="BM"**

Bermuda

**veris:actor:external:country="BN"**

Brunei Darussalam

**veris:actor:external:country="BO"**

Bolivia

**veris:actor:external:country="BQ"**

Bonaire, Saint Eustatius and Saba

**veris:actor:external:country="BR"**

Brazil



**veris:actor:external:country="BS"**

Bahamas

**veris:actor:external:country="BT"**

Bhutan

**veris:actor:external:country="BV"**

Bouvet Island

**veris:actor:external:country="BW"**

Botswana

**veris:actor:external:country="BY"**

Belarus

**veris:actor:external:country="BZ"**

Belize

**veris:actor:external:country="CA"**

Canada

**veris:actor:external:country="CC"**

Cocos (Keeling) Islands

**veris:actor:external:country="CD"**

Congo, Democratic Republic of the

**veris:actor:external:country="CF"**

Central African Republic

**veris:actor:external:country="CG"**

Congo

**veris:actor:external:country="CH"**

Switzerland

**veris:actor:external:country="CI"**

Cote d'Ivoire

**veris:actor:external:country="CK"**

Cook Islands

**veris:actor:external:country="CL"**

Chile

**veris:actor:external:country="CM"**

Cameroon

**veris:actor:external:country="CN"**

China

**veris:actor:external:country="CO"**

Colombia

**veris:actor:external:country="CR"**

Costa Rica

**veris:actor:external:country="CU"**

Cuba

**veris:actor:external:country="CV"**

Cape Verde

**veris:actor:external:country="CW"**

Curacao

**veris:actor:external:country="CX"**

Christmas Island

**veris:actor:external:country="CY"**

Cyprus

**veris:actor:external:country="CZ"**

Czech Republic

**veris:actor:external:country="DE"**

Germany

**veris:actor:external:country="DJ"**

Djibouti

**veris:actor:external:country="DK"**

Denmark

**veris:actor:external:country="DM"**

Dominica

**veris:actor:external:country="DO"**

Dominican Republic

**veris:actor:external:country="DZ"**

Algeria

**veris:actor:external:country="EC"**

Ecuador

**veris:actor:external:country="EE"**

Estonia

**veris:actor:external:country="EG"**

Egypt

**veris:actor:external:country="EH"**

Western Sahara

**veris:actor:external:country="ER"**

Eritrea

**veris:actor:external:country="ES"**

Spain

**veris:actor:external:country="ET"**

Ethiopia

**veris:actor:external:country="FI"**

Finland

**veris:actor:external:country="FJ"**

Fiji

**veris:actor:external:country="FK"**

Faeroe Islands

**veris:actor:external:country="FM"**

Micronesia (Federated States of)

**veris:actor:external:country="FO"**

Falkland Islands (Malvinas)

**veris:actor:external:country="FR"**

France

**veris:actor:external:country="GA"**

Gabon

**veris:actor:external:country="GB"**

United Kingdom

**veris:actor:external:country="GD"**

Grenada

**veris:actor:external:country="GE"**

Georgia

**veris:actor:external:country="GF"**

French Guiana

**veris:actor:external:country="GG"**

Guernsey

**veris:actor:external:country="GH"**

Ghana

**veris:actor:external:country="GI"**

Gibraltar

**veris:actor:external:country="GL"**

Greenland

**veris:actor:external:country="GM"**

Gambia

**veris:actor:external:country="GN"**

Guinea

**veris:actor:external:country="GP"**

Guadeloupe

**veris:actor:external:country="GQ"**

Equatorial Guinea

**veris:actor:external:country="GR"**

Greece

**veris:actor:external:country="GS"**

South Georgia and the South Sandwich Islands

**veris:actor:external:country="GT"**

Guatemala

**veris:actor:external:country="GU"**

Guam

**veris:actor:external:country="GW"**

Guinea-Bissau

**veris:actor:external:country="GY"**

Guyana

**veris:actor:external:country="HK"**

Hong Kong

**veris:actor:external:country="HM"**

Heard Island and McDonal Islands

**veris:actor:external:country="HN"**

Honduras

**veris:actor:external:country="HR"**

Croatia

**veris:actor:external:country="HT"**

Haiti

**veris:actor:external:country="HU"**

Hungary

**veris:actor:external:country="ID"**

Indonesia

**veris:actor:external:country="IE"**

Ireland

**veris:actor:external:country="IL"**

Israel

**veris:actor:external:country="IM"**

Isle of Man

**veris:actor:external:country="IN"**

India

**veris:actor:external:country="IO"**

British Virgin Islands

**veris:actor:external:country="IQ"**

Iraq

**veris:actor:external:country="IR"**

Iran (Islamic Republic of)

**veris:actor:external:country="IS"**

Iceland

**veris:actor:external:country="IT"**

Italy

**veris:actor:external:country="JE"**

Jersey

**veris:actor:external:country="JM"**

Jamaica

**veris:actor:external:country="JO"**

Jordan

**veris:actor:external:country="JP"**

Japan

**veris:actor:external:country="KE"**

Kenya

**veris:actor:external:country="KG"**

Kyrgyzstan

**veris:actor:external:country="KH"**

Cambodia

**veris:actor:external:country="KI"**

Kiribati

**veris:actor:external:country="KM"**

Comoros

**veris:actor:external:country="KN"**

Saint Kitts and Nevis

**veris:actor:external:country="KP"**

Korea, Democratic People's Republic of

**veris:actor:external:country="KR"**

Korea, Republic of

**veris:actor:external:country="KW"**

Kuwait

**veris:actor:external:country="KY"**

Cayman Islands

**veris:actor:external:country="KZ"**

Kazakhstan

**veris:actor:external:country="LA"**

Lao People's Democratic Republic

**veris:actor:external:country="LB"**

Lebanon



**veris:actor:external:country="LC"**

Saint Lucia

**veris:actor:external:country="LI"**

Liechtenstein

**veris:actor:external:country="LK"**

Sri Lanka

**veris:actor:external:country="LR"**

Liberia

**veris:actor:external:country="LS"**

Lesotho

**veris:actor:external:country="LT"**

Lithuania

**veris:actor:external:country="LU"**

Luxembourg

**veris:actor:external:country="LV"**

Latvia

**veris:actor:external:country="LY"**

Libya

**veris:actor:external:country="MA"**

Morocco

**veris:actor:external:country="MC"**

Monaco

**veris:actor:external:country="MD"**

Moldova, Republic of

**veris:actor:external:country="ME"**

Montenegro

**veris:actor:external:country="MF"**

Saint Martin (French part)

