What’s New in CSAF v2.1?

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Who are we?

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Passion for:

- ICS
- International Cooperation
- CVD
- Capacity building
- CSAF

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Passion for:

- CSAF/OpenEoX
- CVD
- SBOM/VEX
- International Cooperation

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OASIS Open

CSAF

- International, open and free OASIS standard
- Machine-readable format for security advisories (JSON) and VEX
- Standardized way for distribution of security advisories
- Built with automation in mind
- Standardized tool set
- Guidance to actionable information

https://www.csaf.io

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Brief History of CSAF

CVRF
CSAF
CSAF

CVRF v1.2

CSAF v2.0

CSAF v2.1

Federal Office
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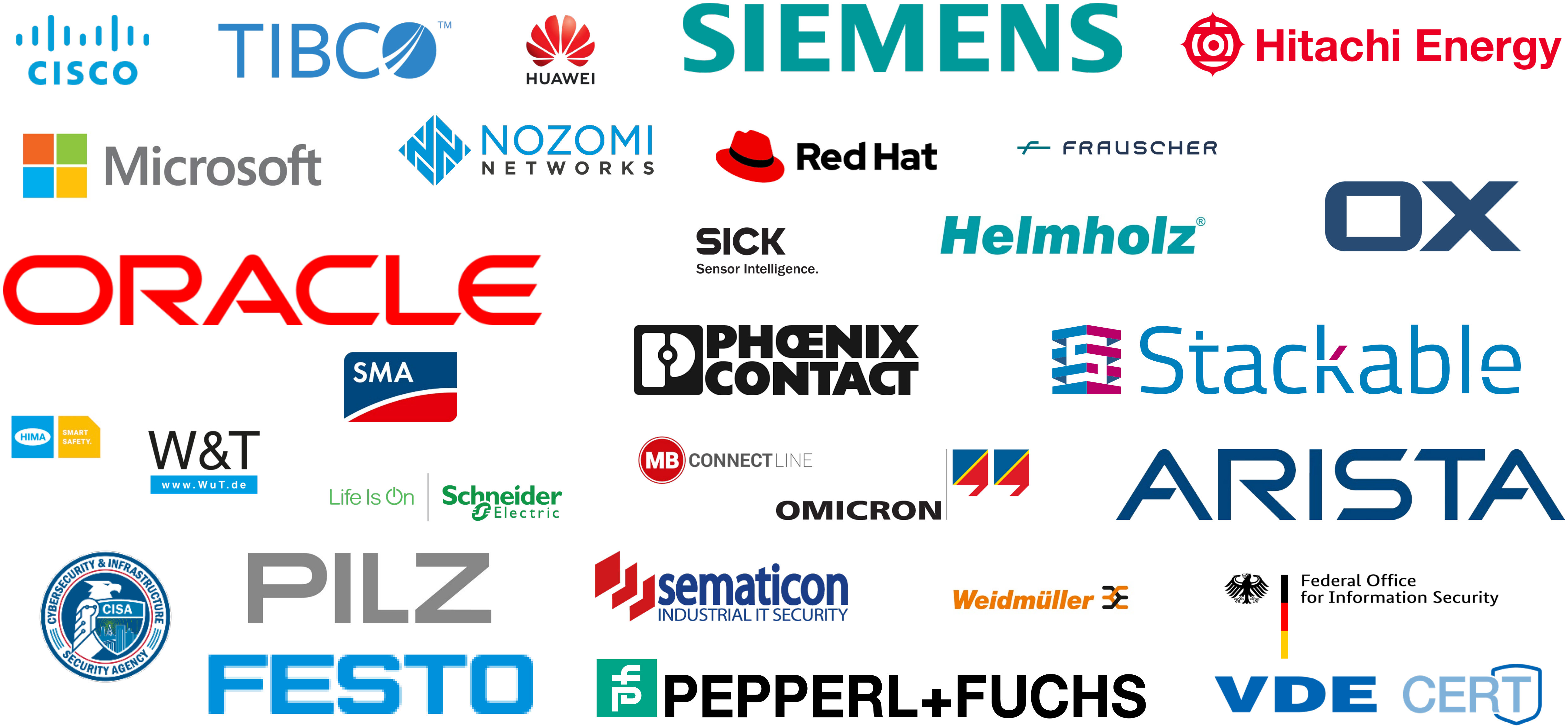
Organizations Publishing CSAF



CSAF Highlights

CSAF v2.0 has been officially recognized as an ISO/IEC standard (ISO/IEC 20153:2025), further solidifying its role in global cybersecurity practices.

CSAF v2.1 CSD01 is now available for public review and comment.

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What’s New in CSAF v2.1?: Key Updates

CVSS v4.0

Metrics vs Scores

CSAF v2.1:

- Replaces the `scores` property with `metrics`.
- Each `metric` item now contains a `content` object that can reference multiple scoring systems including:
  - **CVSS v4**
  - **SSVC v1**
  - **EPSS**
  - CVSS v2, v3
- The `metric` item also includes `products` and an optional `source`.

CSAF v2.0:

- Uses a `scores` array where each score item primarily references CVSS v2 and CVSS v3 alongside the list of products.

