

# **Security Enhancements**

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# **Security Enhancements**

This section lists enhancements introduced to support Cisco Product Security Requirements and the Product Security Baseline (PSB). For more information about Cisco Product Security Requirements, refer to: https://www.cisco.com/c/en/us/about/security-center/security-programs/secure-development-lifecycle/sdl-process.html

## **PSB Requirements for 22.2.0 Release**

### **Feature Summary and Revision History**

#### Table 1: Summary Data

| Applicable Product(s) or Functional Area | CPS/vDRA            |
|--|---------------------|
| Applicable Platform(s)                   | Not Applicable      |
| Default Setting                          | Enabled - Always-on |
| Related Changes in This Release          | Not Applicable      |
| Related Documentation                    | Not Applicable      |

#### **Table 2: Revision History**

| Revision Details | Release |
|------------------|---------|
| First introduced | 22.2.0  |

#### **Feature Description**

CPS PCRF meets the Cisco security guidelines and is aligned with the security features for 22.2.0 release. CPS now supports the following PSB requirements:

Table 3: CPS PSB Requirements

| PSB Item                          | Description  |
|-----------------------------------|--|
| CT2001:<br>SEC-RUN-ASLR-FR1-v3    | Randomize memory segments.   |
| CT2115: SEC-SW-SIG-FR3-v5         | Wrapping signatures.   |
| CT1995:<br>SEC-ASU-TMOD-FR4-v3    | Review and update threat models as needed.                                     |
| CT1982:<br>SEC-ASU-TMOD-FR1-v3    | Create and review a System-Level threat model.                                 |
| CT2093:<br>SEC-CRY-STDCODE-FR4-v3 | Cisco Cryptographic specialists.   |
| CT2088:<br>SEC-RUN-ASLR-FR2-v3    | Randomization Entropy.   |
| CT2087:<br>SEC-CRY-PRIM-FR1-v7    | Algorithms and primitives.   |
| CT2131:<br>SEC-ASU-TMOD-FR6-v3    | Threat models for offers that use Machine Learning or Artificial Intelligence. |
| CT2116: SEC-SW-SIG-FR4-v5         | Protected data.  |
| CT2114: SEC-SW-SIG-FR2-v5         | Native signature formats.  |
| CT2113: SEC-SW-SIG-FR1-v5         | Sign all code.   |
| CT2086:<br>SEC-TLS-CURR-FR3-v6    | SSL 2.0 and SSL 3.0  |
| CT2060:<br>SEC-CRY-STDCODE-FR3-v3 | Third-party libraries.   |
| CT2059:<br>SEC-ASU-TMOD-FR2-v3    | Assess and mitigate Threats against high value assets.                         |
| CT2048:<br>SEC-CRY-PRIM-FR2-v7    | Random number generation.  |
| CT2037:<br>SEC-CRY-STDCODE-FR2-v3 | Adaptation layers and C3M.   |
| CT2034:<br>SEC-UPS-REGI-FR1-v3    | Register third-party software.   |
| CT2118: SEC-SW-SIG-FR6-v5         | Cisco controlled packaging systems.  |
| CT2117: SEC-SW-SIG-FR5-v5         | Code-signing keys.   |

| PSB Item                           | Description   |
|------------------------------------|---|
| CT2026:<br>SEC-TLS-CURR-FR1-v6     | TLS 1.2 and TLS 1.3.  |
| CT2025:<br>SEC-ASU-TMOD-FR3-v3     | Create additional threat models for new features.   |
| CT2015:<br>SEC-CRY-STDCODE-FR1-v3  | Cisco common Cryptography Modules (C3M).  |
| CT2004:<br>SEC-UPS-REGI-FR2-v3     | Update TPS registrations regularly.   |
| CT2140: SEC-PWD-STORE-2            | Hash and salt non-recoverable stored credentials. Store recoverable credentials using a password manager. |
| CT1997:<br>SEC-TLS-CURR-FR2-v6     | TLS 1.0 and TLS 1.1.  |
| CT2135:<br>SEC-HRD-BUILDENV-FR1-v1 | Register and link your build environment to your offer.   |
| CT2138:<br>SEC-HRD-MANDACC         | Mandatory Access Controls (MAC) must be enabled and constraining all network services.                    |
| CT2080:<br>SEC-ASU-TMOD-FR5-v3     | Store threat models.  |
| CT2050:<br>SEC-RUN-ASLR-FR3-v3     | ASLR canot be disabled.   |
| CT2021:<br>SEC-RUN-ASLR-FR4-v3     | Do not leak addresses.  |

CPS vDRA meets the Cisco security guidelines and is aligned with the security features for 22.2.0 release. vDRA now supports the following PSB requirements:

### Table 4: vDRA PSB Requirements

| PSB Item                       | Description                                    |
|--------------------------------|--|
| CT1723: SEC-HRD-OS             | Harden production components.                  |
| CT2001:<br>SEC-RUN-ASLR-FR1-v3 | Randomize memory segments.                     |
| CT2115: SEC-SW-SIG-FR3-v5      | Wrapping signatures.                           |
| CT1995:<br>SEC-ASU-TMOD-FR4-v3 | Review and update threat models as needed.     |
| CT1982:<br>SEC-ASU-TMOD-FR1-v3 | Create and review a System-Level threat model. |

| PSB Item                          | Description  |
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| CT2093:<br>SEC-CRY-STDCODE-FR4-v3 | Cisco Cryptographic specialists.   |
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| CT2116: SEC-SW-SIG-FR4-v5         | Protected data.  |
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| CT2113: SEC-SW-SIG-FR1-v5         | Sign all code.   |
| CT2086:<br>SEC-TLS-CURR-FR3-v6    | SSL 2.0 and SSL 3.0  |
| CT2060:<br>SEC-CRY-STDCODE-FR3-v3 | Third-party libraries.   |
| CT2059:<br>SEC-ASU-TMOD-FR2-v3    | Assess and mitigate Threats against high value assets.                         |
| CT2048:<br>SEC-CRY-PRIM-FR2-v7    | Random number generation.  |
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| CT2026:<br>SEC-TLS-CURR-FR1-v6    | TLS 1.2 and TLS 1.3.   |
| CT2025:<br>SEC-ASU-TMOD-FR3-v3    | Create additional threat models for new features.                              |
| CT2015:<br>SEC-CRY-STDCODE-FR1-v3 | Cisco common Cryptography Modules (C3M).                                       |
| CT2004:<br>SEC-UPS-REGI-FR2-v3    | Update TPS registrations regularly.  |

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| CT1997:<br>SEC-TLS-CURR-FR2-v6     | TLS 1.0 and TLS 1.1.  |
| CT2135:<br>SEC-HRD-BUILDENV-FR1-v1 | Register and link your build environment to your offer.   |
| CT2080:<br>SEC-ASU-TMOD-FR5-v3     | Store threat models.  |
| CT2050:<br>SEC-RUN-ASLR-FR3-v3     | ASLR cannot be disabled.  |
| CT2021:<br>SEC-RUN-ASLR-FR4-v3     | Do not leak addresses.  |

PSB Requirements for 22.2.0 Release