**veris:actor:external:country="MG"**

Madagascar

**veris:actor:external:country="MH"**

Marshall Islands

**veris:actor:external:country="MK"**

Macedonia, The former Yugoslav Republic of

**veris:actor:external:country="ML"**

Mali

**veris:actor:external:country="MM"**

Myanmar

**veris:actor:external:country="MN"**

Mongolia

**veris:actor:external:country="MO"**

Macao

**veris:actor:external:country="MP"**

Northern Mariana Islands

**veris:actor:external:country="MQ"**

Martinique

**veris:actor:external:country="MR"**

Mauritania

**veris:actor:external:country="MS"**

Montserrat

**veris:actor:external:country="MT"**

Malta

**veris:actor:external:country="MU"**

Mauritius

**veris:actor:external:country="MV"**

Maldives

**veris:actor:external:country="MW"**

Malawi

**veris:actor:external:country="MX"**

Mexico

**veris:actor:external:country="MY"**

Malaysia

**veris:actor:external:country="MZ"**

Mozambique

**veris:actor:external:country="NA"**

Namibia

**veris:actor:external:country="NC"**

New Caledonia

**veris:actor:external:country="NE"**

Niger

**veris:actor:external:country="NF"**

Norfolk Island

**veris:actor:external:country="NG"**

Nigeria

**veris:actor:external:country="NI"**

Nicaragua

**veris:actor:external:country="NL"**

Netherlands

**veris:actor:external:country="NO"**

Norway

**veris:actor:external:country="NP"**

Nepal

**veris:actor:external:country="NR"**

Nauru

**veris:actor:external:country="NU"**

Niue

**veris:actor:external:country="NZ"**

New Zealand

**veris:actor:external:country="OM"**

Oman

**veris:actor:external:country="Other"**

Other

**veris:actor:external:country="PA"**

Panama

**veris:actor:external:country="PE"**

Peru

**veris:actor:external:country="PF"**

French Polynesia

**veris:actor:external:country="PG"**

Papua New Guinea

**veris:actor:external:country="PH"**

Philippines

**veris:actor:external:country="PK"**

Pakistan

**veris:actor:external:country="PL"**

Poland

**veris:actor:external:country="PM"**

Saint Pierre and Miquelon

**veris:actor:external:country="PN"**

Pitcairn

**veris:actor:external:country="PR"**

Puerto Rico

**veris:actor:external:country="PS"**

Palestinian Territory, Occupied

**veris:actor:external:country="PT"**

Portugal

**veris:actor:external:country="PW"**

Palau

**veris:actor:external:country="PY"**

Paraguay

**veris:actor:external:country="QA"**

Qatar

**veris:actor:external:country="RE"**

Reunion

**veris:actor:external:country="RO"**

Romania

**veris:actor:external:country="RS"**

Serbia

**veris:actor:external:country="RU"**

Russian Federation

**veris:actor:external:country="RW"**

Rwanda

**veris:actor:external:country="SA"**

Saudi Arabia

**veris:actor:external:country="SB"**

Solomon Islands

**veris:actor:external:country="SC"**

Seychelles

**veris:actor:external:country="SD"**

Sudan

**veris:actor:external:country="SE"**

Sweden

**veris:actor:external:country="SG"**

Singapore

**veris:actor:external:country="SH"**

Saint Helena

**veris:actor:external:country="SI"**

Slovenia

**veris:actor:external:country="SJ"**

Svalbard and Jan Mayen Islands

**veris:actor:external:country="SK"**

Slovakia

**veris:actor:external:country="SL"**

Sierra Leone

**veris:actor:external:country="SM"**

San Marino

**veris:actor:external:country="SN"**

Senegal

**veris:actor:external:country="SO"**

Somalia

**veris:actor:external:country="SR"**

Suriname

**veris:actor:external:country="SS"**

South Sudan

**veris:actor:external:country="ST"**

Sao Tome and Principe

**veris:actor:external:country="SV"**

El Salvador

**veris:actor:external:country="SX"**

Sint Maarten (Dutch part)

**veris:actor:external:country="SY"**

Syrian Arab Republic

**veris:actor:external:country="SZ"**

Swaziland

**veris:actor:external:country="TC"**

Turks and Caicos Islands

**veris:actor:external:country="TD"**

Chad

**veris:actor:external:country="TF"**

French Southern Territories

**veris:actor:external:country="TG"**

Togo

**veris:actor:external:country="TH"**

Thailand

**veris:actor:external:country="TJ"**

Tajikistan

**veris:actor:external:country="TK"**

Tokelau

**veris:actor:external:country="TL"**

Timor-Leste

**veris:actor:external:country="TM"**

Turkmenistan



**veris:actor:external:country="TN"**

Tunisia

**veris:actor:external:country="TO"**

Tonga

**veris:actor:external:country="TR"**

Turkey

**veris:actor:external:country="TT"**

Trinidad and Tobago

**veris:actor:external:country="TV"**

Tuvalu

**veris:actor:external:country="TW"**

Taiwan, Province of China

**veris:actor:external:country="TZ"**

Tanzania, United Republic of

**veris:actor:external:country="UA"**

Ukraine

**veris:actor:external:country="UG"**

Uganda

**veris:actor:external:country="UM"**

United States Minor Outlying Islands

**veris:actor:external:country="US"**

United States of America

**veris:actor:external:country="UY"**

Uruguay

**veris:actor:external:country="UZ"**

Uzbekistan

**veris:actor:external:country="Unknown"**

Unknown

**veris:actor:external:country="VA"**

Holy See

**veris:actor:external:country="VC"**

Saint Vincent and the Grenadines

**veris:actor:external:country="VE"**

Venezuela (Bolivarian Republic of)

