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| Zealience GmbH |
| EN 18031 |
| Test Plan Template v1.1 |

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# EN 18031 Test Plan

## Purpose

This template is designed to support the assessment of radio equipment to demonstrate conformance with the standards EN 18031-1, EN 18031-2 and EN 18031-3. It follows the instructions and assessment criteria laid down in these standards.

## Structure of the template

For each of the requirements listed in the standards, the template provides three parts to enable an evaluator to perform the required assessments and document the results:

1. Conceptual Assessment
2. Functional Completeness Assessment (where applicable)
3. Functional Sufficiency Assessment (where applicable)

The Summary Table below provides an overview of all the requirements and an indication when a given assessment is not necessary (as per the standards).

## Remove unnecessary requirements if needed

This template can be adjusted to cover only one or two of the three standards. To do so, consult the table below and remove the requirements as necessary. “Removing requirements” means to first deleting the irrelevant requirements from the Summary table, then their respective assessment tables.

|  |  |
| --- | --- |
| **Condition** | **Requirements to remove** |
| EN 18031-1 is not applied | RLM-1, NMM-1, TCM-1 |
| EN 18031-2 is not applied | ACM-3, ACM-4, ACM-5, ACM-6, DLM-1, UNM-1, UNM-2, GEC-7 |
| EN 18031-3 is not applied | AUM-1-3, GEC-8 |
| EN 18031-2 and EN 18031-3 are not applied | AUM-2-2, LGM-1, LGM-2, LGM-3, LGM-4 |

## Usage in conjunction with the Technical Documentation template

This template is designed to be used in conjunction with the template of the Technical Documentation also provided by Zealience (<https://github.com/zealience/IoT-Cybersecurity-Compliance>). In particular, the assessments in this Test Plan refer to specific worksheets of this Technical Documentation. This ensures a straightforward evaluation process. However, this Test Plan template is still usable with a different Technical Documentation format, as it uses the official identifiers listed in the standards.

## Assessment structure

Each assessment is structured as follows:

* **Standards**: Indicates the standard(s) where this assessment is required.
* **Preconditions**: Indicates whether there are specific preconditions to be met before performing the assessment.
* **Identifiers: Worksheets**: Provides a link between an official identifier from the standard and the name of the worksheet (in the Technical Documentation template from Zealience) where the information for that identifier can be found. For example, “[E.Info.ACM-1.NetworkAsset]: ACM-1.NetAsset” means that the information to be documented under the identifier [E.Info.ACM-1.NetworkAsset] can be found in the worksheet ACM-1.NetAsset.
* **Test Items**: Indicates the items to be tested for a given assessment.
* **Instructions**: Provides a list of steps to be performed in order to complete the assessment.
* **Notes (Optional)**: Provides some extra information relevant for the assessment.

## Abbreviations

Given the wide range of information to be assessed, Zealience suggests using prefixes to provide contextual information which may be useful for the evaluation. These prefixes are inspired by those used in ETSI TS 103 701. For example, in the Technical Documentation, a network function can be documented as “NetFunc-DHCP” where “DHCP” is its name of the function and the prefix “NetFunc” indicates that it is a network function. This approach is beneficial to remove ambiguity when the same name can be used for different concepts. For example, a firewall can be an access control mechanism (prefixed with “AccCtrl”), and its implementation can be a security function (prefixed with “SecFunc”). The list of the abbreviations used throughout this Test Plan is provided below:

* **SecFunc**: Security function
* **SecParam**; Security parameter
* **NetFunc**: Network function
* **NetFuncConfig:** Network function configuration
* **PrivFunc**: Privacy function
* **PrivFuncConfig**: Privacy function configuration
* **PersoInfo**: Personal information
* **FinData**: Financial data
* **FinFunc**: Financial function
* **FinFuncConfig:** Financial function configuration
* **AccCtrl**: Access control
* **AuthMech**: Authentication mechanism
* **UpdMech**: Update mechanism
* **StorageMech**: Storage mechanism
* **ComMech**: Communication mechanism
* **LogMech**: Logging mechanism
* **NetMonMech**: Network monitoring mechanism
* **TrafConMech**: Traffic control mechanism
* **SoftComp**: Software component

## Navigation

You can easily navigate through the document by pressing Ctrl-F and clicking on Headings.

## Summary Table

The Summary Table below provides an overview of all the requirements and their respective assessments. The evaluator will perform the assessments and report the respective verdicts in the column Verdict. Some assessments may be marked as "Not necessary" in the column Verdict since they are not required as per the standards.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Mechanism** | **Requirement** | **Standard specific** | **Assessment** | **Verdict** |
| ACM | ACM-1 |  | Conceptual |  |
| Functional completeness |  |
| Functional sufficiency |  |
| ACM-2 |  | Conceptual |  |
| Functional completeness | Not necessary |
| Functional sufficiency |  |
| ACM-3 | EN 18031-2 | Conceptual |  |
| Functional completeness |  |
| Functional sufficiency |  |
| ACM-4 | EN 18031-2 | Conceptual |  |
| Functional completeness |  |
| Functional sufficiency |  |
| ACM-5 | EN 18031-2 | Conceptual |  |
| Functional completeness |  |
| Functional sufficiency |  |
| ACM-6 | EN 18031-2 | Conceptual |  |
| Functional completeness |  |
| Functional sufficiency |  |
| AUM | AUM-1-1 |  | Conceptual |  |
| Functional completeness |  |
| Functional sufficiency |  |
| AUM-1-2 |  | Conceptual |  |
| Functional completeness |  |
| Functional sufficiency |  |
| AUM-1-3 | EN 18031-3 | Conceptual |  |
| Functional completeness |  |
| Functional sufficiency |  |
| AUM-2 (AUM-2-1) |  | Conceptual |  |
| Functional completeness | Not necessary |
| Functional sufficiency |  |
| AUM-2-2 | EN 18031-2  EN 18031-3 | Conceptual |  |
| Functional completeness | Not necessary |
| Functional sufficiency |  |
| AUM-3 |  | Conceptual |  |
| Functional completeness | Not necessary |
| Functional sufficiency |  |
| AUM-4 |  | Conceptual |  |
| Functional completeness | Not necessary |
| Functional sufficiency |  |
| AUM-5-1 |  | Conceptual |  |
| Functional completeness | Not necessary |
| Functional sufficiency |  |
| AUM-5-2 |  | Conceptual |  |
| Functional completeness | Not necessary |
| Functional sufficiency |  |
| AUM-6 |  | Conceptual |  |
| Functional completeness | Not necessary |
| Functional sufficiency |  |
| SUM | SUM-1 |  | Conceptual |  |
| Functional completeness | Not necessary |
| Functional sufficiency |  |
| SUM-2 |  | Conceptual |  |
| Functional completeness | Not necessary |
| Functional sufficiency |  |
| SUM-3 |  | Conceptual |  |
| Functional completeness | Not necessary |
| Functional sufficiency |  |
| SSM | SSM-1 |  | Conceptual |  |
| Functional completeness |  |
| Functional sufficiency |  |
| SSM-2 |  | Conceptual |  |
| Functional completeness | Not necessary |
| Functional sufficiency |  |
| SSM-3 |  | Conceptual |  |
| Functional completeness |  |
| Functional sufficiency |  |
| SCM | SCM-1 |  | Conceptual |  |
| Functional completeness |  |
| Functional sufficiency |  |
| SCM-2 |  | Conceptual |  |
| Functional completeness | Not necessary |
| Functional sufficiency |  |
| SCM-3 |  | Conceptual |  |
| Functional completeness | Not necessary |
| Functional sufficiency |  |
| SCM-4 |  | Conceptual |  |
| Functional completeness | Not necessary |
| Functional sufficiency |  |
| RLM | RLM-1 | EN 18031-1 | Conceptual |  |
| Functional completeness |  |
| Functional sufficiency |  |
| NMM | NMM-1 | EN 18031-1 | Conceptual |  |
| Functional completeness | Not necessary |
| Functional sufficiency |  |
| TCM | TCM-1 | EN 18031-1 | Conceptual |  |
| Functional completeness | Not necessary |
| Functional sufficiency |  |
| LGM | LGM-1 | EN 18031-2  EN 18031-3 | Conceptual |  |
| Functional completeness | Not necessary |
| Functional sufficiency |  |
| LGM-2 | EN 18031-2  EN 18031-3 | Conceptual |  |
| Functional completeness | Not necessary |
| Functional sufficiency |  |
| LGM-3 | EN 18031-2  EN 18031-3 | Conceptual |  |
| Functional completeness | Not necessary |
| Functional sufficiency |  |
| LGM-4 | EN 18031-2  EN 18031-3 | Conceptual |  |
| Functional completeness | Not necessary |
| Functional sufficiency |  |
| DLM | DLM-1 | EN 18031-2 | Conceptual |  |
| Functional completeness |  |
| Functional sufficiency |  |
| UNM | UNM-1 | EN 18031-2 | Conceptual |  |
| Functional completeness |  |
| Functional sufficiency |  |
| UNM-2 | EN 18031-2 | Conceptual |  |
| Functional completeness | Not necessary |
| Functional sufficiency |  |
| CCK | CCK-1 |  | Conceptual |  |
| Functional completeness |  |
| Functional sufficiency |  |
| CCK-2 |  | Conceptual |  |
| Conceptual completeness assessment of documentation |  |
| Functional sufficiency | Not necessary |
| CCK-3 |  | Conceptual |  |
| Functional completeness |  |
| Functional sufficiency |  |
| GEC | GEC-1 |  | Conceptual |  |
| Functional completeness |  |
| Functional sufficiency |  |
| GEC-2 |  | Conceptual |  |
| Functional completeness |  |
| Functional sufficiency | Not necessary |
| GEC-3 |  | Conceptual |  |
| Functional completeness |  |
| Functional sufficiency |  |
| GEC-4 |  | Conceptual |  |
| Functional completeness |  |
| Functional sufficiency | Not necessary |
| GEC-5 |  | Conceptual |  |
| Functional completeness |  |
| Functional sufficiency | Not necessary |
| GEC-6 |  | Conceptual |  |
| Functional completeness |  |
| Functional sufficiency |  |
| GEC-7 | EN 18031-2 | Conceptual |  |
| Functional completeness |  |
| Functional sufficiency | Not necessary |
| GEC-8 | EN 18031-3 | Conceptual |  |
| Functional completeness |  |
| Functional sufficiency |  |
| CRY | CRY-1 |  | Conceptual |  |
| Functional completeness |  |
| Functional sufficiency |  |

## [ACM] Access Control Mechanism

### [ACM-1] Applicability of access control mechanisms

|  |  |
| --- | --- |
| **ACM-1 Conceptual Assessment** | |
| **Standards** | EN 18031-1, EN 18031-2, EN 18031-3 |
| **Preconditions** | * None |
| **Identifiers: Worksheets** | * [E.Info.ACM-1.FinancialAsset]: ACM-1.FinAsset * [E.Info.ACM-1.NetworkAsset]: ACM-1.NetAsset * [E.Info.ACM-1.PrivacyAsset]: ACM-1.PrivAsset * [E.Info.ACM-1.SecurityAsset]: ACM-1.SecAsset |
| **Test Items** | * Financial assets (FinData, FinFunc, FinFuncConfig) accessible by entities as documented in the worksheet ACM-1.FinAsset * Network assets (NetFunc, NetFuncConfig) accessible by entities as documented in the worksheet ACM-1.NetAsset * Privacy assets (PersoInfo, PrivFunc, PrivFuncConfig) accessible by entities as documented in the worksheet ACM-1.PrivAsset * Security assets (SecFunc, SecParam) accessible by entities as documented in the worksheet ACM-1.SecAsset |
| **Instructions** | 1. List all the Test Items provided in the worksheet(s) by writing their names in the column "Name" below. Include the Decision Tree result in the column "DT result" (Pass, Fail or NA). Indicate in the column "Is justif. provided?" whether a justification is provided in the respective worksheet by writing Y(es) or N(o). 2. For each Test Item in the table, review the justification and indicate in the column "Is justif. correct?" whether it is correct. Provide comments where necessary. 3. Finally, indicate in the table of verdict below whether each statement is True or False and assign a verdict based on the "Assignment of verdict". |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Name** | **DT result (P/F/NA)** | **Is justif. provided? (Y/N)** | **Is justif. correct? (Y/N)** | **Evaluator's comments** |
| **[E.Info.ACM-1.FinancialAsset]** | | | | |
|  |  |  |  |  |
| **[E.Info.ACM-1.NetworkAsset]** | | | | |
|  |  |  |  |  |
| **[E.Info.ACM-1.PrivacyAsset]** | | | | |
|  |  |  |  |  |
| **[E.Info.ACM-1.SecurityAsset]** | | | | |
|  |  |  |  |  |

|  |  |  |
| --- | --- | --- |
| 1. At least one P in column "DT result" (True/False) | |  |
| 2. No Fs in column "DT result" (True/False) | |  |
| 3. Only Ys in columns "Is justif. provided" and "Is justif. correct" (True/False) | |  |
| **Assignment of verdict** | **PASS** assigned if statements 1, 2 and 3 are True | |
| **FAIL** assigned if statements 2 or 3 are False | |
| **NOT APPLICABLE** assigned in other cases | |
| **Evaluator's comments** |  | |
| **Verdict** | |  |

|  |  |
| --- | --- |
| **ACM-1 Functional Completeness Assessment** | |
| **Standards** | EN 18031-1, EN 18031-2, EN 18031-3 |
| **Preconditions** | * The equipment is in an operational state |
| **Identifiers: Worksheets** | * [E.Info.ACM-1.FinancialAsset]: ACM-1.FinAsset * [E.Info.ACM-1.NetworkAsset]: ACM-1.NetAsset * [E.Info.ACM-1.PrivacyAsset]: ACM-1.PrivAsset * [E.Info.ACM-1.SecurityAsset]: ACM-1.SecAsset |
| **Test Items** | * Financial assets (FinData, FinFunc, FinFuncConfig) accessible by entities as documented in the worksheet ACM-1.FinAsset * Network assets (NetFunc, NetFuncConfig) accessible by entities as documented in the worksheet ACM-1.NetAsset * Privacy assets (PersoInfo, PrivFunc, PrivFuncConfig) accessible by entities as documented in the worksheet ACM-1.PrivAsset * Security assets (SecFunc, SecParam) accessible by entities as documented in the worksheet ACM-1.SecAsset |
| **Instructions** | 1. Perform the assessment units described in the standard(s) applied and report in the table below any relevant Test Items that are not documented in the worksheet(s). 2. Finally, indicate in the table of verdict below whether each statement is True or False and assign a verdict based on the "Assignment of verdict". |

|  |  |
| --- | --- |
| **Relevant Test Items not documented** | **Evaluator's comments** |
|  |  |
|  |  |

|  |  |  |
| --- | --- | --- |
| 1. No entries in column "Relevant Test Items not documented" (True/False) | |  |
| **Assignment of verdict** | **PASS** assigned if statement 1 is True | |
| **FAIL** assigned if statement 1 is False | |
| **NOT APPLICABLE** assigned in other cases | |
| **Evaluator's comments** |  | |
| **Verdict** | |  |

|  |  |
| --- | --- |
| **ACM-1 Functional Sufficiency Assessment** | |
| **Standards** | EN 18031-1, EN 18031-2, EN 18031-3 |
| **Preconditions** | * "The equipment is in an operational state" |
| **Identifiers: Worksheets** | * [E.Info.ACM-1.FinancialAsset]: ACM-1.FinAsset * [E.Info.ACM-1.NetworkAsset]: ACM-1.NetAsset * [E.Info.ACM-1.PrivacyAsset]: ACM-1.PrivAsset * [E.Info.ACM-1.SecurityAsset]: ACM-1.SecAsset |
| **Instructions** | 1. Refer to the instructions provided in the Assessments Unit Table(s) below and perform the actions required. 2. Once the Assessment Unit Table(s) completed, indicate in the table of verdict below whether each statement is True or False and assign a verdict based on the "Assignment of verdict". |