TLP 2.0

Traffic Light Protocol (TLP) Labels

In CSAF v2.1, the TLP `label` enumeration has been revised to switch to definitions from TLP v2.0:

- TLP:RED
- TLP:AMBER+STRICT
- TLP:AMBER
- TLP:GREEN
- TLP:CLEAR

In CSAF v2.0, the TLP `label` enumeration is based on TLP v1.0:

- TLP:RED
- TLP:AMBER
- TLP:GREEN
- TLP:WHITE

Vulnerability Property

CWEs

CSAF v2.1:

- The vulnerability object now uses the property `cwes` (plural) instead of a singular `cwe`.
- It is defined as an array where each CWE object must include the fields `id`, `name`, and an additional `version` field.
- Allows multiple weaknesses to be listed and adds specificity with versioning.

CSAF v2.0:

- Vulnerabilities are represented with a single `cwe` object (not an array) and requires only `id` and `name`.

Vulnerability Disclosure and Exploitation

CSAF v2.1:

- Uses `disclosure_date` to indicate when the vulnerability was disclosed to the public.
- Allows for `first_known_exploitation_date` to indicate when the vulnerability was known to be exploited in a specific product.

CSAF v2.0:

- Uses `release_date` instead of `disclosure_date`.

Remediation Enhancements

CSAF v2.1:

- In the `remediations` property, the `category` enumeration has been expanded to include new values:
  - `fix_planned`
  - `optional_patch`
- The other values such as `mitigation`, `no_fix_planned`, `none_available`, and `vendor_fix` remain.

CSAF v2.0:

- The enumeration for remediation categories is limited to `mitigation`, `no_fix_planned`, `none_available`, and `vendor_fix`, and `workaround`.

Product Identification Helper

Package URLs (purls)

CSAF v2.1:

- The field has been renamed from `purl` to `purls` and its type changed from a single string to an array of strings, enabling the listing of multiple package URLs for a product.

CSAF v2.0:

- A singular `purl` field (a string) is used for representing the package URL.

Document Property

Distribution & Sharing

Distribution Object

- In CSAF 2.1, the `distribution` property is now mandatory
- In CSAF 2.0, the `distribution` property is optional.

New Sharing Group

- CSAF 2.1 introduces an optional `sharing_group` within `distribution`.
- An `id` is required and may include a human-readable `name`.

Publisher Object

Additional Category Value:

- In CSAF v2.1 the `` `publisher` `` object's `` `category` `` enumeration has been expanded to include `` `multiplier` ``.
- This new category was not available in CSAF v2.0, which included: `` `coordinator` ``, `` `discoverer` ``, `` `other` ``, `` `translator` ``, `` `user` ``, and `` `vendor` ``.

Schema Property

Schema Identity and Required Properties

CSAF Provider v2.1:

- Declares a `` `$schema` `` property pointing to the v2.1 URL (aka `` `$id` `` of JSON schema).
- `` `$schema` `` property required.

CSAF Provider v2.0:

- JSON schema has an `` `$id` `` pointing to the v2.0 URL, but the instances have no `` `$schema` `` property.

Profiles

Additional Profiles

CSAF v2.1:

- Profile 1 – 5
  - Updates to mandatory fields
- Additional Profiles:
  - Profile 6: Deprecated Security Advisory
  - Profile 7: Withdrawn
  - Profile 8: Superseded

CSAF v2.0:

- Profile 1: CSAF Base
- Profile 2: Security Incident Response
- Profile 3: Informational Advisory
- Profile 4: Security Advisory
- Profile 5: VEX

Tests, Requirements, and Conformance Targets

Additional Changes

- Additions/modifications to:
  - Mandatory, recommended, and informational tests
    - Note: “Optional Tests” (v.2.0) changed to “Recommended Tests”
    - Test presets
  - Distribution Requirements
  - Conformance targets
    - CSAF 2.0 to CSAF 2.1 converter
- Transition process between CSAF 2.0 and CSAF 2.1

Various Housekeeping Items

Directory-based Distribution

CSAF Provider v2.1:

- The distribution mechanism for directory-based distribution is encapsulated as an object under the property `directory`.
- This object requires:
  - `tlp_label` - its value is obtained via a reference to the CSAF v2.1 document's TLP label definition.
  - `url` - the base URL for the directory.

CSAF Provider v2.0:

- The directory distribution is provided as a single property `directory_url`.

ROLIE Distribution

In CSAF v2.1:

- The ROLIE object requires a `feed` array where each feed object must include `last_updated`, `tlp_label`, and `url`.
- The `tlp_label` is referenced from the CSAF v2.1 document schema.

In CSAF v2.0:

- The corresponding ROLIE object requires `feeds` where each feed object requires `tlp_label` and `url` (note the absence of a `last_updated` requirement.)
- The enumeration for `tlp_label` in v2.0 is hardcoded to values from the old version of the TLP protocol.

Public OpenPGP Keys

CSAF Provider v2.1:

- The `public_openpgp_keys` array requires each key object to include both `fingerprint` and `url`.
- The `fingerprint` must meet a minimum length and a pattern (hexadecimal, at least 40 characters).

CSAF Provider v2.0:

- The similar array requires only the `url` property (with `fingerprint` being optional if present.)

Call to Action

CSAF v2.1 CSD01 is now available for public review and comment.

Public review ends July 6, 2025 23:59 UTC.

https://groups.oasis-open.org/discussion/invitation-to-comment-on-csaf-v21-csd01

CSAF Community Days 2025

- Date: November 2025 (calendar week 46)
- Place: TBD (mostly likely in Germany)
- Audience:
  - Tool producers, CSAF issuing, consuming and aggregating parties, National CERTs, ISACs, and industry associations.
- Unique opportunity to learn and share about:
  - Updates for the standard (e.g. CSAF v2.1), tools (available and new), success stories, lessons learned.
- In person participation encouraged/recommended
- Call for presentations soon

Q&A