**veris:actor:external:country="VG"**

British Virgin Islands

**veris:actor:external:country="VI"**

United States Virgin Islands

**veris:actor:external:country="VN"**

Viet Nam

**veris:actor:external:country="VU"**

Vanuatu

**veris:actor:external:country="WF"**

Wallis and Futuna Islands

**veris:actor:external:country="WS"**

Samoa

**veris:actor:external:country="YE"**

Yemen

**veris:actor:external:country="YT"**

Mayotte

**veris:actor:external:country="ZA"**

South Africa

**veris:actor:external:country="ZM"**

Zambia

**veris:actor:external:country="ZW"**

Zimbabwe

## **actor:external:motive**

**veris:actor:external:motive="Convenience"**

Convenience of expediency

**veris:actor:external:motive="Espionage"**

Espionage or competitive advantage

**veris:actor:external:motive="Fear"**

Fear or duress

**veris:actor:external:motive="Financial"**

Financial or personal gain

**veris:actor:external:motive="Fun"**

Fun, curiosity, or pride

**veris:actor:external:motive="Grudge"**

Grudge or personal offense

**veris:actor:external:motive="Ideology"**

Ideology or protest

**veris:actor:external:motive="NA"**

Not Applicable (unintentional action)

**veris:actor:external:motive="Other"**

Other

**veris:actor:external:motive="Secondary"**

Aid in a different attack

**veris:actor:external:motive="Unknown"**

Unknown

**actor:external:variety**

**veris:actor:external:variety="Acquaintance"**

Relative or acquaintance of employee

**veris:actor:external:variety="Activist"**

Activist group

**veris:actor:external:variety="Auditor"**

Auditor

**veris:actor:external:variety="Competitor"**

Competitor

**veris:actor:external:variety="Customer"**

Customer (B2C)

**veris:actor:external:variety="Force majeure"**

Force majeure (nature and chance)

**veris:actor:external:variety="Former employee"**

Former employee (no longer had access)

**veris:actor:external:variety="Nation-state"**

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

## **veris:actor:internal:motive="Fun"**

Fun, curiosity, or pride

## **veris:actor:internal:motive="Grudge"**

Grudge or personal offense

## **veris:actor:internal:motive="Ideology"**

Ideology or protest

## **veris:actor:internal:motive="NA"**

Not Applicable (unintentional action)