|  |  |  |
| --- | --- | --- |
| **Assessment Unit Table - [E.Info.ACM-1.NetworkAsset]** | | |
| **Test Items** | Network assets (NetFunc, NetFuncConfig) accessible by entities as documented in the worksheet ACM-1.NetAsset | |
| **Instructions** | 1. List all the Test Items by writing their names in the column "Name" below. 2. For each Test Item, perform the assessment units described in the standard(s) applied and functionally confirm each case (C) listed below by indicating Y (yes) or N (no) in the respective column. | |
| 1. The access control mechanisms managing entities' access to the asset exist and there is no evidence that they are not implemented | | |
| **Name** | **C1** | **Evaluator's comments** |
|  |  |  |

|  |  |  |
| --- | --- | --- |
| **Assessment Unit Table - [E.Info.ACM-1.PrivacyAsset]** | | |
| **Test Items** | Privacy assets (PrivFunc, PrivFuncConfig, PersoInfo) accessible by entities as documented in the worksheet ACM-1.PrivAsset | |
| **Instructions** | 1. List all the Test Items by writing their names in the column "Name" below. 2. For each Test Item, perform the assessment units described in the standard(s) applied and functionally confirm each case (C) listed below by indicating Y (yes) or N (no) in the respective column. | |
| 1. The access control mechanisms managing entities' access to the asset exist and there is no evidence that they are not implemented | | |
| **Name** | **C1** | **Evaluator's comments** |
|  |  |  |

|  |  |  |
| --- | --- | --- |
| **Assessment Unit Table - [E.Info.ACM-1.FinancialAsset]** | | |
| **Test Items** | Financial assets (FinData, FinFunc, FinFuncConfig) accessible by entities as documented in the worksheet ACM-1.FinAsset | |
| **Instructions** | 1. List all the Test Items by writing their names in the column "Name" below. 2. For each Test Item, perform the assessment units described in the standard(s) applied and functionally confirm each case (C) listed below by indicating Y (yes) or N (no) in the respective column. | |
| 1. The access control mechanisms managing entities' access to the asset exist and there is no evidence that they are not implemented | | |
| **Name** | **C1** | **Evaluator's comments** |
|  |  |  |

|  |  |  |
| --- | --- | --- |
| **Assessment Unit Table - [E.Info.ACM-1.SecurityAsset]** | | |
| **Test Items** | Security assets (SecFunc, SecParam) accessible by entities as documented in the worksheet ACM-1.SecAsset | |
| **Instructions** | 1. List all the Test Items by writing their names in the column "Name" below. 2. For each Test Item, perform the assessment units described in the standard(s) applied and functionally confirm each case (C) listed below by indicating Y (yes) or N (no) in the respective column. | |
| 1. The access control mechanisms managing entities' access to the asset exist and there is no evidence that they are not implemented | | |
| **Name** | **C1** | **Evaluator's comments** |
|  |  |  |

|  |  |  |
| --- | --- | --- |
| 1. Only Ys in the case columns (Cx) in the Assessment Unit Tables (True/False) | |  |
| **Assignment of verdict** | **PASS** assigned if statement 1 is True | |
| **FAIL** assigned if statement 1 is False | |
| **NOT APPLICABLE** assigned in other cases | |
| **Evaluator's comments** |  | |
| **Verdict** | |  |

### [ACM-2] Appropriate access control mechanisms

|  |  |
| --- | --- |
| **ACM-2 Conceptual Assessment** | |
| **Standards** | EN 18031-1, EN 18031-2, EN 18031-3 |
| **Preconditions** | * None |
| **Identifiers: Worksheets** | * [E.Info.ACM-2.FinancialAsset]: ACM-2.FinAsset * [E.Info.ACM-2.NetworkAsset]: ACM-2.NetAsset * [E.Info.ACM-2.PrivacyAsset]: ACM-2.PrivAsset * [E.Info.ACM-2.SecurityAsset]: ACM-2.SecAsset |
| **Test Items** | * Financial assets (FinData, FinFunc, FinFuncConfig) requiring access control as documented in the worksheet ACM-2.FinAsset * Network assets (NetFunc, NetFuncConfig) requiring access control as documented in the worksheet ACM-2.NetAsset * Privacy assets (PersoInfo, PrivFunc, PrivFuncConfig) requiring access control as documented in the worksheet ACM-2.PrivAsset * Security assets (SecFunc, SecParam) requiring access control as documented in the worksheet ACM-2.SecAsset |
| **Instructions** | 1. List all the Test Items provided in the worksheet(s) by writing their names in the column "Name" below. Include the Decision Tree result in the column "DT result" (Pass, Fail or NA). Indicate in the column "Is justif. provided?" whether a justification is provided in the respective worksheet by writing Y(es) or N(o). 2. For each Test Item in the table, review the justification and indicate in the column "Is justif. correct?" whether it is correct. Provide comments where necessary. 3. Finally, indicate in the table of verdict below whether each statement is True or False and assign a verdict based on the "Assignment of verdict". |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Name** | **DT result (P/F)** | **Is justif. provided? (Y/N)** | **Is justif. correct? (Y/N)** | **Evaluator's comments** |
| **[E.Info.ACM-2.FinancialAsset]** | | | | |
|  |  |  |  |  |
| **[E.Info.ACM-2.NetworkAsset]** | | | | |
|  |  |  |  |  |
| **[E.Info.ACM-2.PrivacyAsset]** | | | | |
|  |  |  |  |  |
| **[E.Info.ACM-2.SecurityAsset]** | | | | |
|  |  |  |  |  |

|  |  |  |
| --- | --- | --- |
| 1. Only Ps in column "DT result" (True/False) | |  |
| 2. Only Ys in columns "Is justif. provided" and "Is justif. correct" (True/False) | |  |
| **Assignment of verdict** | **PASS** assigned if statements 1 and 2 are True | |
| **FAIL** assigned if statements 1 or 2 are False | |
| **NOT APPLICABLE** assigned in other cases | |
| **Evaluator's comments** |  | |
| **Verdict** | |  |

|  |  |
| --- | --- |
| **ACM-2 Functional Sufficiency Assessment** | |
| **Standards** | EN 18031-1, EN 18031-2, EN 18031-3 |
| **Preconditions** | * "The equipment is in an operational state" |
| **Identifiers: Worksheets** | * [E.Info.ACM-2.FinancialAsset]: ACM-2.FinAsset * [E.Info.ACM-2.NetworkAsset]: ACM-2.NetAsset * [E.Info.ACM-2.PrivacyAsset]: ACM-2.PrivAsset * [E.Info.ACM-2.SecurityAsset]: ACM-2.SecAsset |
| **Instructions** | 1. Refer to the instructions provided in the Assessments Unit Table(s) below and perform the actions required. 2. Once the Assessment Unit Table(s) completed, indicate in the table of verdict below whether each statement is True or False and assign a verdict based on the "Assignment of verdict". |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Assessment Unit Table - [AU.ACM-2.RBAC]** | | | | | |
| **Test Items** | Access control mechanisms (AccCtrl) with implementation category [IC.ACM-2.RBAC] documented in the following worksheets (depending on the standard applied): ACM-2.FinAsset (under [E.Info.ACM-2.FinancialAsset.ACM]), ACM-2.NetAsset (under [E.Info.ACM-2.NetworkAsset.ACM]), ACM-2.PrivAsset (under [E.Info.ACM-2.PrivacyAsset.ACM]) and ACM-2.SecAsset (under [E.Info.ACM-2.Security.ACM]) | | | | |
| **Instructions** | 1. List all the Test Items by writing their names in the column "Name" below. 2. For each Test Item, perform the assessment units described in the standard(s) applied and functionally confirm each case (C) listed below by indicating Y (yes) or N (no) in the respective column. | | | | |
| 1. "Roles are assigned to each user with associated authorization" 2. "Least privileges are associated with the roles" 3. "The [assets are] only accessible by authorized users given by their role" 4. "Changes in roles can only be performed by authorized users" | | | | | |
| **Name** | **C1** | **C2** | **C3** | **C4** | **Evaluator's comments** |
|  |  |  |  |  |  |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Assessment Unit Table - [AU.ACM-2.DAC]** | | | | | |
| **Test Items** | Access control mechanisms (AccCtrl) with implementation category [IC.ACM-2.DAC] documented in the following worksheets (depending on the standard applied): ACM-2.FinAsset (under [E.Info.ACM-2.FinancialAsset.ACM]), ACM-2.NetAsset (under [E.Info.ACM-2.NetworkAsset.ACM]), ACM-2.PrivAsset (under [E.Info.ACM-2.PrivacyAsset.ACM]) and ACM-2.SecAsset (under [E.Info.ACM-2.Security.ACM]) | | | | |
| **Instructions** | 1. List all the Test Items by writing their names in the column "Name" below. 2. For each Test Item, perform the assessment units described in the standard(s) applied and functionally confirm each case (C) listed below by indicating Y (yes) or N (no) in the respective column. | | | | |
| 1. "Identities are assigned to each user with associated authorization" 2. "Least privileges are associated with the identities" 3. "The [assets are] only accessible by authorized users given by their identity" 4. "Changes in identities can only be performed by authorized users" | | | | | |
| **Name** | **C1** | **C2** | **C3** | **C4** | **Evaluator's comments** |
|  |  |  |  |  |  |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Assessment Unit Table - [AU.ACM-2.MAC]** | | | | |
| **Test Items** | Access control mechanisms (AccCtrl) with implementation category [IC.ACM-2.MAC] documented in the following worksheets (depending on the standard applied): ACM-2.FinAsset (under [E.Info.ACM-2.FinancialAsset.ACM]), ACM-2.NetAsset (under [E.Info.ACM-2.NetworkAsset.ACM]), ACM-2.PrivAsset (under [E.Info.ACM-2.PrivacyAsset.ACM]) and ACM-2.SecAsset (under [E.Info.ACM-2.Security.ACM]) | | | |
| **Instructions** | 1. List all the Test Items by writing their names in the column "Name" below. 2. For each Test Item, perform the assessment units described in the standard(s) applied and functionally confirm each case (C) listed below by indicating Y (yes) or N (no) in the respective column. | | | |
| 1. "The [assets are] only accessible by authorized users after clearance was issued by the operating system and/or system administrator" 2. "The issuance of clearance is associated with the principle of least privileges" 3. "Changing the operating system and/or system administrator that is responsible for the issuance of clearance to the user can only be performed by the authorized system administrator" | | | | |
| **Name** | **C1** | **C2** | **C3** | **Evaluator's comments** |
|  |  |  |  |  |

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| **Assessment Unit Table - [AU.ACM-2.Generic]** | | | | |
| **Test Items** | Access control mechanisms (AccCtrl) with implementation category [IC.ACM-2.Generic] documented in the following worksheets (depending on the standard applied): ACM-2.FinAsset (under [E.Info.ACM-2.FinancialAsset.ACM]), ACM-2.NetAsset (under [E.Info.ACM-2.NetworkAsset.ACM]), ACM-2.PrivAsset (under [E.Info.ACM-2.PrivacyAsset.ACM]) and ACM-2.SecAsset (under [E.Info.ACM-2.Security.ACM]) | | | |
| **Instructions** | 1. List all the Test Items by writing their names in the column "Name" below. 2. For each Test Item, perform the assessment units described in the standard(s) applied and functionally confirm each case (C) listed below by indicating Y (yes) or N (no) in the respective column. | | | |
| 1. "The [assets are] only accessible by authorized users" 2. "The principle of least privileges for users is followed" 3. "Changing settings related to the access control mechanism or changes of privileges of users are only allowed to be performed by authorized users" | | | | |
| **Name** | **C1** | **C2** | **C3** | **Evaluator's comments** |
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| 1. Only Ys in the case columns (Cx) in the Assessment Unit Tables (True/False) | |  |
| **Assignment of verdict** | **PASS** assigned if statement 1 is True | |
| **FAIL** assigned if statement 1 is False | |
| **NOT APPLICABLE** assigned in other cases | |
| **Evaluator's comments** |  | |
| **Verdict** | |  |

### [ACM-3] Appropriate access control mechanisms

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| **ACM-3 Conceptual Assessment** | |
| **Standards** | EN 18031-2 |
| **Preconditions** | * None |
| **Identifiers: Worksheets** | * [E.Info.ACM-3.ACM]: ACM-3.PrivAsset * [E.Info.ACM-3.PrivacyAsset]: ACM-3.PrivAsset |
| **Test Items** | * Privacy functions (PrivFunc) enabling children to access external content as documented in the worksheet ACM-3.PrivAsset |
| **Instructions** | 1. List all the Test Items provided in the worksheet(s) by writing their names in the column "Name" below. Include the Decision Tree result in the column "DT result" (Pass, Fail or NA). Indicate in the column "Is justif. provided?" whether a justification is provided in the respective worksheet by writing Y(es) or N(o). 2. For each Test Item in the table, review the justification and indicate in the column "Is justif. correct?" whether it is correct. Provide comments where necessary. 3. Finally, indicate in the table of verdict below whether each statement is True or False and assign a verdict based on the "Assignment of verdict". |
| **Notes** | * If the device is not a toy, the verdict must be NOT APPLICABLE. |

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| **Name** | **DT result (P/F/NA)** | **Is justif. provided? (Y/N)** | **Is justif. correct? (Y/N)** | **Evaluator's comments** |
| **[E.Info.ACM-3.PrivacyAsset]** | | | | |
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| 1. At least one P in column "DT result" (True/False) | |  |
| 2. No Fs in column "DT result" (True/False) | |  |
| 3. Only Ys in columns "Is justif. provided" and "Is justif. correct" (True/False) | |  |
| **Assignment of verdict** | **PASS** assigned if statements 1, 2 and 3 are True | |
| **FAIL** assigned if statements 2 or 3 are False | |
| **NOT APPLICABLE** assigned in other cases | |
| **Evaluator's comments** |  | |
| **Verdict** | |  |

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| **ACM-3 Functional Completeness Assessment** | |
| **Standards** | EN 18031-2 |
| **Preconditions** | * The equipment is in an operational state |
| **Identifiers: Worksheets** | * [E.Info.ACM-3.PrivacyAsset]: ACM-3.PrivAsset |
| **Test Items** | * Privacy functions (PrivFunc) enabling children to access external content as documented in the worksheet ACM-3.PrivAsset |
| **Instructions** | 1. Perform the assessment units described in the standard(s) applied and report in the table below any relevant Test Items that are not documented in the worksheet(s). 2. Finally, indicate in the table of verdict below whether each statement is True or False and assign a verdict based on the "Assignment of verdict". |
| **Notes** | * If the device is not a toy, the verdict must be NOT APPLICABLE. |

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| **Relevant Test Items not documented** | **Evaluator's comments** |
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| 1. No entries in column "Relevant Test Items not documented" (True/False) | |  |
| **Assignment of verdict** | **PASS** assigned if statement 1 is True | |
| **FAIL** assigned if statement 1 is False | |
| **NOT APPLICABLE** assigned in other cases | |
| **Evaluator's comments** |  | |
| **Verdict** | |  |

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| **ACM-3 Functional Sufficiency Assessment** | |
| **Standards** | EN 18031-2 |
| **Preconditions** | * "The equipment is in an operational state" |
| **Identifiers: Worksheets** | * [E.Info.ACM-3.ACM]: ACM-3.PrivAsset |
| **Instructions** | 1. Refer to the instructions provided in the Assessments Unit Table(s) below and perform the actions required. 2. Once the Assessment Unit Table(s) completed, indicate in the table of verdict below whether each statement is True or False and assign a verdict based on the "Assignment of verdict". |
| **Notes** | * If the device is not a toy, the verdict must be NOT APPLICABLE. |

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| **Assessment Unit Table - [AU.ACM-3.RBAC]** | | | | |
| **Test Items** | Access control mechanisms (AccCtrl) with implementation category [IC.ACM-3.RBAC] as documented in the worksheet ACM-3.PrivAsset | | | |
| **Instructions** | 1. List all the Test Items by writing their names in the column "Name" below. 2. For each Test Item, perform the assessment units described in the standard(s) applied and functionally confirm each case (C) listed below by indicating Y (yes) or N (no) in the respective column. | | | |
| 1. "Children are assigned to associated roles that only allow to access content from authorized entities via the privacy function that allows access to external content" 2. "Least privileges are associated with the children's role" 3. "Changes in roles can only be performed by authorized users" | | | | |
| **Name** | **C1** | **C2** | **C3** | **Evaluator's comments** |
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| **Assessment Unit Table - [AU.ACM-3.DAC]** | | | | |
| **Test Items** | Access control mechanisms (AccCtrl) with implementation category [IC.ACM-3.DAC] as documented in the worksheet ACM-3.PrivAsset | | | |
| **Instructions** | 1. List all the Test Items by writing their names in the column "Name" below. 2. For each Test Item, perform the assessment units described in the standard(s) applied and functionally confirm each case (C) listed below by indicating Y (yes) or N (no) in the respective column. | | | |
| 1. "Children are assigned to associated identities that only allow to access content from authorized entities via the privacy function that allows access to external content" 2. "Least privileges are associated with the children's identity" 3. "Changes in identities can only be performed by authorized users" | | | | |
| **Name** | **C1** | **C2** | **C3** | **Evaluator's comments** |
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| **Assessment Unit Table - [AU.ACM-3.MAC]** | | | | |
| **Test Items** | Access control mechanisms (AccCtrl) with implementation category [IC.ACM-3.MAC] as documented in the worksheet ACM-3.PrivAsset | | | |
| **Instructions** | 1. List all the Test Items by writing their names in the column "Name" below. 2. For each Test Item, perform the assessment units described in the standard(s) applied and functionally confirm each case (C) listed below by indicating Y (yes) or N (no) in the respective column. | | | |
| 1. "Children are only issued with clearance by the operating system and/or system administrator when trying to access content from authorized entities via the privacy function that allows access to external content" 2. "The issuance of clearance is associated with the principle of least privileges" 3. "Changing the operating system and/or system administrator that is responsible for the issuance of clearance to the user can only be performed by the authorized system administrator." | | | | |
| **Name** | **C1** | **C2** | **C3** | **Evaluator's comments** |
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| **Assessment Unit Table - [AU.ACM-3.Generic]** | | | | |
| **Test Items** | Access control mechanisms (AccCtrl) with implementation category [IC.ACM-3.Generic] as documented in the worksheet ACM-3.PrivAsset | | | |
| **Instructions** | 1. List all the Test Items by writing their names in the column "Name" below. 2. For each Test Item, perform the assessment units described in the standard(s) applied and functionally confirm each case (C) listed below by indicating Y (yes) or N (no) in the respective column. | | | |
| 1. "Children can only access content from authorized entities via the privacy function that allows access to external content" 2. "The principle of least privileges for children is followed" 3. "Changing settings related to the access control mechanism or changes of privileges of children are only allowed to be performed by authorized users" | | | | |
| **Name** | **C1** | **C2** | **C3** | **Evaluator's comments** |
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| 1. Only Ys in the case columns (Cx) in the Assessment Unit Tables (True/False) | |  |
| **Assignment of verdict** | **PASS** assigned if statement 1 is True | |
| **FAIL** assigned if statement 1 is False | |
| **NOT APPLICABLE** assigned in other cases | |
| **Evaluator's comments** |  | |
| **Verdict** | |  |

### [ACM-4] Appropriate access control mechanisms

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| **ACM-4 Conceptual Assessment** | |
| **Standards** | EN 18031-2 |
| **Preconditions** | * None |
| **Identifiers: Worksheets** | * [E.Info.ACM-4.ACM]: ACM-4.PrivAsset * [E.Info.ACM-4.PrivacyAsset]: ACM-4.PrivAsset |
| **Test Items** | * Children's privacy functions (PrivFunc) and children's personal information (PersoInfo) "processed by the equipment which can be accessed by entities other than the children or their parents/guardians" as documented in the worksheet ACM-4.PrivAsset |
| **Instructions** | 1. List all the Test Items provided in the worksheet(s) by writing their names in the column "Name" below. Include the Decision Tree result in the column "DT result" (Pass, Fail or NA). Indicate in the column "Is justif. provided?" whether a justification is provided in the respective worksheet by writing Y(es) or N(o). 2. For each Test Item in the table, review the justification and indicate in the column "Is justif. correct?" whether it is correct. Provide comments where necessary. 3. Finally, indicate in the table of verdict below whether each statement is True or False and assign a verdict based on the "Assignment of verdict". |
| **Notes** | * If the device is not a toy nor a childcare equipment, the verdict must be NOT APPLICABLE. * The term "children's privacy function" is interpreted by Zealience as any privacy function on a children's toy that processes children's personal information. |

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| **Name** | **DT result (P/F/NA)** | **Is justif. provided? (Y/N)** | **Is justif. correct? (Y/N)** | **Evaluator's comments** |
| **[E.Info.ACM-4.PrivacyAsset]** | | | | |
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| 1. At least one P in column "DT result" (True/False) | |  |
| 2. No Fs in column "DT result" (True/False) | |  |
| 3. Only Ys in columns "Is justif. provided" and "Is justif. correct" (True/False) | |  |
| **Assignment of verdict** | **PASS** assigned if statements 1, 2 and 3 are True | |
| **FAIL** assigned if statements 2 or 3 are False | |
| **NOT APPLICABLE** assigned in other cases | |
| **Evaluator's comments** |  | |
| **Verdict** | |  |

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| **ACM-4 Functional Completeness Assessment** | |
| **Standards** | EN 18031-2 |
| **Preconditions** | * The equipment is in an operational state |
| **Identifiers: Worksheets** | * [E.Info.ACM-4.PrivacyAsset]: ACM-4.PrivAsset |
| **Test Items** | * Children's privacy functions (PrivFunc) and children's personal information (PersoInfo) "processed by the equipment which can be accessed by entities other than the children or their parents/guardians" as documented in the worksheet ACM-4.PrivAsset |
| **Instructions** | 1. Perform the assessment units described in the standard(s) applied and report in the table below any relevant Test Items that are not documented in the worksheet(s). 2. Finally, indicate in the table of verdict below whether each statement is True or False and assign a verdict based on the "Assignment of verdict". |
| **Notes** | * If the device is not a toy nor a childcare equipment, the verdict must be NOT APPLICABLE. * The term "children's privacy function" is interpreted by Zealience as any privacy function on a children's toy that processes children's personal information. |

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| **Relevant Test Items not documented** | **Evaluator's comments** |
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| 1. No entries in column "Relevant Test Items not documented" (True/False) | |  |
| **Assignment of verdict** | **PASS** assigned if statement 1 is True | |
| **FAIL** assigned if statement 1 is False | |
| **NOT APPLICABLE** assigned in other cases | |
| **Evaluator's comments** |  | |
| **Verdict** | |  |

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| **ACM-4 Functional Sufficiency Assessment** | |
| **Standards** | EN 18031-2 |
| **Preconditions** | * "The equipment is in an operational state" |
| **Identifiers: Worksheets** | * [E.Info.ACM-4.ACM]: ACM-4.PrivAsset |
| **Instructions** | 1. Refer to the instructions provided in the Assessments Unit Table(s) below and perform the actions required. 2. Once the Assessment Unit Table(s) completed, indicate in the table of verdict below whether each statement is True or False and assign a verdict based on the "Assignment of verdict". |
| **Notes** | * If the device is not a toy nor a childcare equipment, the verdict must be NOT APPLICABLE. * The term "children's privacy function" is interpreted by Zealience as any privacy function on a children's toy that processes children's personal information. |

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| **Assessment Unit Table - [AU.ACM-4.RBAC]** | | | | |
| **Test Items** | Access control mechanisms (AccCtrl) with implementation category [IC.ACM-4.RBAC] as documented in the worksheet ACM-4.PrivAsset | | | |
| **Instructions** | 1. List all the Test Items by writing their names in the column "Name" below. 2. For each Test Item, perform the assessment units described in the standard(s) applied and functionally confirm each case (C) listed below by indicating Y (yes) or N (no) in the respective column. | | | |
| 1. "Other entities' third-parties' are assigned to associated roles that restrict access to the children's privacy function and personal information processed by the equipment's privacy assets to the necessary for the operation of the equipment" 2. "Least privileges are associated with the other entities' third-parties' role" 3. "Changes in roles can only be performed by authorized users" | | | | |
| **Name** | **C1** | **C2** | **C3** | **Evaluator's comments** |
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| **Assessment Unit Table - [AU.ACM-4.DAC]** | | | | |
| **Test Items** | Access control mechanisms (AccCtrl) with implementation category [IC.ACM-4.DAC] as documented in the worksheet ACM-4.PrivAsset | | | |
| **Instructions** | 1. List all the Test Items by writing their names in the column "Name" below. 2. For each Test Item, perform the assessment units described in the standard(s) applied and functionally confirm each case (C) listed below by indicating Y (yes) or N (no) in the respective column. | | | |
| 1. "Other entities' third-parties' are assigned to associated identities that restrict access to the children's privacy function and personal information processed by the equipment's privacy assets to the necessary for the operation of the equipment" 2. "Least privileges are associated with the other entities' third-parties' identity" 3. "Changes in identities can only be performed by authorized users" | | | | |
| **Name** | **C1** | **C2** | **C3** | **Evaluator's comments** |
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| **Assessment Unit Table - [AU.ACM-4.MAC]** | | | | |
| **Test Items** | Access control mechanisms (AccCtrl) with implementation category [IC.ACM-4.MAC] as documented in the worksheet ACM-4.PrivAsset | | | |
| **Instructions** | 1. List all the Test Items by writing their names in the column "Name" below. 2. For each Test Item, perform the assessment units described in the standard(s) applied and functionally confirm each case (C) listed below by indicating Y (yes) or N (no) in the respective column. | | | |
| 1. "Other entities' third-parties' that want to access to the children's privacy function and personal information processed by the equipment's privacy assets are only issued with clearance by the operating system and/or system administrator if necessary for the operation of the equipment" 2. "The issuance of clearance is associated with the principle of least privileges" 3. "Changing the operating system and/or system administrator that is responsible for the issuance of clearance to the user can only be performed by the authorized system administrator" | | | | |
| **Name** | **C1** | **C2** | **C3** | **Evaluator's comments** |
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| **Assessment Unit Table - [AU.ACM-4.Generic]** | | | | |
| **Test Items** | Access control mechanisms (AccCtrl) with implementation category [IC.ACM-4.Generic] as documented in the worksheet ACM-4.PrivAsset | | | |
| **Instructions** | 1. List all the Test Items by writing their names in the column "Name" below. 2. For each Test Item, perform the assessment units described in the standard(s) applied and functionally confirm each case (C) listed below by indicating Y (yes) or N (no) in the respective column. | | | |
| 1. "Other entities' third-parties' can only access children's privacy function and personal information processed by the equipment's privacy assets if necessary for the operation of the equipment" 2. "The principle of least privileges for other entities' third-parties is followed" 3. "Changing settings related to the access control mechanism or changes of privileges of other entities' third-parties' are only allowed to be performed by authorized users" | | | | |
| **Name** | **C1** | **C2** | **C3** | **Evaluator's comments** |
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| 1. Only Ys in the case columns (Cx) in the Assessment Unit Tables (True/False) | |  |
| **Assignment of verdict** | **PASS** assigned if statement 1 is True | |
| **FAIL** assigned if statement 1 is False | |
| **NOT APPLICABLE** assigned in other cases | |
| **Evaluator's comments** |  | |
| **Verdict** | |  |

### [ACM-5] Appropriate access control mechanisms

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| **ACM-5 Conceptual Assessment** | |
| **Standards** | EN 18031-2 |
| **Preconditions** | * None |
| **Identifiers: Worksheets** | * [E.Info.ACM-5.ACM]: ACM-5.SecAsset * [E.Info.ACM-5.PrivacyAsset]: ACM-5.PrivAsset * [E.Info.ACM-5.SecurityAsset]: ACM-5.SecAsset |
| **Test Items** | * Privacy assets (PersoInfo, PrivFunc, PrivFuncConfig) accessible by children as documented in the worksheet ACM-5.PrivAsset * Security assets (SecFunc, SecParam) accessible by children as documented in the worksheet ACM-5.SecAsset |
| **Instructions** | 1. List all the Test Items provided in the worksheet(s) by writing their names in the column "Name" below. Include the Decision Tree result in the column "DT result" (Pass, Fail or NA). Indicate in the column "Is justif. provided?" whether a justification is provided in the respective worksheet by writing Y(es) or N(o). 2. For each Test Item in the table, review the justification and indicate in the column "Is justif. correct?" whether it is correct. Provide comments where necessary. 3. Finally, indicate in the table of verdict below whether each statement is True or False and assign a verdict based on the "Assignment of verdict". |
| **Notes** | * If the device is not a toy, the verdict must be NOT APPLICABLE. |

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| **Name** | **DT result (P/F/NA)** | **Is justif. provided? (Y/N)** | **Is justif. correct? (Y/N)** | **Evaluator's comments** |
| **[E.Info.ACM-5.PrivacyAsset]** | | | | |
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| **[E.Info.ACM-5.SecurityAsset]** | | | | |
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| 1. At least one P in column "DT result" (True/False) | |  |
| 2. No Fs in column "DT result" (True/False) | |  |
| 3. Only Ys in columns "Is justif. provided" and "Is justif. correct" (True/False) | |  |
| **Assignment of verdict** | **PASS** assigned if statements 1, 2 and 3 are True | |
| **FAIL** assigned if statements 2 or 3 are False | |
| **NOT APPLICABLE** assigned in other cases | |
| **Evaluator's comments** |  | |
| **Verdict** | |  |

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| **ACM-5 Functional Completeness Assessment** | |
| **Standards** | EN 18031-2 |
| **Preconditions** | * The equipment is in an operational state |
| **Identifiers: Worksheets** | * [E.Info.ACM-5.PrivacyAsset]: ACM-5.PrivAsset * [E.Info.ACM-5.SecurityAsset]: ACM-5.SecAsset |
| **Test Items** | * Privacy assets (PersoInfo, PrivFunc, PrivFuncConfig) accessible by children as documented in the worksheet ACM-5.PrivAsset * Security assets (SecFunc, SecParam) accessible by children as documented in the worksheet ACM-5.SecAsset |
| **Instructions** | 1. Perform the assessment units described in the standard(s) applied and report in the table below any relevant Test Items that are not documented in the worksheet(s). 2. Finally, indicate in the table of verdict below whether each statement is True or False and assign a verdict based on the "Assignment of verdict". |
| **Notes** | * If the device is not a toy, the verdict must be NOT APPLICABLE. |

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| **Relevant Test Items not documented** | **Evaluator's comments** |
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| 1. No entries in column "Relevant Test Items not documented" (True/False) | |  |
| **Assignment of verdict** | **PASS** assigned if statement 1 is True | |
| **FAIL** assigned if statement 1 is False | |
| **NOT APPLICABLE** assigned in other cases | |
| **Evaluator's comments** |  | |
| **Verdict** | |  |