## **veris:actor:internal:motive="Other"**

Other

## **veris:actor:internal:motive="Secondary"**

Aid in a different attack

## **veris:actor:internal:motive="Unknown"**

Unknown

## **actor:internal:variety**

### **veris:actor:internal:variety="Auditor"**

Auditor

### **veris:actor:internal:variety="Call center"**

Call center staff

### **veris:actor:internal:variety="Cashier"**

Cashier, teller, or waiter

**veris:actor:internal:variety="Developer"**

Software developer

**veris:actor:internal:variety="Doctor or nurse"**

A doctor or a nurse

**veris:actor:internal:variety="End-user"**

End-user or regular employee

**veris:actor:internal:variety="Executive"**

Executive or upper management

**veris:actor:internal:variety="Finance"**

Finance or accounting staff

**veris:actor:internal:variety="Guard"**

Security guard

**veris:actor:internal:variety="Helpdesk"**

Helpdesk staff

**veris:actor:internal:variety="Human resources"**

Human resources staff

**veris:actor:internal:variety="Maintenance"**

Maintenance or janitorial staff

**veris:actor:internal:variety="Manager"**

Manager or supervisor

**veris:actor:internal:variety="Other"**

Other

**veris:actor:internal:variety="System admin"**

System or network administrator



**veris:actor:internal:variety="Unknown"**

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

**veris:actor:partner:country="AT"**

Austria

**veris:actor:partner:country="AU"**

Australia

**veris:actor:partner:country="AW"**

Aruba

**veris:actor:partner:country="AX"**

Aland Islands

**veris:actor:partner:country="AZ"**

Azerbaijan

**veris:actor:partner:country="BA"**

Bosnia and Herzegovina

**veris:actor:partner:country="BB"**

Barbados

**veris:actor:partner:country="BD"**

Bangladesh

**veris:actor:partner:country="BE"**

Belgium

**veris:actor:partner:country="BF"**

Burkina Faso

**veris:actor:partner:country="BG"**

Bulgaria

**veris:actor:partner:country="BH"**

Bahrain

**veris:actor:partner:country="BI"**

Burundi

**veris:actor:partner:country="BJ"**

Benin

**veris:actor:partner:country="BL"**

Saint-Barthelemy

**veris:actor:partner:country="BM"**

Bermuda

**veris:actor:partner:country="BN"**

Brunei Darussalam

**veris:actor:partner:country="BO"**

Bolivia

**veris:actor:partner:country="BQ"**

Bonaire, Saint Eustatius and Saba

**veris:actor:partner:country="BR"**

Brazil

**veris:actor:partner:country="BS"**

Bahamas

**veris:actor:partner:country="BT"**

Bhutan

**veris:actor:partner:country="BV"**

Bouvet Island

**veris:actor:partner:country="BW"**

Botswana

**veris:actor:partner:country="BY"**

Belarus

**veris:actor:partner:country="BZ"**

Belize

**veris:actor:partner:country="CA"**

Canada

**veris:actor:partner:country="CC"**

Cocos (Keeling) Islands

**veris:actor:partner:country="CD"**

Congo, Democratic Republic of the

**veris:actor:partner:country="CF"**

Central African Republic

**veris:actor:partner:country="CG"**

Congo

**veris:actor:partner:country="CH"**

Switzerland

**veris:actor:partner:country="CI"**

Cote d'Ivoire

**veris:actor:partner:country="CK"**

Cook Islands

**veris:actor:partner:country="CL"**

Chile

**veris:actor:partner:country="CM"**

Cameroon

**veris:actor:partner:country="CN"**

China

**veris:actor:partner:country="CO"**

Colombia

**veris:actor:partner:country="CR"**

Costa Rica

**veris:actor:partner:country="CU"**

Cuba

**veris:actor:partner:country="CV"**

Cape Verde

**veris:actor:partner:country="CW"**

Curacao

**veris:actor:partner:country="CX"**

Christmas Island

**veris:actor:partner:country="CY"**

Cyprus

**veris:actor:partner:country="CZ"**

Czech Republic

**veris:actor:partner:country="DE"**

Germany

**veris:actor:partner:country="DJ"**

Djibouti

**veris:actor:partner:country="DK"**

Denmark

**veris:actor:partner:country="DM"**

Dominica

**veris:actor:partner:country="DO"**

Dominican Republic

**veris:actor:partner:country="DZ"**

Algeria

**veris:actor:partner:country="EC"**

Ecuador

**veris:actor:partner:country="EE"**

Estonia

**veris:actor:partner:country="EG"**

Egypt

**veris:actor:partner:country="EH"**

Western Sahara

**veris:actor:partner:country="ER"**

Eritrea

**veris:actor:partner:country="ES"**

Spain

**veris:actor:partner:country="ET"**

Ethiopia

**veris:actor:partner:country="FI"**

Finland

**veris:actor:partner:country="FJ"**

Fiji

**veris:actor:partner:country="FK"**

Faeroe Islands

**veris:actor:partner:country="FM"**

Micronesia (Federated States of)

**veris:actor:partner:country="FO"**

Falkland Islands (Malvinas)

**veris:actor:partner:country="FR"**

France

**veris:actor:partner:country="GA"**

Gabon

**veris:actor:partner:country="GB"**

United Kingdom

**veris:actor:partner:country="GD"**

Grenada

**veris:actor:partner:country="GE"**

Georgia

**veris:actor:partner:country="GF"**

French Guiana

**veris:actor:partner:country="GG"**

Guernsey

**veris:actor:partner:country="GH"**

Ghana

**veris:actor:partner:country="GI"**

Gibraltar

**veris:actor:partner:country="GL"**

Greenland

**veris:actor:partner:country="GM"**

Gambia

**veris:actor:partner:country="GN"**

Guinea

**veris:actor:partner:country="GP"**

Guadeloupe

**veris:actor:partner:country="GQ"**

Equatorial Guinea

**veris:actor:partner:country="GR"**

Greece

**veris:actor:partner:country="GS"**

South Georgia and the South Sandwich Islands

**veris:actor:partner:country="GT"**

Guatemala

**veris:actor:partner:country="GU"**

Guam

**veris:actor:partner:country="GW"**

Guinea-Bissau

**veris:actor:partner:country="GY"**

Guyana



**veris:actor:partner:country="HK"**

Hong Kong

**veris:actor:partner:country="HM"**

Heard Island and McDonal Islands

**veris:actor:partner:country="HN"**

Honduras

**veris:actor:partner:country="HR"**

Croatia

**veris:actor:partner:country="HT"**

Haiti

**veris:actor:partner:country="HU"**

Hungary

**veris:actor:partner:country="ID"**

Indonesia

**veris:actor:partner:country="IE"**

Ireland

**veris:actor:partner:country="IL"**

Israel

**veris:actor:partner:country="IM"**

Isle of Man

**veris:actor:partner:country="IN"**

India

**veris:actor:partner:country="IO"**

British Virgin Islands

**veris:actor:partner:country="IQ"**

Iraq

**veris:actor:partner:country="IR"**

Iran (Islamic Republic of)

**veris:actor:partner:country="IS"**

Iceland

**veris:actor:partner:country="IT"**

Italy

**veris:actor:partner:country="JE"**

Jersey

**veris:actor:partner:country="JM"**

Jamaica

**veris:actor:partner:country="JO"**

Jordan

**veris:actor:partner:country="JP"**

Japan

**veris:actor:partner:country="KE"**

Kenya

**veris:actor:partner:country="KG"**

Kyrgyzstan

**veris:actor:partner:country="KH"**

Cambodia

**veris:actor:partner:country="KI"**

Kiribati

**veris:actor:partner:country="KM"**

Comoros

**veris:actor:partner:country="KN"**

Saint Kitts and Nevis

**veris:actor:partner:country="KP"**

Korea, Democratic People's Republic of

**veris:actor:partner:country="KR"**

Korea, Republic of

**veris:actor:partner:country="KW"**

Kuwait

**veris:actor:partner:country="KY"**

Cayman Islands

**veris:actor:partner:country="KZ"**

Kazakhstan

**veris:actor:partner:country="LA"**

Lao People's Democratic Republic

**veris:actor:partner:country="LB"**

Lebanon

**veris:actor:partner:country="LC"**

Saint Lucia

**veris:actor:partner:country="LI"**

Liechtenstein

**veris:actor:partner:country="LK"**

Sri Lanka

**veris:actor:partner:country="LR"**

Liberia

**veris:actor:partner:country="LS"**

Lesotho

**veris:actor:partner:country="LT"**

Lithuania

**veris:actor:partner:country="LU"**

Luxembourg

**veris:actor:partner:country="LV"**

Latvia

**veris:actor:partner:country="LY"**

Libya

**veris:actor:partner:country="MA"**

Morocco

**veris:actor:partner:country="MC"**

Monaco

**veris:actor:partner:country="MD"**

Moldova, Republic of

**veris:actor:partner:country="ME"**

Montenegro

**veris:actor:partner:country="MF"**

Saint Martin (French part)