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| **ACM-5 Functional Sufficiency Assessment** | |
| **Standards** | EN 18031-2 |
| **Preconditions** | * "The equipment is in an operational state" |
| **Identifiers: Worksheets** | * [E.Info.ACM-5.ACM]: ACM-5.PrivAsset * [E.Info.ACM-5.ACM]: ACM-5.SecAsset |
| **Instructions** | 1. Refer to the instructions provided in the Assessments Unit Table(s) below and perform the actions required. 2. Once the Assessment Unit Table(s) completed, indicate in the table of verdict below whether each statement is True or False and assign a verdict based on the "Assignment of verdict". |
| **Notes** | * If the device is not a toy, the verdict must be NOT APPLICABLE. |

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| **Assessment Unit Table - [AU.ACM-5.RBAC]** | | | | |
| **Test Items** | Access control mechanisms (AccCtrl) with implementation category [IC.ACM-5.RBAC] documented in the worksheets ACM-5.PrivAsset and ACM-5.SecAsset under [E.Info.ACM-5.ACM] | | | |
| **Instructions** | 1. List all the Test Items by writing their names in the column "Name" below. 2. For each Test Item, perform the assessment units described in the standard(s) applied and functionally confirm each case (C) listed below by indicating Y (yes) or N (no) in the respective column. | | | |
| 1. "All users are assigned to associated roles" 2. "Least privileges are associated with users' roles so that only an authorized entity is able to configure the role-based access control mechanisms to restrict children's access to the managed security assets and privacy assets, as justified in [E.Just.DT.ACM-5]" 3. "Changes in roles can only be performed by authorized users" | | | | |
| **Name** | **C1** | **C2** | **C3** | **Evaluator's comments** |
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| **Assessment Unit Table - [AU.ACM-5.DAC]** | | | | |
| **Test Items** | Access control mechanisms (AccCtrl) with implementation category [IC.ACM-5.DAC] documented in the worksheets ACM-5.PrivAsset and ACM-5.SecAsset under [E.Info.ACM-5.ACM] | | | |
| **Instructions** | 1. List all the Test Items by writing their names in the column "Name" below. 2. For each Test Item, perform the assessment units described in the standard(s) applied and functionally confirm each case (C) listed below by indicating Y (yes) or N (no) in the respective column. | | | |
| 1. "All users are assigned to associated identities" 2. "Least privileges are associated with users' identities so that only an authorized entity is able to configure the discretionary access control mechanisms to restrict children's access to the managed security assets and privacy assets, as justified in [E.Just.DT.ACM-5]" 3. "Changes in identities can only be performed by authorized users" | | | | |
| **Name** | **C1** | **C2** | **C3** | **Evaluator's comments** |
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| **Assessment Unit Table - [AU.ACM-5.MAC]** | | | | |
| **Test Items** | Access control mechanisms (AccCtrl) with implementation category [IC.ACM-5.MAC] documented in the worksheets ACM-5.PrivAsset and ACM-5.SecAsset under [E.Info.ACM-5.ACM] | | | |
| **Instructions** | 1. List all the Test Items by writing their names in the column "Name" below. 2. For each Test Item, perform the assessment units described in the standard(s) applied and functionally confirm each case (C) listed below by indicating Y (yes) or N (no) in the respective column. | | | |
| 1. "All users are only issued with clearance by the operating system and/or system administrator to configure the mandatory access control to restrict children's access to the managed security assets and privacy assets, as justified in [E.Just.DT.ACM-5], if this user is an authorized user" 2. "The issuance of clearance is associated with the principle of least privileges" 3. "Changing the operating system and/or system administrator that is responsible for the issuance of clearance to the user can only be performed by the authorized system administrator" | | | | |
| **Name** | **C1** | **C2** | **C3** | **Evaluator's comments** |
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| **Assessment Unit Table - [AU.ACM-5.Generic]** | | | | |
| **Test Items** | Access control mechanisms (AccCtrl) with implementation category [IC.ACM-5.Generic] documented in the worksheets ACM-5.PrivAsset and ACM-5.SecAsset under [E.Info.ACM-5.ACM] | | | |
| **Instructions** | 1. List all the Test Items by writing their names in the column "Name" below. 2. For each Test Item, perform the assessment units described in the standard(s) applied and functionally confirm each case (C) listed below by indicating Y (yes) or N (no) in the respective column. | | | |
| 1. "Users are only allowed to configure access control mechanisms to restrict children's access to the managed security assets and privacy assets if this user is an authorized user" 2. "The principle of least privileges for all users is followed" 3. "Changing settings related to the access control mechanism or changes of privileges of users are only allowed to be performed by authorized users" | | | | |
| **Name** | **C1** | **C2** | **C3** | **Evaluator's comments** |
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| 1. Only Ys in the case columns (Cx) in the Assessment Unit Tables (True/False) | |  |
| **Assignment of verdict** | **PASS** assigned if statement 1 is True | |
| **FAIL** assigned if statement 1 is False | |
| **NOT APPLICABLE** assigned in other cases | |
| **Evaluator's comments** |  | |
| **Verdict** | |  |

### [ACM-6] Appropriate access control mechanisms

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| **ACM-6 Conceptual Assessment** | |
| **Standards** | EN 18031-2 |
| **Preconditions** | * None |
| **Identifiers: Worksheets** | * [E.Info.ACM-6.ACM]: ACM-6.PrivAsset * [E.Info.ACM-6.PrivacyAsset]: ACM-6.PrivAsset |
| **Test Items** | * Privacy assets (PersoInfo, PrivFunc, PrivFuncConfig) that are "accessible by entities, other than the children or their parents or guardians" as documented in the worksheet ACM-6.PrivAsset |
| **Instructions** | 1. List all the Test Items provided in the worksheet(s) by writing their names in the column "Name" below. Include the Decision Tree result in the column "DT result" (Pass, Fail or NA). Indicate in the column "Is justif. provided?" whether a justification is provided in the respective worksheet by writing Y(es) or N(o). 2. For each Test Item in the table, review the justification and indicate in the column "Is justif. correct?" whether it is correct. Provide comments where necessary. 3. Finally, indicate in the table of verdict below whether each statement is True or False and assign a verdict based on the "Assignment of verdict". |
| **Notes** | * If the device is not a toy, the verdict must be NOT APPLICABLE. * This requirement ACM-6 focuses on "children's privacy assets", which encompass "children's personal information", "children's privacy function" and "children's privacy function configuration". * The term "children's privacy function" is interpreted by Zealience as any privacy function on a children's toy that processes children's personal information. * The term "children's privacy function configuration" is interpreted by Zealience as any privacy function configuration that defines the behavior of a privacy function that processes children's personal information |

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| **Name** | **DT result (P/F/NA)** | **Is justif. provided? (Y/N)** | **Is justif. correct? (Y/N)** | **Evaluator's comments** |
| **[E.Info.ACM-6.PrivacyAsset]** | | | | |
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| --- | --- | --- |
| 1. At least one P in column "DT result" (True/False) | |  |
| 2. No Fs in column "DT result" (True/False) | |  |
| 3. Only Ys in columns "Is justif. provided" and "Is justif. correct" (True/False) | |  |
| **Assignment of verdict** | **PASS** assigned if statements 1, 2 and 3 are True | |
| **FAIL** assigned if statements 2 or 3 are False | |
| **NOT APPLICABLE** assigned in other cases | |
| **Evaluator's comments** |  | |
| **Verdict** | |  |

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| **ACM-6 Functional Completeness Assessment** | |
| **Standards** | EN 18031-2 |
| **Preconditions** | * The equipment is in an operational state |
| **Identifiers: Worksheets** | * [E.Info.ACM-6.PrivacyAsset]: ACM-6.PrivAsset |
| **Test Items** | * Privacy assets (PersoInfo, PrivFunc, PrivFuncConfig) that are "accessible by entities, other than the children or their parents or guardians" as documented in the worksheet ACM-6.PrivAsset |
| **Instructions** | 1. Perform the assessment units described in the standard(s) applied and report in the table below any relevant Test Items that are not documented in the worksheet(s). 2. Finally, indicate in the table of verdict below whether each statement is True or False and assign a verdict based on the "Assignment of verdict". |
| **Notes** | * If the device is not a toy, the verdict must be NOT APPLICABLE. * This requirement ACM-6 focuses on "children's privacy assets", which encompass "children's personal information", "children's privacy function" and "children's privacy function configuration". * The term "children's privacy function" is interpreted by Zealience as any privacy function on a children's toy that processes children's personal information. * The term "children's privacy function configuration" is interpreted by Zealience as any privacy function configuration that defines the behavior of a privacy function that processes children's personal information |

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| **Relevant Test Items not documented** | **Evaluator's comments** |
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| 1. No entries in column "Relevant Test Items not documented" (True/False) | |  |
| **Assignment of verdict** | **PASS** assigned if statement 1 is True | |
| **FAIL** assigned if statement 1 is False | |
| **NOT APPLICABLE** assigned in other cases | |
| **Evaluator's comments** |  | |
| **Verdict** | |  |

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| **ACM-6 Functional Sufficiency Assessment** | |
| **Standards** | EN 18031-2 |
| **Preconditions** | * "The equipment is in an operational state" |
| **Identifiers: Worksheets** | * [E.Info.ACM-6.ACM]: ACM-6.PrivAsset |
| **Instructions** | 1. Refer to the instructions provided in the Assessments Unit Table(s) below and perform the actions required. 2. Once the Assessment Unit Table(s) completed, indicate in the table of verdict below whether each statement is True or False and assign a verdict based on the "Assignment of verdict". |
| **Notes** | * If the device is not a toy, the verdict must be NOT APPLICABLE. * This requirement ACM-6 focuses on "children's privacy assets", which encompass "children's personal information", "children's privacy function" and "children's privacy function configuration". * The term "children's privacy function" is interpreted by Zealience as any privacy function on a children's toy that processes children's personal information. * The term "children's privacy function configuration" is interpreted by Zealience as any privacy function configuration that defines the behavior of a privacy function that processes children's personal information |

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| **Assessment Unit Table - [AU.ACM-6.RBAC]** | | | | |
| **Test Items** | Access control mechanisms (AccCtrl) with implementation category [IC.ACM-6.RBAC] documented in the worksheet ACM-6.PrivAsset under [E.Info.ACM-6.ACM] | | | |
| **Instructions** | 1. List all the Test Items by writing their names in the column "Name" below. 2. For each Test Item, perform the assessment units described in the standard(s) applied and functionally confirm each case (C) listed below by indicating Y (yes) or N (no) in the respective column. | | | |
| 1. "All users are assigned to associated roles" 2. "Least privileges are associated with users' roles so that only an authorized entity is able to configure the role-based access control mechanisms to restrict the other entities' access to the managed children's privacy assets, as justified in [E.Just.DT.ACM-6]" 3. "Changes in roles can only be performed by authorized users" | | | | |
| **Name** | **C1** | **C2** | **C3** | **Evaluator's comments** |
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| **Assessment Unit Table - [AU.ACM-6.DAC]** | | | | |
| **Test Items** | Access control mechanisms (AccCtrl) with implementation category [IC.ACM-6.DAC] documented in the worksheet ACM-6.PrivAsset under [E.Info.ACM-6.ACM] | | | |
| **Instructions** | 1. List all the Test Items by writing their names in the column "Name" below. 2. For each Test Item, perform the assessment units described in the standard(s) applied and functionally confirm each case (C) listed below by indicating Y (yes) or N (no) in the respective column. | | | |
| 1. "All users are assigned to associated identities" 2. "Least privileges are associated with users' identities so that only an authorized entity is able to configure the discretionary access control mechanisms to restrict access to the other entities' access to the managed children's privacy assets, as justified in [E.Just.DT.ACM-6]" 3. "Changes in identities can only be performed by authorized users" | | | | |
| **Name** | **C1** | **C2** | **C3** | **Evaluator's comments** |
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| **Assessment Unit Table - [AU.ACM-6.MAC]** | | | | |
| **Test Items** | Access control mechanisms (AccCtrl) with implementation category [IC.ACM-6.MAC] documented in the worksheet ACM-6.PrivAsset under [E.Info.ACM-6.ACM] | | | |
| **Instructions** | 1. List all the Test Items by writing their names in the column "Name" below. 2. For each Test Item, perform the assessment units described in the standard(s) applied and functionally confirm each case (C) listed below by indicating Y (yes) or N (no) in the respective column. | | | |
| 1. "Users are only issued with clearance by the operating system and/or system administrator to configure the mandatory access control to restrict other entities' access to the children's managed security and privacy assets, as justified in [E.Just.DT.ACM-6], if this user is an authorized user" 2. "The issuance of clearance is associated with the principle of least privileges" 3. "Changing the operating system and/or system administrator that is responsible for the issuance of clearance to the user can only be performed by the authorized system administrator." | | | | |
| **Name** | **C1** | **C2** | **C3** | **Evaluator's comments** |
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| **Assessment Unit Table - [AU.ACM-6.Generic]** | | | | |
| **Test Items** | Access control mechanisms (AccCtrl) with implementation category [IC.ACM-6.Generic] documented in the worksheet ACM-6.PrivAsset under [E.Info.ACM-6.ACM] | | | |
| **Instructions** | 1. List all the Test Items by writing their names in the column "Name" below. 2. For each Test Item, perform the assessment units described in the standard(s) applied and functionally confirm each case (C) listed below by indicating Y (yes) or N (no) in the respective column. | | | |
| 1. "Users are only allowed to configure access control mechanisms to restrict other entities' access to the children's managed privacy assets if this user is an authorized user" 2. "The principle of least privileges for all users is followed" 3. "Changing settings related to the access control mechanism or changes of privileges of users are only allowed to be performed by authorized users" | | | | |
| **Name** | **C1** | **C2** | **C3** | **Evaluator's comments** |
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| 1. Only Ys in the case columns (Cx) in the Assessment Unit Tables (True/False) | |  |
| **Assignment of verdict** | **PASS** assigned if statement 1 is True | |
| **FAIL** assigned if statement 1 is False | |
| **NOT APPLICABLE** assigned in other cases | |
| **Evaluator's comments** |  | |
| **Verdict** | |  |

## [AUM] Authentication mechanism

### [AUM-1] Applicability of authentication mechanisms

### [AUM-1-1] Requirement network interface

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| --- | --- |
| **AUM-1-1 Conceptual Assessment** | |
| **Standards** | EN 18031-1, EN 18031-2, EN 18031-3 |
| **Preconditions** | * None |
| **Identifiers: Worksheets** | * [E.Info.AUM-1-1.ACM]: AUM-1-1.ACM |
| **Test Items** | * Access control mechanisms (AccCtrl) managing entities' access to assets via network interfaces as documented in the worksheet AUM-1-1.ACM |
| **Instructions** | 1. List all the Test Items provided in the worksheet(s) by writing their names in the column "Name" below. Include the Decision Tree result in the column "DT result" (Pass, Fail or NA). Indicate in the column "Is justif. provided?" whether a justification is provided in the respective worksheet by writing Y(es) or N(o). 2. For each Test Item in the table, review the justification and indicate in the column "Is justif. correct?" whether it is correct. Provide comments where necessary. 3. Finally, indicate in the table of verdict below whether each statement is True or False and assign a verdict based on the "Assignment of verdict". |

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| **Name** | **DT result (P/F/NA)** | **Is justif. provided? (Y/N)** | **Is justif. correct? (Y/N)** | **Evaluator's comments** |
| **[E.Info.AUM-1-1.ACM]** | | | | |
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| 1. At least one P in column "DT result" (True/False) | |  |
| 2. No Fs in column "DT result" (True/False) | |  |
| 3. Only Ys in columns "Is justif. provided" and "Is justif. correct" (True/False) | |  |
| **Assignment of verdict** | **PASS** assigned if statements 1, 2 and 3 are True | |
| **FAIL** assigned if statements 2 or 3 are False | |
| **NOT APPLICABLE** assigned in other cases | |
| **Evaluator's comments** |  | |
| **Verdict** | |  |

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| **AUM-1-1 Functional Completeness Assessment** | |
| **Standards** | EN 18031-1, EN 18031-2, EN 18031-3 |
| **Preconditions** | * "The equipment is in an operational state" |
| **Identifiers: Worksheets** | * [E.Info.AUM-1-1.ACM]: AUM-1-1.ACM |
| **Test Items** | * Access control mechanisms (AccCtrl) managing entities' access to assets via network interfaces as documented in the worksheet AUM-1-1.ACM |
| **Instructions** | 1. Perform the assessment units described in the standard(s) applied and report in the table below any relevant Test Items that are not documented in the worksheet(s). 2. Finally, indicate in the table of verdict below whether each statement is True or False and assign a verdict based on the "Assignment of verdict". |

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| **Relevant Test Items not documented** | **Evaluator's comments** |
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| 1. No entries in column "Relevant Test Items not documented" (True/False) | |  |
| **Assignment of verdict** | **PASS** assigned if statement 1 is True | |
| **FAIL** assigned if statement 1 is False | |
| **NOT APPLICABLE** assigned in other cases | |
| **Evaluator's comments** |  | |
| **Verdict** | |  |

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| **AUM-1-1 Functional Sufficiency Assessment** | |
| **Standards** | EN 18031-1, EN 18031-2, EN 18031-3 |
| **Preconditions** | * "The equipment is in an operational state" |
| **Identifiers: Worksheets** | * [E.Info.AUM-1-1.ACM]: AUM-1-1.ACM |
| **Instructions** | 1. Refer to the instructions provided in the Assessments Unit Table(s) below and perform the actions required. 2. Once the Assessment Unit Table(s) completed, indicate in the table of verdict below whether each statement is True or False and assign a verdict based on the "Assignment of verdict". |

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| **Assessment Unit Table - [AU.AUM-1-1.ACM]** | | |
| **Test Items** | Access control mechanisms (AccCtrl) managing entities' access to assets via network interfaces as documented in the worksheet AUM-1-1.ACM | |
| **Instructions** | 1. List all the Test Items by writing their names in the column "Name" below. 2. For each Test Item, perform the assessment units described in the standard(s) applied and functionally confirm each case (C) listed below by indicating Y (yes) or N (no) in the respective column. | |
| 1. The authentication mechanism(s) documented in [E.Info.AUM-1-1.ACM.AuthenticationMechanism] is implemented as described. | | |
| **Name** | **C1** | **Evaluator's comments** |
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| --- | --- | --- |
| 1. Only Ys in the case columns (Cx) in the Assessment Unit Tables (True/False) | |  |
| **Assignment of verdict** | **PASS** assigned if statement 1 is True | |
| **FAIL** assigned if statement 1 is False | |
| **NOT APPLICABLE** assigned in other cases | |
| **Evaluator's comments** |  | |
| **Verdict** | |  |

### [AUM-1-2] Requirement user interface

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| --- | --- |
| **AUM-1-2 Conceptual Assessment** | |
| **Standards** | EN 18031-1, EN 18031-2, EN 18031-3 |
| **Preconditions** | * None |
| **Identifiers: Worksheets** | * [E.Info.AUM-1-2.ACM]: AUM-1-2.ACM |
| **Test Items** | * Access control mechanisms (AccCtrl) managing entities' access to assets via user interfaces as documented in the worksheet AUM-1-2.ACM |
| **Instructions** | 1. List all the Test Items provided in the worksheet(s) by writing their names in the column "Name" below. Include the Decision Tree result in the column "DT result" (Pass, Fail or NA). Indicate in the column "Is justif. provided?" whether a justification is provided in the respective worksheet by writing Y(es) or N(o). 2. For each Test Item in the table, review the justification and indicate in the column "Is justif. correct?" whether it is correct. Provide comments where necessary. 3. Finally, indicate in the table of verdict below whether each statement is True or False and assign a verdict based on the "Assignment of verdict". |

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| --- | --- | --- | --- | --- |
| **Name** | **DT result (P/F/NA)** | **Is justif. provided? (Y/N)** | **Is justif. correct? (Y/N)** | **Evaluator's comments** |
| **[E.Info.AUM-1-2.ACM]** | | | | |
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| --- | --- | --- |
| 1. At least one P in column "DT result" (True/False) | |  |
| 2. No Fs in column "DT result" (True/False) | |  |
| 3. Only Ys in columns "Is justif. provided" and "Is justif. correct" (True/False) | |  |
| **Assignment of verdict** | **PASS** assigned if statements 1, 2 and 3 are True | |
| **FAIL** assigned if statements 2 or 3 are False | |
| **NOT APPLICABLE** assigned in other cases | |
| **Evaluator's comments** |  | |
| **Verdict** | |  |

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| --- | --- |
| **AUM-1-2 Functional Completeness Assessment** | |
| **Standards** | EN 18031-1, EN 18031-2, EN 18031-3 |
| **Preconditions** | * "The equipment is in an operational state" |
| **Identifiers: Worksheets** | * [E.Info.AUM-1-2.ACM]: AUM-1-2.ACM |
| **Test Items** | * Access control mechanisms (AccCtrl) managing entities' access over user interfaces as documented in the worksheet AUM-1-2.ACM |
| **Instructions** | 1. Perform the assessment units described in the standard(s) applied and report in the table below any relevant Test Items that are not documented in the worksheet(s). 2. Finally, indicate in the table of verdict below whether each statement is True or False and assign a verdict based on the "Assignment of verdict". |

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| --- | --- |
| **Relevant Test Items not documented** | **Evaluator's comments** |
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| --- | --- | --- |
| 1. No entries in column "Relevant Test Items not documented" (True/False) | |  |
| **Assignment of verdict** | **PASS** assigned if statement 1 is True | |
| **FAIL** assigned if statement 1 is False | |
| **NOT APPLICABLE** assigned in other cases | |
| **Evaluator's comments** |  | |
| **Verdict** | |  |

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| --- | --- |
| **AUM-1-2 Functional Sufficiency Assessment** | |
| **Standards** | EN 18031-1, EN 18031-2, EN 18031-3 |
| **Preconditions** | * "The equipment is in an operational state" |
| **Identifiers: Worksheets** | * [E.Info.AUM-1-2.ACM]: AUM-1-2.ACM |
| **Instructions** | 1. Refer to the instructions provided in the Assessments Unit Table(s) below and perform the actions required. 2. Once the Assessment Unit Table(s) completed, indicate in the table of verdict below whether each statement is True or False and assign a verdict based on the "Assignment of verdict". |

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| **Assessment Unit Table - [AU.AUM-1-2.ACM]** | | |
| **Test Items** | Access control mechanisms (AccCtrl) managing entities' access to assets via user interfaces as documented in the worksheet AUM-1-2.ACM | |
| **Instructions** | 1. List all the Test Items by writing their names in the column "Name" below. 2. For each Test Item, perform the assessment units described in the standard(s) applied and functionally confirm each case (C) listed below by indicating Y (yes) or N (no) in the respective column. | |
| 1. The authentication mechanism(s) documented in [E.Info.AUM-1-2.ACM.AuthenticationMechanism] is implemented as described | | |
| **Name** | **C1** | **Evaluator's comments** |
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| --- | --- | --- |
| 1. Only Ys in the case columns (Cx) in the Assessment Unit Tables (True/False) | |  |
| **Assignment of verdict** | **PASS** assigned if statement 1 is True | |
| **FAIL** assigned if statement 1 is False | |
| **NOT APPLICABLE** assigned in other cases | |
| **Evaluator's comments** |  | |
| **Verdict** | |  |

### [AUM-1-3] Requirement machine interface

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| --- | --- |
| **AUM-1-3 Conceptual Assessment** | |
| **Standards** | EN 18031-3 |
| **Preconditions** | * None |
| **Identifiers: Worksheets** | * [E.Info.AUM-1-3.ACM]: AUM-1-3.ACM |
| **Test Items** | * Access control mechanisms (AccCtrl) managing entities' access to assets via machine interfaces as documented in the worksheet AUM-1-3.ACM |
| **Instructions** | 1. List all the Test Items provided in the worksheet(s) by writing their names in the column "Name" below. Include the Decision Tree result in the column "DT result" (Pass, Fail or NA). Indicate in the column "Is justif. provided?" whether a justification is provided in the respective worksheet by writing Y(es) or N(o). 2. For each Test Item in the table, review the justification and indicate in the column "Is justif. correct?" whether it is correct. Provide comments where necessary. 3. Finally, indicate in the table of verdict below whether each statement is True or False and assign a verdict based on the "Assignment of verdict". |

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| --- | --- | --- | --- | --- |
| **Name** | **DT result (P/F/NA)** | **Is justif. provided? (Y/N)** | **Is justif. correct? (Y/N)** | **Evaluator's comments** |
| **[E.Info.AUM-1-3.ACM]** | | | | |
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| 1. At least one P in column "DT result" (True/False) | |  |
| 2. No Fs in column "DT result" (True/False) | |  |
| 3. Only Ys in columns "Is justif. provided" and "Is justif. correct" (True/False) | |  |
| **Assignment of verdict** | **PASS** assigned if statements 1, 2 and 3 are True | |
| **FAIL** assigned if statements 2 or 3 are False | |
| **NOT APPLICABLE** assigned in other cases | |
| **Evaluator's comments** |  | |
| **Verdict** | |  |

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| **AUM-1-3 Functional Completeness Assessment** | |
| **Standards** | EN 18031-3 |
| **Preconditions** | * "The equipment is in an operational state" |
| **Identifiers: Worksheets** | * [E.Info.AUM-1-3.ACM]: AUM-1-3.ACM |
| **Test Items** | * Access control mechanisms (AccCtrl) managing entities' access to assets via machine interfaces as documented in the worksheet AUM-1-3.ACM |
| **Instructions** | 1. Perform the assessment units described in the standard(s) applied and report in the table below any relevant Test Items that are not documented in the worksheet(s). 2. Finally, indicate in the table of verdict below whether each statement is True or False and assign a verdict based on the "Assignment of verdict". |

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| **Relevant Test Items not documented** | **Evaluator's comments** |
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| --- | --- | --- |
| 1. No entries in column "Relevant Test Items not documented" (True/False) | |  |
| **Assignment of verdict** | **PASS** assigned if statement 1 is True | |
| **FAIL** assigned if statement 1 is False | |
| **NOT APPLICABLE** assigned in other cases | |
| **Evaluator's comments** |  | |
| **Verdict** | |  |

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| --- | --- |
| **AUM-1-3 Functional Sufficiency Assessment** | |
| **Standards** | EN 18031-3 |
| **Preconditions** | * "The equipment is in an operational state" |
| **Identifiers: Worksheets** | * [E.Info.AUM-1-3.ACM]: AUM-1-3.ACM |
| **Instructions** | 1. Refer to the instructions provided in the Assessments Unit Table(s) below and perform the actions required. 2. Once the Assessment Unit Table(s) completed, indicate in the table of verdict below whether each statement is True or False and assign a verdict based on the "Assignment of verdict". |

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| **Assessment Unit Table - [AU.AUM-1-3.ACM]** | | |
| **Test Items** | Access control mechanisms (AccCtrl) managing entities' access over machine interfaces as documented in the worksheet AUM-1-3.ACM | |
| **Instructions** | 1. List all the Test Items by writing their names in the column "Name" below. 2. For each Test Item, perform the assessment units described in the standard(s) applied and functionally confirm each case (C) listed below by indicating Y (yes) or N (no) in the respective column. | |
| 1. The authentication mechanism(s) documented in [E.Info.AUM-1-3.ACM.AuthenticationMechanism] is implemented as described. | | |
| **Name** | **C1** | **Evaluator's comments** |
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| --- | --- | --- |
| 1. Only Ys in the case columns (Cx) in the Assessment Unit Tables (True/False) | |  |
| **Assignment of verdict** | **PASS** assigned if statement 1 is True | |
| **FAIL** assigned if statement 1 is False | |
| **NOT APPLICABLE** assigned in other cases | |
| **Evaluator's comments** |  | |
| **Verdict** | |  |

### [AUM-2] Appropriate authentication mechanisms

|  |  |
| --- | --- |
| **AUM-2 Conceptual Assessment** | |
| **Standards** | EN 18031-1, EN 18031-2, EN 18031-3 |
| **Preconditions** | * None |
| **Identifiers: Worksheets** | * [E.Info.AUM-2.AuthenticationMechanism]: AUM-2.AUM |
| **Test Items** | * Authentication mechanisms (AuthMech) documented in the worksheet AUM-2.AUM |
| **Instructions** | 1. List all the Test Items provided in the worksheet(s) by writing their names in the column "Name" below. Include the Decision Tree result in the column "DT result" (Pass, Fail or NA). Indicate in the column "Is justif. provided?" whether a justification is provided in the respective worksheet by writing Y(es) or N(o). 2. For each Test Item in the table, review the justification and indicate in the column "Is justif. correct?" whether it is correct. Provide comments where necessary. 3. Finally, indicate in the table of verdict below whether each statement is True or False and assign a verdict based on the "Assignment of verdict". |
| **Notes** | * The requirements AUM-2 (in EN 18031-1) and AUM-2-1 (in EN 18031-2 and EN 18031-3) and their assessments are identical. They can therefore be done at once here. |

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| --- | --- | --- | --- | --- |
| **Name** | **DT result (P/F)** | **Is justif. provided? (Y/N)** | **Is justif. correct? (Y/N)** | **Evaluator's comments** |
| **[E.Info.AUM-2.AuthenticationMechanism]** | | | | |
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| --- | --- | --- |
| 1. Only Ps in column "DT result" (True/False) | |  |
| 2. Only Ys in columns "Is justif. provided" and "Is justif. correct" (True/False) | |  |
| **Assignment of verdict** | **PASS** assigned if statements 1 and 2 are True | |
| **FAIL** assigned if statements 1 or 2 are False | |
| **NOT APPLICABLE** assigned in other cases | |
| **Evaluator's comments** |  | |
| **Verdict** | |  |

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| --- | --- |
| **AUM-2 Functional Sufficiency Assessment** | |
| **Standards** | EN 18031-1, EN 18031-2, EN 18031-3 |
| **Preconditions** | * "The equipment is in an operational state" |
| **Identifiers: Worksheets** | * [E.Info.AUM-2.AuthenticationMechanism]: AUM-2.AUM |
| **Instructions** | 1. Refer to the instructions provided in the Assessments Unit Table(s) below and perform the actions required. 2. Once the Assessment Unit Table(s) completed, indicate in the table of verdict below whether each statement is True or False and assign a verdict based on the "Assignment of verdict". |
| **Notes** | * The requirements AUM-2 (in EN 18031-1) and AUM-2-1 (in EN 18031-2 and EN 18031-3) and their assessments are identical. They can therefore be done at once here. |

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| **Assessment Unit Table - [AU.AUM-2. AuthenticationMechanism]** | | |
| **Test Items** | Authentication mechanisms (AuthMech) documented in the worksheet AUM-2.AUM | |
| **Instructions** | 1. List all the Test Items by writing their names in the column "Name" below. 2. For each Test Item, perform the assessment units described in the standard(s) applied and functionally confirm each case (C) listed below by indicating Y (yes) or N (no) in the respective column. | |
| 1. An authentication can be performed and the authentication mechanism is implemented as documented in [E.Info.AUM-2.AuthenticationMechanism] | | |
| **Name** | **C1** | **Evaluator's comments** |
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| --- | --- | --- |
| 1. Only Ys in the case columns (Cx) in the Assessment Unit Tables (True/False) | |  |
| **Assignment of verdict** | **PASS** assigned if statement 1 is True | |
| **FAIL** assigned if statement 1 is False | |
| **NOT APPLICABLE** assigned in other cases | |
| **Evaluator's comments** |  | |
| **Verdict** | |  |