**veris:actor:partner:country="MG"**

Madagascar

**veris:actor:partner:country="MH"**

Marshall Islands

**veris:actor:partner:country="MK"**

Macedonia, The former Yugoslav Republic of

**veris:actor:partner:country="ML"**

Mali

**veris:actor:partner:country="MM"**

Myanmar

**veris:actor:partner:country="MN"**

Mongolia

**veris:actor:partner:country="MO"**

Macao

**veris:actor:partner:country="MP"**

Northern Mariana Islands

**veris:actor:partner:country="MQ"**

Martinique

**veris:actor:partner:country="MR"**

Mauritania

**veris:actor:partner:country="MS"**

Montserrat

**veris:actor:partner:country="MT"**

Malta

**veris:actor:partner:country="MU"**

Mauritius

**veris:actor:partner:country="MV"**

Maldives

**veris:actor:partner:country="MW"**

Malawi

**veris:actor:partner:country="MX"**

Mexico

**veris:actor:partner:country="MY"**

Malaysia

**veris:actor:partner:country="MZ"**

Mozambique

**veris:actor:partner:country="NA"**

Namibia

**veris:actor:partner:country="NC"**

New Caledonia

**veris:actor:partner:country="NE"**

Niger

**veris:actor:partner:country="NF"**

Norfolk Island

**veris:actor:partner:country="NG"**

Nigeria

**veris:actor:partner:country="NI"**

Nicaragua

**veris:actor:partner:country="NL"**

Netherlands

**veris:actor:partner:country="NO"**

Norway

**veris:actor:partner:country="NP"**

Nepal

**veris:actor:partner:country="NR"**

Nauru

**veris:actor:partner:country="NU"**

Niue

**veris:actor:partner:country="NZ"**

New Zealand

**veris:actor:partner:country="OM"**

Oman

**veris:actor:partner:country="Other"**

Other

**veris:actor:partner:country="PA"**

Panama

**veris:actor:partner:country="PE"**

Peru

**veris:actor:partner:country="PF"**

French Polynesia

**veris:actor:partner:country="PG"**

Papua New Guinea

**veris:actor:partner:country="PH"**

Philippines

**veris:actor:partner:country="PK"**

Pakistan

**veris:actor:partner:country="PL"**

Poland

**veris:actor:partner:country="PM"**

Saint Pierre and Miquelon

**veris:actor:partner:country="PN"**

Pitcairn

**veris:actor:partner:country="PR"**

Puerto Rico

**veris:actor:partner:country="PS"**

Palestinian Territory, Occupied

**veris:actor:partner:country="PT"**

Portugal

**veris:actor:partner:country="PW"**

Palau

**veris:actor:partner:country="PY"**

Paraguay

**veris:actor:partner:country="QA"**

Qatar

**veris:actor:partner:country="RE"**

Reunion

**veris:actor:partner:country="RO"**

Romania



**veris:actor:partner:country="RS"**

Serbia

**veris:actor:partner:country="RU"**

Russian Federation

**veris:actor:partner:country="RW"**

Rwanda

**veris:actor:partner:country="SA"**

Saudi Arabia

**veris:actor:partner:country="SB"**

Solomon Islands

**veris:actor:partner:country="SC"**

Seychelles

**veris:actor:partner:country="SD"**

Sudan

**veris:actor:partner:country="SE"**

Sweden

**veris:actor:partner:country="SG"**

Singapore

**veris:actor:partner:country="SH"**

Saint Helena

**veris:actor:partner:country="SI"**

Slovenia

**veris:actor:partner:country="SJ"**

Svalbard and Jan Mayen Islands

**veris:actor:partner:country="SK"**

Slovakia

**veris:actor:partner:country="SL"**

Sierra Leone

**veris:actor:partner:country="SM"**

San Marino

**veris:actor:partner:country="SN"**

Senegal

**veris:actor:partner:country="SO"**

Somalia

**veris:actor:partner:country="SR"**

Suriname

**veris:actor:partner:country="SS"**

South Sudan

**veris:actor:partner:country="ST"**

Sao Tome and Principe

**veris:actor:partner:country="SV"**

El Salvador

**veris:actor:partner:country="SX"**

Sint Maarten (Dutch part)

**veris:actor:partner:country="SY"**

Syrian Arab Republic

**veris:actor:partner:country="SZ"**

Swaziland

**veris:actor:partner:country="TC"**

Turks and Caicos Islands

**veris:actor:partner:country="TD"**

Chad

**veris:actor:partner:country="TF"**

French Southern Territories

**veris:actor:partner:country="TG"**

Togo

**veris:actor:partner:country="TH"**

Thailand

**veris:actor:partner:country="TJ"**

Tajikistan

**veris:actor:partner:country="TK"**

Tokelau

**veris:actor:partner:country="TL"**

Timor-Leste

**veris:actor:partner:country="TM"**

Turkmenistan

**veris:actor:partner:country="TN"**

Tunisia

**veris:actor:partner:country="TO"**

Tonga

**veris:actor:partner:country="TR"**

Turkey

**veris:actor:partner:country="TT"**

Trinidad and Tobago

**veris:actor:partner:country="TV"**

Tuvalu

**veris:actor:partner:country="TW"**

Taiwan, Province of China

**veris:actor:partner:country="TZ"**

Tanzania, United Republic of

**veris:actor:partner:country="UA"**

Ukraine

**veris:actor:partner:country="UG"**

Uganda

**veris:actor:partner:country="UM"**

United States Minor Outlying Islands

**veris:actor:partner:country="US"**

United States of America

**veris:actor:partner:country="UY"**

Uruguay

**veris:actor:partner:country="UZ"**

Uzbekistan

**veris:actor:partner:country="Unknown"**

Unknown

**veris:actor:partner:country="VA"**

Holy See

**veris:actor:partner:country="VC"**

Saint Vincent and the Grenadines

**veris:actor:partner:country="VE"**

Venezuela (Bolivarian Republic of)