### [AUM-2-2] Requirement two factor authentication

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| --- | --- |
| **AUM-2-2 Conceptual Assessment** | |
| **Standards** | EN 18031-2, EN 18031-3 |
| **Preconditions** | * None |
| **Identifiers: Worksheets** | * [E.Info.AUM-2-2.AuthenticationMechanism]: AUM-2-2.AUM |
| **Test Items** | * Authentication mechanisms (AuthMech) documented in the worksheet AUM-2-2.AUM |
| **Instructions** | 1. List all the Test Items provided in the worksheet(s) by writing their names in the column "Name" below. Include the Decision Tree result in the column "DT result" (Pass, Fail or NA). Indicate in the column "Is justif. provided?" whether a justification is provided in the respective worksheet by writing Y(es) or N(o). 2. For each Test Item in the table, review the justification and indicate in the column "Is justif. correct?" whether it is correct. Provide comments where necessary. 3. Finally, indicate in the table of verdict below whether each statement is True or False and assign a verdict based on the "Assignment of verdict". |
| **Notes** | * If only EN 18031-2 is applied: The verdict must be NOT APPLICABLE if the primary equipment's intended functionality is not specifically processing personal information of special categories. * When EN 18031-3 is applied, the verdict is either PASS or FAIL |

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| --- | --- | --- | --- | --- |
| **Name** | **DT result (P/F)** | **Is justif. provided? (Y/N)** | **Is justif. correct? (Y/N)** | **Evaluator's comments** |
| **[E.Info.AUM-2-2.AuthenticationMechanism]** | | | | |
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| --- | --- | --- |
| 1. Only Ps in column "DT result" (True/False) | |  |
| 2. Only Ys in columns "Is justif. provided" and "Is justif. correct" (True/False) | |  |
| **Assignment of verdict** | **PASS** assigned if statements 1 and 2 are True | |
| **FAIL** assigned if statements 1 or 2 are False | |
| **NOT APPLICABLE** assigned in other cases | |
| **Evaluator's comments** |  | |
| **Verdict** | |  |

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| --- | --- |
| **AUM-2-2 Functional Sufficiency Assessment** | |
| **Standards** | EN 18031-2, EN 18031-3 |
| **Preconditions** | * "The equipment is in an operational state" |
| **Identifiers: Worksheets** | * [E.Info.AUM-2-2.AuthenticationMechanism]: AUM-2-2.AUM |
| **Instructions** | 1. Refer to the instructions provided in the Assessments Unit Table(s) below and perform the actions required. 2. Once the Assessment Unit Table(s) completed, indicate in the table of verdict below whether each statement is True or False and assign a verdict based on the "Assignment of verdict". |
| **Notes** | * If only EN 18031-2 is applied: The verdict must be NOT APPLICABLE if the primary equipment's intended functionality is not specifically processing personal information of special categories. |

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| **Assessment Unit Table - [AU.AUM-2-2. AuthenticationMechanism]** | | |
| **Test Items** | Authentication mechanisms (AuthMech) documented in the worksheet AUM-2-2.AUM | |
| **Instructions** | 1. List all the Test Items by writing their names in the column "Name" below. 2. For each Test Item, perform the assessment units described in the standard(s) applied and functionally confirm each case (C) listed below by indicating Y (yes) or N (no) in the respective column. | |
| 1. An authentication can be performed using two factors and the authentication mechanism is implemented as documented in [E.Info.AUM-2-2.AuthenticationMechanism] | | |
| **Name** | **C1** | **Evaluator's comments** |
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| --- | --- | --- |
| 1. Only Ys in the case columns (Cx) in the Assessment Unit Tables (True/False) | |  |
| **Assignment of verdict** | **PASS** assigned if statement 1 is True | |
| **FAIL** assigned if statement 1 is False | |
| **NOT APPLICABLE** assigned in other cases | |
| **Evaluator's comments** |  | |
| **Verdict** | |  |

### [AUM-3] Authenticator validation

|  |  |
| --- | --- |
| **AUM-3 Conceptual Assessment** | |
| **Standards** | EN 18031-1, EN 18031-2, EN 18031-3 |
| **Preconditions** | * None |
| **Identifiers: Worksheets** | * [E.Info.AUM-3.AUM]: AUM-3.AUM |
| **Test Items** | * Authentication mechanisms (AuthMech) documented in the worksheet AUM-3.AUM |
| **Instructions** | 1. List all the Test Items provided in the worksheet(s) by writing their names in the column "Name" below. Include the Decision Tree result in the column "DT result" (Pass, Fail or NA). Indicate in the column "Is justif. provided?" whether a justification is provided in the respective worksheet by writing Y(es) or N(o). 2. For each Test Item in the table, review the justification and indicate in the column "Is justif. correct?" whether it is correct. Provide comments where necessary. 3. Finally, indicate in the table of verdict below whether each statement is True or False and assign a verdict based on the "Assignment of verdict". |

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| --- | --- | --- | --- | --- |
| **Name** | **DT result (P/F)** | **Is justif. provided? (Y/N)** | **Is justif. correct? (Y/N)** | **Evaluator's comments** |
| **[E.Info.AUM-3.AUM]** | | | | |
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| --- | --- | --- |
| 1. Only Ps in column "DT result" (True/False) | |  |
| 2. Only Ys in columns "Is justif. provided" and "Is justif. correct" (True/False) | |  |
| **Assignment of verdict** | **PASS** assigned if statements 1 and 2 are True | |
| **FAIL** assigned if statements 1 or 2 are False | |
| **NOT APPLICABLE** assigned in other cases | |
| **Evaluator's comments** |  | |
| **Verdict** | |  |

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| --- | --- |
| **AUM-3 Functional Sufficiency Assessment** | |
| **Standards** | EN 18031-1, EN 18031-2, EN 18031-3 |
| **Preconditions** | * "The equipment is in an operational state" |
| **Identifiers: Worksheets** | * [E.Info.AUM-3.AUM]: AUM-3.AUM |
| **Instructions** | 1. Refer to the instructions provided in the Assessments Unit Table(s) below and perform the actions required. 2. Once the Assessment Unit Table(s) completed, indicate in the table of verdict below whether each statement is True or False and assign a verdict based on the "Assignment of verdict". |

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| **Assessment Unit Table - [AU.AUM-3.Password]** | | | | | |
| **Test Items** | Authentication mechanisms (AuthMech) with implementation category [IC.AUM-3.Password] as documented in the worksheet AUM-3.AUM | | | | |
| **Instructions** | 1. List all the Test Items by writing their names in the column "Name" below. 2. For each Test Item, perform the assessment units described in the standard(s) applied and functionally confirm each case (C) listed below by indicating Y (yes) or N (no) in the respective column. | | | | |
| 1. Incorrect passwords can NOT be used for successful authentication 2. (If the confidentiality of the messages exchanged during authentication via network interfaces is not protected) a replay of a recorded successful authentication attempt can NOT be used for successful authentication 3. Parts of the correct password can NOT be used for authentication 4. (If different user accounts exist or can be created) passwords of other entities can NOT be used for authentication (if different user accounts do not exist or cannot be created, input '-') | | | | | |
| **Name** | **C1** | **C2** | **C3** | **C4** | **Evaluator's comments** |
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| **Assessment Unit Table - [AU.AUM-3.CertificatePrivateKey]** | | | | | |
| **Test Items** | Authentication mechanisms (AuthMech) with implementation category [IC.AUM-3.CertificatePrivateKey] as documented in the worksheet AUM-3.AUM | | | | |
| **Instructions** | 1. List all the Test Items by writing their names in the column "Name" below. 2. For each Test Item, perform the assessment units described in the standard(s) applied and functionally confirm each case (C) listed below by indicating Y (yes) or N (no) in the respective column. | | | | |
| 1. Incorrect private keys to a trusted certificate can NOT be used for successful authentication 2. (If the confidentiality of the messages exchanged during authentication via network interfaces is not protected) a replay of a recorded successful authentication attempt can NOT be used for successful authentication 3. Valid private keys to untrusted or invalid certificates can NOT be used for successful authentication 4. (If different user accounts exist or can be created) private keys to a trusted certificate of other entities can NOT be used for authentication (if different user accounts do not exist or cannot be created, input '-') | | | | | |
| **Name** | **C1** | **C2** | **C3** | **C4** | **Evaluator's comments** |
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| **Assessment Unit Table - [AU.AUM-3.Generic]** | | | | |
| **Test Items** | Authentication mechanisms (AuthMech) with implementation category [IC.AUM-3.Generic] as documented in the worksheet AUM-3.AUM | | | |
| **Instructions** | 1. List all the Test Items by writing their names in the column "Name" below. 2. For each Test Item, perform the assessment units described in the standard(s) applied and functionally confirm each case (C) listed below by indicating Y (yes) or N (no) in the respective column. | | | |
| 1. Incorrect authenticators can NOT be used for successful authentication 2. (If the confidentiality of the messages exchanged during authentication via network interfaces is not protected) a replay of a recorded successful authentication attempt can NOT be used for successful authentication 3. (If different user accounts exist or can be created) authenticators of other entities can NOT be used for authentication (if different user accounts do not exist or cannot be created, input '-') | | | | |
| **Name** | **C1** | **C2** | **C3** | **Evaluator's comments** |
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| --- | --- | --- |
| 1. Only Ys in the case columns (Cx) in the Assessment Unit Tables (True/False) | |  |
| **Assignment of verdict** | **PASS** assigned if statement 1 is True | |
| **FAIL** assigned if statement 1 is False | |
| **NOT APPLICABLE** assigned in other cases | |
| **Evaluator's comments** |  | |
| **Verdict** | |  |

### [AUM-4] Changing authenticators

|  |  |
| --- | --- |
| **AUM-4 Conceptual Assessment** | |
| **Standards** | EN 18031-1, EN 18031-2, EN 18031-3 |
| **Preconditions** | * None |
| **Identifiers: Worksheets** | * [E.Info.AUM-4.AUM]: AUM-4.AUM |
| **Test Items** | * Authentication mechanisms (AuthMech) documented in the worksheet AUM-4.AUM |
| **Instructions** | 1. List all the Test Items provided in the worksheet(s) by writing their names in the column "Name" below. Include the Decision Tree result in the column "DT result" (Pass, Fail or NA). Indicate in the column "Is justif. provided?" whether a justification is provided in the respective worksheet by writing Y(es) or N(o). 2. For each Test Item in the table, review the justification and indicate in the column "Is justif. correct?" whether it is correct. Provide comments where necessary. 3. Finally, indicate in the table of verdict below whether each statement is True or False and assign a verdict based on the "Assignment of verdict". |

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| --- | --- | --- | --- | --- |
| **Name** | **DT result (P/F/NA)** | **Is justif. provided? (Y/N)** | **Is justif. correct? (Y/N)** | **Evaluator's comments** |
| **[E.Info.AUM-4.AUM]** | | | | |
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| 1. At least one P in column "DT result" (True/False) | |  |
| 2. No Fs in column "DT result" (True/False) | |  |
| 3. Only Ys in columns "Is justif. provided" and "Is justif. correct" (True/False) | |  |
| **Assignment of verdict** | **PASS** assigned if statements 1, 2 and 3 are True | |
| **FAIL** assigned if statements 2 or 3 are False | |
| **NOT APPLICABLE** assigned in other cases | |
| **Evaluator's comments** |  | |
| **Verdict** | |  |

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| **AUM-4 Functional Sufficiency Assessment** | |
| **Standards** | EN 18031-1, EN 18031-2, EN 18031-3 |
| **Preconditions** | * "The equipment is in an operational state" |
| **Identifiers: Worksheets** | * [E.Info.AUM-4.AUM]: AUM-4.AUM |
| **Instructions** | 1. Refer to the instructions provided in the Assessments Unit Table(s) below and perform the actions required. 2. Once the Assessment Unit Table(s) completed, indicate in the table of verdict below whether each statement is True or False and assign a verdict based on the "Assignment of verdict". |

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| **Assessment Unit Table - [E.Info.AUM-4.AUM]** | | | | |
| **Test Items** | Authentication mechanisms (AuthMech) documented in the worksheet AUM-4.AUM | | | |
| **Instructions** | 1. List all the Test Items by writing their names in the column "Name" below. 2. For each Test Item, perform the assessment units described in the standard(s) applied and functionally confirm each case (C) listed below by indicating Y (yes) or N (no) in the respective column. | | | |
| 1. The authenticator can be changed as documented in [E.Info.AUM-4.AUM.AuthChange] 2. "The newly assigned authenticator grants access on each path to [...] assets" 3. "The previous authenticator does no longer grant access on any path to [...] assets" | | | | |
| **Name** | **C1** | **C2** | **C3** | **Evaluator's comments** |
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| --- | --- | --- |
| 1. Only Ys in the case columns (Cx) in the Assessment Unit Tables (True/False) | |  |
| **Assignment of verdict** | **PASS** assigned if statement 1 is True | |
| **FAIL** assigned if statement 1 is False | |
| **NOT APPLICABLE** assigned in other cases | |
| **Evaluator's comments** |  | |
| **Verdict** | |  |

### [AUM-5] Password strength

### [AUM-5-1] Requirement for factory default passwords

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| --- | --- |
| **AUM-5-1 Conceptual Assessment** | |
| **Standards** | EN 18031-1, EN 18031-2, EN 18031-3 |
| **Preconditions** | * None |
| **Identifiers: Worksheets** | * [E.Info.AUM-5-1.AUM]: AUM-5-1.AUM |
| **Test Items** | * Authentication mechanisms (AuthMech) documented in the worksheet AUM-5-1.AUM |
| **Instructions** | 1. List all the Test Items provided in the worksheet(s) by writing their names in the column "Name" below. Include the Decision Tree result in the column "DT result" (Pass, Fail or NA). Indicate in the column "Is justif. provided?" whether a justification is provided in the respective worksheet by writing Y(es) or N(o). 2. For each Test Item in the table, review the justification and indicate in the column "Is justif. correct?" whether it is correct. Provide comments where necessary. 3. Finally, indicate in the table of verdict below whether each statement is True or False and assign a verdict based on the "Assignment of verdict". |

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| --- | --- | --- | --- | --- |
| **Name** | **DT result (P/F)** | **Is justif. provided? (Y/N)** | **Is justif. correct? (Y/N)** | **Evaluator's comments** |
| **[E.Info.AUM-5-1.AUM]** | | | | |
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| 1. Only Ps in column "DT result" (True/False) | |  |
| 2. Only Ys in columns "Is justif. provided" and "Is justif. correct" (True/False) | |  |
| **Assignment of verdict** | **PASS** assigned if statements 1 and 2 are True | |
| **FAIL** assigned if statements 1 or 2 are False | |
| **NOT APPLICABLE** assigned in other cases | |
| **Evaluator's comments** |  | |
| **Verdict** | |  |

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| --- | --- |
| **AUM-5-1 Functional Sufficiency Assessment** | |
| **Standards** | EN 18031-1, EN 18031-2, EN 18031-3 |
| **Preconditions** | * "The equipment is in the factory default state and not commissioned" * (If applicable) "The equipment's actual factory default password is available" |
| **Identifiers: Worksheets** | * [E.Info.AUM-5-1.AUM]: AUM-5-1.AUM |
| **Instructions** | 1. Refer to the instructions provided in the Assessments Unit Table(s) below and perform the actions required. 2. Once the Assessment Unit Table(s) completed, indicate in the table of verdict below whether each statement is True or False and assign a verdict based on the "Assignment of verdict". |