**veris:actor:partner:country="VG"**

British Virgin Islands

**veris:actor:partner:country="VI"**

United States Virgin Islands

**veris:actor:partner:country="VN"**

Viet Nam

**veris:actor:partner:country="VU"**

Vanuatu

**veris:actor:partner:country="WF"**

Wallis and Futuna Islands

**veris:actor:partner:country="WS"**

Samoa

**veris:actor:partner:country="YE"**

Yemen

**veris:actor:partner:country="YT"**

Mayotte

**veris:actor:partner:country="ZA"**

South Africa

**veris:actor:partner:country="ZM"**

Zambia

**veris:actor:partner:country="ZW"**

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

**veris:asset:assets:variety="N - PBX"**

Network - Private branch exchange (PBX)

**veris:asset:assets:variety="N - PLC"**

Network - Programmable logic controller (PLC)

**veris:asset:assets:variety="N - Private WAN"**

Network - Private WAN

**veris:asset:assets:variety="N - Public WAN"**

Network - Public WAN

**veris:asset:assets:variety="N - RTU"**

Network - Remote terminal unit (RTU)

**veris:asset:assets:variety="N - Router or switch"**

Network - Router or switch

**veris:asset:assets:variety="N - SAN"**

Network - Storage area network (SAN)

**veris:asset:assets:variety="N - Telephone"**

Network - Telephone

**veris:asset:assets:variety="N - Unknown"**

Network - Variety not known

**veris:asset:assets:variety="N - VoIP adapter"**

Network - VoIP adapter

**veris:asset:assets:variety="N - WLAN"**

Network - Wireless LAN

**veris:asset:assets:variety="Other"**

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

**veris:asset:assets:variety="P - Maintenance"**

People - Maintenance

**veris:asset:assets:variety="P - Manager"**

People - Manager

**veris:asset:assets:variety="P - Other"**

People - Variety known but not listed

**veris:asset:assets:variety="P - Partner"**

People - Partner

**veris:asset:assets:variety="P - System admin"**

People - Administrator

**veris:asset:assets:variety="P - Unknown"**

People - Variety not known

**veris:asset:assets:variety="S - Authentication"**

Server - Authentication

**veris:asset:assets:variety="S - Backup"**

Server - Backup

**veris:asset:assets:variety="S - Code repository"**

Server - Code repository

**veris:asset:assets:variety="S - Configuration or patch management"**

Servers maintaining or deploying configurations or patches to other assets

**veris:asset:assets:variety="S - DCS"**

Server - Distributed control system (DCS)

**veris:asset:assets:variety="S - DHCP"**

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

**veris:asset:assets:variety="S - Proxy"**

Server - Proxy

**veris:asset:assets:variety="S - Remote access"**

Server - Remote access

**veris:asset:assets:variety="S - Unknown"**

Server - Variety not known

**veris:asset:assets:variety="S - VM host"**

Server - Virtual Host

**veris:asset:assets:variety="S - Web application"**

Server - Web application

**veris:asset:assets:variety="T - ATM"**

Public Terminal - Automated Teller Machine (ATM)

**veris:asset:assets:variety="T - Gas terminal"**

Public Terminal - Gas "pay-at-the-pump" terminal

**veris:asset:assets:variety="T - Kiosk"**

Public Terminal - Self-service kiosk

**veris:asset:assets:variety="T - Other"**

Public Terminal - Variety known but not listed

**veris:asset:assets:variety="T - PED pad"**

Public Terminal - Detached PIN pad or card reader

**veris:asset:assets:variety="T - Unknown"**

Public Terminal - Variety not known

**veris:asset:assets:variety="U - Auth token"**

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

**veris:attribute:confidentiality:data\_disclosure="Yes"**

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

**veris:attribute:integrity:variety="Hardware tampering"**

Hardware tampering or physical alteration

**veris:attribute:integrity:variety="Log tampering"**

Log tampering or modification

**veris:attribute:integrity:variety="Misrepresentation"**

Misrepresentation

**veris:attribute:integrity:variety="Modify configuration"**

Modified configuration or services

**veris:attribute:integrity:variety="Modify data"**

Modified stored data or content

**veris:attribute:integrity:variety="Modify privileges"**

Modified privileges or permissions

**veris:attribute:integrity:variety="Other"**

Other

**veris:attribute:integrity:variety="Repurpose"**

Repurposed asset for unauthorized function

**veris:attribute:integrity:variety="Software installation"**

Software installation or code modification

**veris:attribute:integrity:variety="Unknown"**

Unknown

**impact:loss:rating**

**veris:impact:loss:rating="Major"**

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.

**veris:impact:loss:variety="Response and recovery"**

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

**veris:timeline:discovery:unit="Hours"**

Hours

**veris:timeline:discovery:unit="Minutes"**

Minutes

**veris:timeline:discovery:unit="Months"**

Months

**veris:timeline:discovery:unit="NA"**

Discovery does not apply in the context of the security event.

**veris:timeline:discovery:unit="Never"**

Never

**veris:timeline:discovery:unit="Seconds"**

Seconds

**veris:timeline:discovery:unit="Unknown"**

Unknown

**veris:timeline:discovery:unit="Weeks"**

Weeks

**veris:timeline:discovery:unit="Years"**

Years

## **timeline:exfiltration:unit**

**veris:timeline:exfiltration:unit="Days"**

Days

**veris:timeline:exfiltration:unit="Hours"**

Hours

**veris:timeline:exfiltration:unit="Minutes"**

Minutes

**veris:timeline:exfiltration:unit="Months"**

Months

**veris:timeline:exfiltration:unit="NA"**

Exfiltration does not apply in the context of the security event.

**veris:timeline:exfiltration:unit="Never"**

Never

**veris:timeline:exfiltration:unit="Seconds"**

Seconds

**veris:timeline:exfiltration:unit="Unknown"**

Unknown

**veris:timeline:exfiltration:unit="Weeks"**

Weeks

**veris:timeline:exfiltration:unit="Years"**

Years

**victim:revenue:iso\_currency\_code**

**veris:victim:revenue:iso\_currency\_code="AED"**

AED - UAE Dirham

**veris:victim:revenue:iso\_currency\_code="AFN"**

AFN - Afghani

**veris:victim:revenue:iso\_currency\_code="ALL"**

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

**veris:victim:revenue:iso\_currency\_code="DZD"**

DZD - Algerian Dinar

**veris:victim:revenue:iso\_currency\_code="EGP"**

EGP - Egyptian Pound

**veris:victim:revenue:iso\_currency\_code="ERN"**

ERN - Nakfa

**veris:victim:revenue:iso\_currency\_code="ETB"**

ETB - Ethiopian Birr

**veris:victim:revenue:iso\_currency\_code="EUR"**

EUR - Euro

**veris:victim:revenue:iso\_currency\_code="FJD"**

FJD - Fiji Dollar

**veris:victim:revenue:iso\_currency\_code="FKP"**

FKP - Falkland Islands Pound

**veris:victim:revenue:iso\_currency\_code="GBP"**

GBP - Pound Sterling

**veris:victim:revenue:iso\_currency\_code="GEL"**

GEL - Lari

**veris:victim:revenue:iso\_currency\_code="GGP"**

GGP - Guernsey pound

**veris:victim:revenue:iso\_currency\_code="GHS"**

GHS - Ghana Cedi

**veris:victim:revenue:iso\_currency\_code="GIP"**

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

**veris:victim:revenue:iso\_currency\_code="INR"**

INR - Indian Rupee

**veris:victim:revenue:iso\_currency\_code="IQD"**

IQD - Iraqi Dinar

**veris:victim:revenue:iso\_currency\_code="IRR"**

IRR - Iranian Rial

**veris:victim:revenue:iso\_currency\_code="ISK"**

ISK - Iceland Krona

**veris:victim:revenue:iso\_currency\_code="JEP"**

JEP - Jersey pound

**veris:victim:revenue:iso\_currency\_code="JMD"**

JMD - Jamaican Dollar

**veris:victim:revenue:iso\_currency\_code="JOD"**

JOD - Jordanian Dinar

**veris:victim:revenue:iso\_currency\_code="JPY"**

JPY - Yen

**veris:victim:revenue:iso\_currency\_code="KES"**

KES - Kenyan Shilling

**veris:victim:revenue:iso\_currency\_code="KGS"**

KGS - Som

**veris:victim:revenue:iso\_currency\_code="KHR"**

KHR - Riel

**veris:victim:revenue:iso\_currency\_code="KMF"**

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

**veris:victim:revenue:iso\_currency\_code="LYD"**

LYD - Libyan Dinar

**veris:victim:revenue:iso\_currency\_code="MAD"**

MAD - Moroccan Dirham

**veris:victim:revenue:iso\_currency\_code="MDL"**

MDL - Moldovan Leu

**veris:victim:revenue:iso\_currency\_code="MGA"**

MGA - Malagasy Ariary

**veris:victim:revenue:iso\_currency\_code="MKD"**

MKD - Denar

**veris:victim:revenue:iso\_currency\_code="MMK"**

MMK - Kyat

**veris:victim:revenue:iso\_currency\_code="MNT"**

MNT - Tugrik

**veris:victim:revenue:iso\_currency\_code="MOP"**

MOP - Pataca

**veris:victim:revenue:iso\_currency\_code="MRO"**

MRO - Ouguiya

**veris:victim:revenue:iso\_currency\_code="MUR"**

MUR - Mauritius Rupee

**veris:victim:revenue:iso\_currency\_code="MVR"**

MVR - Rufiyaa

**veris:victim:revenue:iso\_currency\_code="MWK"**

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

**veris:victim:revenue:iso\_currency\_code="PGK"**

PGK - Kina

**veris:victim:revenue:iso\_currency\_code="PHP"**

PHP - Philippine Peso

**veris:victim:revenue:iso\_currency\_code="PKR"**

PKR - Pakistan Rupee

**veris:victim:revenue:iso\_currency\_code="PLN"**

PLN - Zloty

**veris:victim:revenue:iso\_currency\_code="PYG"**

PYG - Guarani

**veris:victim:revenue:iso\_currency\_code="QAR"**

QAR - Qatari Rial

**veris:victim:revenue:iso\_currency\_code="RON"**

RON - New Romanian Leu

**veris:victim:revenue:iso\_currency\_code="RSD"**

RSD - Serbian Dinar

**veris:victim:revenue:iso\_currency\_code="RUB"**

RUB - Russian Ruble

**veris:victim:revenue:iso\_currency\_code="RWF"**

RWF - Rwanda Franc

**veris:victim:revenue:iso\_currency\_code="SAR"**

SAR - Saudi Riyal

**veris:victim:revenue:iso\_currency\_code="SBD"**

SBD - Solomon Islands Dollar

**veris:victim:revenue:iso\_currency\_code="SCR"**

SCR - Seychelles Rupee

**veris:victim:revenue:iso\_currency\_code="SDG"**

SDG - Sudanese Pound

**veris:victim:revenue:iso\_currency\_code="SEK"**

SEK - Swedish Krona

**veris:victim:revenue:iso\_currency\_code="SGD"**

SGD - Singapore Dollar

**veris:victim:revenue:iso\_currency\_code="SHP"**

SHP - Saint Helena Pound

**veris:victim:revenue:iso\_currency\_code="SLL"**

SLL - Leone

**veris:victim:revenue:iso\_currency\_code="SOS"**

SOS - Somali Shilling

**veris:victim:revenue:iso\_currency\_code="SPL"**

SPL - Seborga Luigino

**veris:victim:revenue:iso\_currency\_code="SRD"**

SRD - Surinam Dollar

**veris:victim:revenue:iso\_currency\_code="STD"**

STD - Dobra

**veris:victim:revenue:iso\_currency\_code="SVC"**

SVC - El Salvador Colon

**veris:victim:revenue:iso\_currency\_code="SYP"**

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

**veris:attribute:availability:duration:unit="Seconds"**

Seconds

**veris:attribute:availability:duration:unit="Unknown"**

Unknown

**veris:attribute:availability:duration:unit="Weeks"**

Weeks

**veris:attribute:availability:duration:unit="Years"**

Years

**attribute:confidentiality:data:variety**

**veris:attribute:confidentiality:data:variety="Bank"**

Bank account data

**veris:attribute:confidentiality:data:variety="Classified"**

Classified information

**veris:attribute:confidentiality:data:variety="Copyrighted"**

Copyrighted material

**veris:attribute:confidentiality:data:variety="Credentials"**

Authentication credentials (e.g., pwds, OTPs, biometrics)

**veris:attribute:confidentiality:data:variety="Digital certificate"**

Digital certificate