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| **Assessment Unit Table - [AU.AUM-5-1.UniqueBestPractice]** | | | |
| **Test Items** | Authentication mechanisms (AuthMech) with implementation category [IC.AUM-5-1.UniqueBestPractice] as documented in the worksheet AUM-5-1.AUM | | |
| **Instructions** | 1. List all the Test Items by writing their names in the column "Name" below. 2. For each Test Item, perform the assessment units described in the standard(s) applied and functionally confirm each case (C) listed below by indicating Y (yes) or N (no) in the respective column. | | |
| 1. The actual factory default passwords are matching the description of the implementation documented in [E.Info.AUM-5-1.AUM.PwdProperty] 2. The actual factory default passwords are valid, i.e. they can be used after putting the equipment into service | | | |
| **Name** | **C1** | **C2** | **Evaluator's comments** |
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| --- | --- | --- |
| **Assessment Unit Table - [AU.AUM-5-1.EnforceSettingFirstUse]** | | |
| **Test Items** | Authentication mechanisms (AuthMech) with implementation category [IC.AUM-5-1.EnforceSettingFirstUse] as documented in the worksheet AUM-5-1.AUM | |
| **Instructions** | 1. List all the Test Items by writing their names in the column "Name" below. 2. For each Test Item, perform the assessment units described in the standard(s) applied and functionally confirm each case (C) listed below by indicating Y (yes) or N (no) in the respective column. | |
| 1. The factory default password is enforced to be changed after putting the equipment into service (Note: The assessment unit in the standards requires to "using the factory default passwords", however it seems to be missing to verify that factory default passwords are actually enforced to be changed.) | | |
| **Name** | **C1** | **Evaluator's comments** |
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| --- | --- | --- |
| 1. Only Ys in the case columns (Cx) in the Assessment Unit Tables (True/False) | |  |
| **Assignment of verdict** | **PASS** assigned if statement 1 is True | |
| **FAIL** assigned if statement 1 is False | |
| **NOT APPLICABLE** assigned in other cases | |
| **Evaluator's comments** |  | |
| **Verdict** | |  |

### [AUM-5-2] Requirement for non-factory default passwords

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| --- | --- |
| **AUM-5-2 Conceptual Assessment** | |
| **Standards** | EN 18031-1, EN 18031-2, EN 18031-3 |
| **Preconditions** | * None |
| **Identifiers: Worksheets** | * [E.Info.AUM-5-2.AUM]: AUM-5-2.AUM |
| **Test Items** | * Authentication mechanisms (AuthMech) documented in the worksheet AUM-5-2.AUM |
| **Instructions** | 1. List all the Test Items provided in the worksheet(s) by writing their names in the column "Name" below. Include the Decision Tree result in the column "DT result" (Pass, Fail or NA). Indicate in the column "Is justif. provided?" whether a justification is provided in the respective worksheet by writing Y(es) or N(o). 2. For each Test Item in the table, review the justification and indicate in the column "Is justif. correct?" whether it is correct. Provide comments where necessary. 3. Finally, indicate in the table of verdict below whether each statement is True or False and assign a verdict based on the "Assignment of verdict". |

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| --- | --- | --- | --- | --- |
| **Name** | **DT result (P/F)** | **Is justif. provided? (Y/N)** | **Is justif. correct? (Y/N)** | **Evaluator's comments** |
| **[E.Info.AUM-5-2.AUM]** | | | | |
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| --- | --- | --- |
| 1. Only Ps in column "DT result" (True/False) | |  |
| 2. Only Ys in columns "Is justif. provided" and "Is justif. correct" (True/False) | |  |
| **Assignment of verdict** | **PASS** assigned if statements 1 and 2 are True | |
| **FAIL** assigned if statements 1 or 2 are False | |
| **NOT APPLICABLE** assigned in other cases | |
| **Evaluator's comments** |  | |
| **Verdict** | |  |

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| --- | --- |
| **AUM-5-2 Functional Sufficiency Assessment** | |
| **Standards** | EN 18031-1, EN 18031-2, EN 18031-3 |
| **Preconditions** | * "The equipment is in the factory default state and not commissioned" |
| **Identifiers: Worksheets** | * [E.Info.AUM-5-2.AUM]: AUM-5-2.AUM |
| **Instructions** | 1. Refer to the instructions provided in the Assessments Unit Table(s) below and perform the actions required. 2. Once the Assessment Unit Table(s) completed, indicate in the table of verdict below whether each statement is True or False and assign a verdict based on the "Assignment of verdict". |

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| **Assessment Unit Table - [AU.AUM-5-2.SettingFirstUse]** | | | |
| **Test Items** | Authentication mechanisms (AuthMech) with implementation category [IC.AUM-5-2.SettingFirstUse] as documented in the worksheet AUM-5-2.AUM | | |
| **Instructions** | 1. List all the Test Items by writing their names in the column "Name" below. 2. For each Test Item, perform the assessment units described in the standard(s) applied and functionally confirm each case (C) listed below by indicating Y (yes) or N (no) in the respective column. | | |
| 1. The non-factory default password is enforced to be set "before or on first use" 2. The non-factory default password is enforced to be set "before the equipment is logically connected to a network" | | | |
| **Name** | **C1** | **C2** | **Evaluator's comments** |
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| --- | --- | --- |
| **Assessment Unit Table - [AU.AUM-5-2.DefinedAuthEntity]** | | |
| **Test Items** | Authentication mechanisms (AuthMech) with implementation category [IC.AUM-5-2.DefinedAuthEntity] as documented in the worksheet AUM-5-2.AUM | |
| **Instructions** | 1. List all the Test Items by writing their names in the column "Name" below. 2. For each Test Item, perform the assessment units described in the standard(s) applied and functionally confirm each case (C) listed below by indicating Y (yes) or N (no) in the respective column. | |
| 1. The non-factory default password can only be defined by an authorized entity | | |
| **Name** | **C1** | **Evaluator's comments** |
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| **Assessment Unit Table - [AU.AUM-5-2.EquipmentGenerated]** | | | |
| **Test Items** | Authentication mechanisms (AuthMech) with implementation category [IC.AUM-5-2.EquipmentGenerated] as documented in the worksheet AUM-5-2.AUM | | |
| **Instructions** | 1. List all the Test Items by writing their names in the column "Name" below. 2. For each Test Item, perform the assessment units described in the standard(s) applied and functionally confirm each case (C) listed below by indicating Y (yes) or N (no) in the respective column. | | |
| 1. The generation of the non-factory default password by the equipment matches the description provided in [E.Info.AUM-5-2.AUM.PwdProperty] 2. The non-factory default password can only be retrieved by "an authorized entity within a network where access is limited to authorized entities" | | | |
| **Name** | **C1** | **C2** | **Evaluator's comments** |
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| 1. Only Ys in the case columns (Cx) in the Assessment Unit Tables (True/False) | |  |
| **Assignment of verdict** | **PASS** assigned if statement 1 is True | |
| **FAIL** assigned if statement 1 is False | |
| **NOT APPLICABLE** assigned in other cases | |
| **Evaluator's comments** |  | |
| **Verdict** | |  |

### [AUM-6] Brute force protection

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| --- | --- |
| **AUM-6 Conceptual Assessment** | |
| **Standards** | EN 18031-1, EN 18031-2, EN 18031-3 |
| **Preconditions** | * None |
| **Identifiers: Worksheets** | * [E.Info.AUM-6.AUM]: AUM-6.AUM |
| **Test Items** | * Authentication mechanisms (AuthMech) documented in the worksheet AUM-6.AUM |
| **Instructions** | 1. List all the Test Items provided in the worksheet(s) by writing their names in the column "Name" below. Include the Decision Tree result in the column "DT result" (Pass, Fail or NA). Indicate in the column "Is justif. provided?" whether a justification is provided in the respective worksheet by writing Y(es) or N(o). 2. For each Test Item in the table, review the justification and indicate in the column "Is justif. correct?" whether it is correct. Provide comments where necessary. 3. Finally, indicate in the table of verdict below whether each statement is True or False and assign a verdict based on the "Assignment of verdict". |

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| **Name** | **DT result (P/F)** | **Is justif. provided? (Y/N)** | **Is justif. correct? (Y/N)** | **Evaluator's comments** |
| **[E.Info.AUM-6.AUM]** | | | | |
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| 1. Only Ps in column "DT result" (True/False) | |  |
| 2. Only Ys in columns "Is justif. provided" and "Is justif. correct" (True/False) | |  |
| **Assignment of verdict** | **PASS** assigned if statements 1 and 2 are True | |
| **FAIL** assigned if statements 1 or 2 are False | |
| **NOT APPLICABLE** assigned in other cases | |
| **Evaluator's comments** |  | |
| **Verdict** | |  |

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| --- | --- |
| **AUM-6 Functional Sufficiency Assessment** | |
| **Standards** | EN 18031-1, EN 18031-2, EN 18031-3 |
| **Preconditions** | * "The equipment is in an operational state" |
| **Identifiers: Worksheets** | * [E.Info.AUM-6.AUM]: AUM-6.AUM |
| **Instructions** | 1. Refer to the instructions provided in the Assessments Unit Table(s) below and perform the actions required. 2. Once the Assessment Unit Table(s) completed, indicate in the table of verdict below whether each statement is True or False and assign a verdict based on the "Assignment of verdict". |
| **Notes** | * An authentication mechanism may rely on multiple implementation categories to prevent brute force attacks. For example, it can use both a time delay ([IC.AUM-6.TimeDelay]) and limit the number of attempts ([IC.AUM-6.LimitedAttempts]). In such cases, the same authentication mechanism needs to be listed in each relevant Assessment Unit Table below so that all its implementation categories will be assessed independently. |

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| **Assessment Unit Table - [AU.AUM-6.TimeDelay]** | | |
| **Test Items** | Authentication mechanisms (AuthMech) with implementation category [IC.AUM-6.TimeDelay] as documented in the worksheet AUM-6.AUM | |
| **Instructions** | 1. List all the Test Items by writing their names in the column "Name" below. 2. For each Test Item, perform the assessment units described in the standard(s) applied and functionally confirm each case (C) listed below by indicating Y (yes) or N (no) in the respective column. | |
| 1. The time delays between consecutive failed authentication attempts match the value documented in [E.Info.AUM-6.AUM.BFProtection] | | |
| **Name** | **C1** | **Evaluator's comments** |
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| **Assessment Unit Table - [AU.AUM-6.LimitedAttempts]** | | |
| **Test Items** | Authentication mechanisms (AuthMech) with implementation category [IC.AUM-6.LimitedAttempts] as documented in the worksheet AUM-6.AUM | |
| **Instructions** | 1. List all the Test Items by writing their names in the column "Name" below. 2. For each Test Item, perform the assessment units described in the standard(s) applied and functionally confirm each case (C) listed below by indicating Y (yes) or N (no) in the respective column. | |
| 1. The "number [of] consecutive failed attempts before the equipment prevents further attempts" matches the value documented in [E.Info.AUM-6.AUM.BFProtection] | | |
| **Name** | **C1** | **Evaluator's comments** |
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| **Assessment Unit Table - [AU.AUM-6.AuthenticatorComplexity]** | | | |
| **Test Items** | Authentication mechanisms (AuthMech) with implementation category [IC.AUM-6.AuthenticatorComplexity] as documented in the worksheet AUM-6.AUM | | |
| **Instructions** | 1. List all the Test Items by writing their names in the column "Name" below. 2. For each Test Item, perform the assessment units described in the standard(s) applied and functionally confirm each case (C) listed below by indicating Y (yes) or N (no) in the respective column. | | |
| 1. Only authenticators which meet the complexity criteria documented in [E.Info.AUM-6.AUM.BFProtection] are accepted 2. The authentication mechanism is resilient against brute force attacks | | | |
| **Name** | **C1** | **C2** | **Evaluator's comments** |
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| **Assessment Unit Table - [AU.AUM-6.Generic]** | | |
| **Test Items** | Authentication mechanisms (AuthMech) with implementation category [IC.AUM-6.Generic] as documented in the worksheet AUM-6.AUM | |
| **Instructions** | 1. List all the Test Items by writing their names in the column "Name" below. 2. For each Test Item, perform the assessment units described in the standard(s) applied and functionally confirm each case (C) listed below by indicating Y (yes) or N (no) in the respective column. | |
| 1. The authentication mechanism is resilient against brute force attacks | | |
| **Name** | **C1** | **Evaluator's comments** |
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| 1. Only Ys in the case columns (Cx) in the Assessment Unit Tables (True/False) | |  |
| **Assignment of verdict** | **PASS** assigned if statement 1 is True | |
| **FAIL** assigned if statement 1 is False | |
| **NOT APPLICABLE** assigned in other cases | |
| **Evaluator's comments** |  | |
| **Verdict** | |  |

## [SUM] Secure update mechanism

### [SUM-1] Applicability of update mechanisms

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| --- | --- |
| **SUM-1 Conceptual Assessment** | |
| **Standards** | EN 18031-1, EN 18031-2, EN 18031-3 |
| **Preconditions** | * None |
| **Identifiers: Worksheets** | * [E.Info.SUM-1.PartOfSoftw]: SUM-1.PartOfSW |
| **Test Items** | * Software components (SoftComp) documented in the worksheet SUM-1.PartOfSW |
| **Instructions** | 1. List all the Test Items provided in the worksheet(s) by writing their names in the column "Name" below. Include the Decision Tree result in the column "DT result" (Pass, Fail or NA). Indicate in the column "Is justif. provided?" whether a justification is provided in the respective worksheet by writing Y(es) or N(o). 2. For each Test Item in the table, review the justification and indicate in the column "Is justif. correct?" whether it is correct. Provide comments where necessary. 3. Finally, indicate in the table of verdict below whether each statement is True or False and assign a verdict based on the "Assignment of verdict". |

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| **Name** | **DT result (P/F/NA)** | **Is justif. provided? (Y/N)** | **Is justif. correct? (Y/N)** | **Evaluator's comments** |
| **[E.Info.SUM-1.PartOfSoftw]** | | | | |
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| 1. At least one P in column "DT result" (True/False) | |  |
| 2. No Fs in column "DT result" (True/False) | |  |
| 3. Only Ys in columns "Is justif. provided" and "Is justif. correct" (True/False) | |  |
| **Assignment of verdict** | **PASS** assigned if statements 1, 2 and 3 are True | |
| **FAIL** assigned if statements 2 or 3 are False | |
| **NOT APPLICABLE** assigned in other cases | |
| **Evaluator's comments** |  | |
| **Verdict** | |  |

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| --- | --- |
| **SUM-1 Functional Sufficiency Assessment** | |
| **Standards** | EN 18031-1, EN 18031-2, EN 18031-3 |
| **Preconditions** | * "The equipment is in an operational state" * "For each update mechanism described in [E.Info.SUM-1.PartOfSoftw.SUM], the manufacturer provides updated software (in the following: SW-a) which is integrity-protected and authenticity-protected using a mechanism that the equipment natively supports" |
| **Identifiers: Worksheets** | * [E.Info.SUM-1.PartOfSoftw]: SUM-1.PartOfSW |
| **Instructions** | 1. Refer to the instructions provided in the Assessments Unit Table(s) below and perform the actions required. 2. Once the Assessment Unit Table(s) completed, indicate in the table of verdict below whether each statement is True or False and assign a verdict based on the "Assignment of verdict". |
| **Notes** | * There seems to be a mistake in the Assessment Units of the standards. It reads "For each update mechanism documented in [E.Info.SUM-1.PartOfSoftw.SUM] which ends with a PASS verdict in the SUM-1 conceptual assessment, install SW-a on the equipment." This seems incorrect since a PASS verdict means that, for a given software component (i.e. part of software), the equipment provides at least one update mechanism for updating it. Moreover, in [E.Info.SUM-1.PartOfSoftw] are documented software components which may have multiple update mechanisms documented in [E.Info.SUM-1.PartOfSoftw.SUM]. Therefore, Zealience believes that the correct assessment unit should be: For each update mechanism documented in [E.Info.SUM-1.PartOfSoftw.SUM], perform an update by installing SW-a and functionally confirm that the related software component(s) has been successfully updated. |