**veris:attribute:confidentiality:data:variety="Internal"**

Sensitive internal data (e.g., plans, reports, emails)

**veris:attribute:confidentiality:data:variety="Medical"**

Medical records

**veris:attribute:confidentiality:data:variety="Other"**

Other

**veris:attribute:confidentiality:data:variety="Payment"**

Payment card data (e.g., PAN, PIN, CVV2, Expiration)

**veris:attribute:confidentiality:data:variety="Personal"**

Personal or identifying information (e.g., addr, ID#, credit score)

**veris:attribute:confidentiality:data:variety="Secrets"**

Trade secrets

**veris:attribute:confidentiality:data:variety="Source code"**

Source code

**veris:attribute:confidentiality:data:variety="System"**

System information (e.g., config info, open services)

**veris:attribute:confidentiality:data:variety="Unknown"**

Unknown

**veris:attribute:confidentiality:data:variety="Virtual currency"**

Virtual currency

## vocabulaire-des-probabilites-estimatives



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

### degré-de-probabilité

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-before-publication"**

Review is required before publishing the information tagged

### **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

### **workflow:todo="review-classification"**

Review the classification of the information tagged to ensure adequate marking of the information before publication

## **workflow:todo="review-the-grammar"**

Review the grammar of the information tagged to improve the overall quality

## **state**

State are the different states of the information or data being tagged.

## **workflow:state="incomplete"**

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

## **workflow:state="complete"**

Complete means that the information tagged reach a state of completeness with the current capabilities of the analyst

# 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*

Brute Force
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*

DDoS
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
veris:action:malware:variety="Downloader"
malware_classification:malware-category="Downloader"

Table 5. Mapping table - **Remote Access Tool**

Remote Access Tool
enisa:nefarious-activity-abuse="remote-access-tool"
ms-caro-malware:malware-type="RemoteAccess"

Table 6. Mapping table - **SQLi**

SQLi
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"
europol-event:sql-injection

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
ecsirt:intrusion-attempts="brute-force"
veris:action:malware:variety="Brute force"
europol-event:brute-force-attempt
enisa:nefarious-activity-abuse="brute-force"

Table 13. Mapping table - **c&c**

c&c
ecsirt:malicious-code="c&c"
europol-incident:malware="c&c"
europol-event:c&c-server-hosting
veris:action:malware:variety="C2"

Table 14. Mapping table - **exploit**

exploit
veris:action:malware:variety="Exploit vuln"
ecsirt:intrusion-attempts="exploit"
europol-event:exploit
europol-incident:intrusion="exploitation-vulnerability"
ms-caro-malware:malware-type="Exploit"

Table 15. Mapping table - **malware**

malware
ecsirt:malicious-code="malware"
circl:incident-classification="malware"

Table 16. Mapping table - **phishing**

phishing
circl:incident-classification="phishing"
ecsirt:fraud="phishing"
veris:action:social:variety="Phishing"
europol-incident:information-gathering="phishing"
enisa:nefarious-activity-abuse="phishing-attacks"

Table 17. Mapping table - **ransomware**

ransomware
ecsirt:malicious-code="ransomware"
enisa:nefarious-activity-abuse="ransomware"
malware_classification:malware-category="Ransomware"
ms-caro-malware:malware-type="Ransom"
veris:action:malware:variety="Ransomware"

Table 18. Mapping table - **rootkit**

rootkit
veris:action:malware:variety="Rootkit"
enisa:nefarious-activity-abuse="rootkits"
malware_classification:malware-category="Rootkit"

Table 19. Mapping table - **scan**

scan
circl:incident-classification="scan"
ecsirt:information-gathering="scanner"
europol-incident:information-gathering="scanning"

Table 20. Mapping table - **scan network**

scan network
veris:action:malware:variety="Scan network"
europol-event:network-scanning

Table 21. Mapping table - **spam**

spam
circl:incident-classification="spam"
ecsirt:abusive-content="spam"
enisa:nefarious-activity-abuse="spam"
europol-event:spam
europol-incident:abusive-content="spam"

veris:action:malware:variety="Spam"
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veris:action:social:variety="Spam"
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Table 22. Mapping table - **tlp-amber**

tlp-amber
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tlp:amber
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iep:traffic-light-protocol="AMBER"
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Table 23. Mapping table - **tlp-green**

tlp-green
-----------

tlp:green
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iep:traffic-light-protocol="GREEN"
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Table 24. Mapping table - **tlp-red**

tlp-red
---------

tlp:red
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iep:traffic-light-protocol="RED"
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Table 25. Mapping table - **tlp-white**

tlp-white
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tlp:white
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iep:traffic-light-protocol="WHITE"
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Table 26. Mapping table - **xss**

xss
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circl:incident-classification="XSS"
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europol-event:xss
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