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| **Assessment Unit Table - [E.Info.SUM-1.PartOfSoftw]** | | |
| **Test Items** | Update mechanisms (UpdMech) documented in the worksheet SUM-1.PartOfSW | |
| **Instructions** | 1. List all the Test Items by writing their names in the column "Name" below. 2. For each Test Item, perform the assessment units described in the standard(s) applied and functionally confirm each case (C) listed below by indicating Y (yes) or N (no) in the respective column. | |
| 1. The installation of the update (SW-a) is successful and the related software component(s) is effectively updated. | | |
| **Name** | **C1** | **Evaluator's comments** |
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| --- | --- | --- |
| 1. Only Ys in the case columns (Cx) in the Assessment Unit Tables (True/False) | |  |
| **Assignment of verdict** | **PASS** assigned if statement 1 is True | |
| **FAIL** assigned if statement 1 is False | |
| **NOT APPLICABLE** assigned in other cases | |
| **Evaluator's comments** |  | |
| **Verdict** | |  |

### [SUM-2] Secure updates

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| --- | --- |
| **SUM-2 Conceptual Assessment** | |
| **Standards** | EN 18031-1, EN 18031-2, EN 18031-3 |
| **Preconditions** | * None |
| **Identifiers: Worksheets** | * [E.Info.SUM-2.SUM]: SUM-2.SUM |
| **Test Items** | * Update mechanisms (UpdMech) documented in the worksheet SUM-2.SUM |
| **Instructions** | 1. List all the Test Items provided in the worksheet(s) by writing their names in the column "Name" below. Include the Decision Tree result in the column "DT result" (Pass, Fail or NA). Indicate in the column "Is justif. provided?" whether a justification is provided in the respective worksheet by writing Y(es) or N(o). 2. For each Test Item in the table, review the justification and indicate in the column "Is justif. correct?" whether it is correct. Provide comments where necessary. 3. Finally, indicate in the table of verdict below whether each statement is True or False and assign a verdict based on the "Assignment of verdict". |

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| **Name** | **DT result (P/F)** | **Is justif. provided? (Y/N)** | **Is justif. correct? (Y/N)** | **Evaluator's comments** |
| **[E.Info.SUM-2.SUM]** | | | | |
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| 1. Only Ps in column "DT result" (True/False) | |  |
| 2. Only Ys in columns "Is justif. provided" and "Is justif. correct" (True/False) | |  |
| **Assignment of verdict** | **PASS** assigned if statements 1 and 2 are True | |
| **FAIL** assigned if statements 1 or 2 are False | |
| **NOT APPLICABLE** assigned in other cases | |
| **Evaluator's comments** |  | |
| **Verdict** | |  |

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| **SUM-2 Functional Sufficiency Assessment** | |
| **Standards** | EN 18031-1, EN 18031-2, EN 18031-3 |
| **Preconditions** | * "The equipment is in an operational state" * "For each update mechanism, the manufacturer provides updated software" |
| **Identifiers: Worksheets** | * [E.Info.SUM-2.SUM]: SUM-2.SUM |
| **Instructions** | 1. Refer to the instructions provided in the Assessments Unit Table(s) below and perform the actions required. 2. Once the Assessment Unit Table(s) completed, indicate in the table of verdict below whether each statement is True or False and assign a verdict based on the "Assignment of verdict". |

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| **Assessment Unit Table - [AU.SUM-2.Sign]** | | | | | | |
| **Test Items** | Update mechanisms (UpdMech) with implementation category [IC.SUM-2.AuthIntVal.Sign] as documented in the worksheet SUM-2.SUM | | | | | |
| **Instructions** | 1. List all the Test Items by writing their names in the column "Name" below. 2. For each Test Item, perform the assessment units described in the standard(s) applied and functionally confirm each case (C) listed below by indicating Y (yes) or N (no) in the respective column. | | | | | |
| 1. "It is implemented using best practice cryptography according to CRY-1" 2. "An unsigned software update is not installed" 3. "A software update with a modified signature is not installed" 4. "A modified software update with a valid signature for the unmodified software update is not installed" 5. "A software update with a signature from an unauthorized entity is not installed" | | | | | | |
| **Name** | **C1** | **C2** | **C3** | **C4** | **C5** | **Evaluator's comments** |
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| **Assessment Unit Table - [AU.SUM-2.SecChan]** | | | | | |
| **Test Items** | Update mechanisms (UpdMech) with implementation category [IC.SUM-2.AuthIntVal.SecChan] as documented in the worksheet SUM-2.SUM | | | | |
| **Instructions** | 1. List all the Test Items by writing their names in the column "Name" below. 2. For each Test Item, perform the assessment units described in the standard(s) applied and functionally confirm each case (C) listed below by indicating Y (yes) or N (no) in the respective column. | | | | |
| 1. "It is implemented using the secure communication mechanism according to SCM" 2. "A software update from an unauthorized source is not installed" 3. "The secure communication channel does not allow to impersonate the authorized software updates source via a man-in-the-middle attack" 4. "A software update that is modified during communication is not installed" | | | | | |
| **Name** | **C1** | **C2** | **C3** | **C4** | **Evaluator's comments** |
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| **Assessment Unit Table - [AU.SUM-2.AccContMech]** | | | | | |
| **Test Items** | Update mechanisms (UpdMech) with implementation category [IC.SUM-2.AuthIntVal.AccContMech] as documented in the worksheet SUM-2.SUM | | | | |
| **Instructions** | 1. List all the Test Items by writing their names in the column "Name" below. 2. For each Test Item, perform the assessment units described in the standard(s) applied and functionally confirm each case (C) listed below by indicating Y (yes) or N (no) in the respective column. | | | | |
| 1. "It is implemented using the access control mechanism according to ACM" 2. "A modified software update with a valid hash for the unmodified software update is not installed" 3. "A software update with a hash generated by an unsupported hash function is not installed" 4. "A software update provided by an unauthorized entity is not installed" | | | | | |
| **Name** | **C1** | **C2** | **C3** | **C4** | **Evaluator's comments** |
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| **Assessment Unit Table - [AU.SUM-2.Generic]** | | | |
| **Test Items** | Update mechanisms (UpdMech) with implementation category [IC.SUM-2.AuthIntVal.Generic] documented in the worksheet SUM-2.SUM | | |
| **Instructions** | 1. List all the Test Items by writing their names in the column "Name" below. 2. For each Test Item, perform the assessment units described in the standard(s) applied and functionally confirm each case (C) listed below by indicating Y (yes) or N (no) in the respective column. | | |
| 1. "A software update whose integrity is not valid is not installed" 2. "A software update whose authenticity is not valid is not installed" | | | |
| **Name** | **C1** | **C2** | **Evaluator's comments** |
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| 1. Only Ys in the case columns (Cx) in the Assessment Unit Tables (True/False) | |  |
| **Assignment of verdict** | **PASS** assigned if statement 1 is True | |
| **FAIL** assigned if statement 1 is False | |
| **NOT APPLICABLE** assigned in other cases | |
| **Evaluator's comments** |  | |
| **Verdict** | |  |

### [SUM-3] Automated updates

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| --- | --- |
| **SUM-3 Conceptual Assessment** | |
| **Standards** | EN 18031-1, EN 18031-2, EN 18031-3 |
| **Preconditions** | * None |
| **Identifiers: Worksheets** | * [E.Info.SUM-3.SUM]: SUM-3.SUM |
| **Test Items** | * Update mechanisms (UpdMech) documented in the worksheet SUM-3.SUM |
| **Instructions** | 1. List all the Test Items provided in the worksheet(s) by writing their names in the column "Name" below. Include the Decision Tree result in the column "DT result" (Pass, Fail or NA). Indicate in the column "Is justif. provided?" whether a justification is provided in the respective worksheet by writing Y(es) or N(o). 2. For each Test Item in the table, review the justification and indicate in the column "Is justif. correct?" whether it is correct. Provide comments where necessary. 3. Finally, indicate in the table of verdict below whether each statement is True or False and assign a verdict based on the "Assignment of verdict". |
| **Notes** | * If only EN 18031-2 is applied and the device is not Internet-connected, the verdict must be NOT APPLICABLE. |

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| **Name** | **DT result (P/F)** | **Is justif. provided? (Y/N)** | **Is justif. correct? (Y/N)** | **Evaluator's comments** |
| **[E.Info.SUM-3.SUM]** | | | | |
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| 1. Only Ps in column "DT result" (True/False) | |  |
| 2. Only Ys in columns "Is justif. provided" and "Is justif. correct" (True/False) | |  |
| **Assignment of verdict** | **PASS** assigned if statements 1 and 2 are True | |
| **FAIL** assigned if statements 1 or 2 are False | |
| **NOT APPLICABLE** assigned in other cases | |
| **Evaluator's comments** |  | |
| **Verdict** | |  |

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| **SUM-3 Functional Sufficiency Assessment** | |
| **Standards** | EN 18031-1, EN 18031-2, EN 18031-3 |
| **Preconditions** | * "The equipment is in an operational state" * "The manufacturer provides the means to perform automated updates" |
| **Identifiers: Worksheets** | * [E.Info.SUM-3.SUM]: SUM-3.SUM |
| **Instructions** | 1. Refer to the instructions provided in the Assessments Unit Table(s) below and perform the actions required. 2. Once the Assessment Unit Table(s) completed, indicate in the table of verdict below whether each statement is True or False and assign a verdict based on the "Assignment of verdict". |
| **Notes** | * If only EN 18031-2 is applied and the device is not Internet-connected, the verdict must be NOT APPLICABLE. |

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| **Assessment Unit Table - [E.Info.SUM-3.SUM]** | | |
| **Test Items** | Update mechanisms (UpdMech) documented in the worksheet SUM-3.SUM | |
| **Instructions** | 1. List all the Test Items by writing their names in the column "Name" below. 2. For each Test Item, perform the assessment units described in the standard(s) applied and functionally confirm each case (C) listed below by indicating Y (yes) or N (no) in the respective column. | |
| 1. The equipment can successfully update the relevant software component(s) "without human intervention at the equipment" OR "via scheduling the installation of an update under human approval" OR "via triggering the installation of an update under human approval". | | |
| **Name** | **C1** | **Evaluator's comments** |
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| --- | --- | --- |
| 1. Only Ys in the case columns (Cx) in the Assessment Unit Tables (True/False) | |  |
| **Assignment of verdict** | **PASS** assigned if statement 1 is True | |
| **FAIL** assigned if statement 1 is False | |
| **NOT APPLICABLE** assigned in other cases | |
| **Evaluator's comments** |  | |
| **Verdict** | |  |

## [SSM] Secure storage mechanism

### [SSM-1] Applicability of secure storage mechanisms

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| --- | --- |
| **SSM-1 Conceptual Assessment** | |
| **Standards** | EN 18031-1, EN 18031-2, EN 18031-3 |
| **Preconditions** | * None |
| **Identifiers: Worksheets** | * [E.Info.SSM-1.FinancialAsset]: SSM-1.FinAsset * [E.Info.SSM-1.NetworkAsset]: SSM-1.NetAsset * [E.Info.SSM-1.PrivacyAsset]: SSM-1.PrivAsset * [E.Info.SSM-1.SecurityAsset]: SSM-1.SecAsset |
| **Test Items** | * Financial assets (FinData, FinFunc, FinFuncConfig) persistently stored on the equipment as documented in the worksheet SSM-1.FinAsset * Network assets (NetFunc, NetFuncConfig) persistently stored on the equipment as documented in the worksheet SSM-1.NetAsset * Privacy assets (PersoInfo, PrivFunc, PrivFuncConfig) persistently stored on the equipment as documented in the worksheet SSM-1.PrivAsset * Security assets (SecFunc, SecParam) persistently stored on the equipment as documented in the worksheet SSM-1.SecAsset |
| **Instructions** | 1. List all the Test Items provided in the worksheet(s) by writing their names in the column "Name" below. Include the Decision Tree result in the column "DT result" (Pass, Fail or NA). Indicate in the column "Is justif. provided?" whether a justification is provided in the respective worksheet by writing Y(es) or N(o). 2. For each Test Item in the table, review the justification and indicate in the column "Is justif. correct?" whether it is correct. Provide comments where necessary. 3. Finally, indicate in the table of verdict below whether each statement is True or False and assign a verdict based on the "Assignment of verdict". |

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| --- | --- | --- | --- | --- |
| **Name** | **DT result (P/F/NA)** | **Is justif. provided? (Y/N)** | **Is justif. correct? (Y/N)** | **Evaluator's comments** |
| **[E.Info.SSM-1.FinancialAsset]** | | | | |
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| **[E.Info.SSM-1.NetworkAsset]** | | | | |
|  |  |  |  |  |
| **[E.Info.SSM-1.PrivacyAsset]** | | | | |
|  |  |  |  |  |
| **[E.Info.SSM-1.SecurityAsset]** | | | | |
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| --- | --- | --- |
| 1. At least one P in column "DT result" (True/False) | |  |
| 2. No Fs in column "DT result" (True/False) | |  |
| 3. Only Ys in columns "Is justif. provided" and "Is justif. correct" (True/False) | |  |
| **Assignment of verdict** | **PASS** assigned if statements 1, 2 and 3 are True | |
| **FAIL** assigned if statements 2 or 3 are False | |
| **NOT APPLICABLE** assigned in other cases | |
| **Evaluator's comments** |  | |
| **Verdict** | |  |

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| --- | --- |
| **SSM-1 Functional Completeness Assessment** | |
| **Standards** | EN 18031-1, EN 18031-2, EN 18031-3 |
| **Preconditions** | * The equipment is in an operational state |
| **Identifiers: Worksheets** | * [E.Info.SSM-1.FinancialAsset]: SSM-1.FinAsset * [E.Info.SSM-1.NetworkAsset]: SSM-1.NetAsset * [E.Info.SSM-1.PrivacyAsset]: SSM-1.PrivAsset * [E.Info.SSM-1.SecurityAsset]: SSM-1.SecAsset |
| **Test Items** | * Financial assets (FinData, FinFunc, FinFuncConfig) persistently stored on the equipment as documented in the worksheet SSM-1.FinAsset * Network assets (NetFunc, NetFuncConfig) persistently stored on the equipment as documented in the worksheet SSM-1.NetAsset * Privacy assets (PersoInfo, PrivFunc, PrivFuncConfig) persistently stored on the equipment as documented in the worksheet SSM-1.PrivAsset * Security assets (SecFunc, SecParam) persistently stored on the equipment as documented in the worksheet SSM-1.SecAsset |
| **Instructions** | 1. Perform the assessment units described in the standard(s) applied and report in the table below any relevant Test Items that are not documented in the worksheet(s). 2. Finally, indicate in the table of verdict below whether each statement is True or False and assign a verdict based on the "Assignment of verdict". |

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| **Relevant Test Items not documented** | **Evaluator's comments** |
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| 1. No entries in column "Relevant Test Items not documented" (True/False) | |  |
| **Assignment of verdict** | **PASS** assigned if statement 1 is True | |
| **FAIL** assigned if statement 1 is False | |
| **NOT APPLICABLE** assigned in other cases | |
| **Evaluator's comments** |  | |
| **Verdict** | |  |

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| **SSM-1 Functional Sufficiency Assessment** | |
| **Standards** | EN 18031-1, EN 18031-2, EN 18031-3 |
| **Preconditions** | * "The equipment is in an operational state" |
| **Identifiers: Worksheets** | * [E.Info.SSM-1.FinancialAsset]: SSM-1.FinAsset * [E.Info.SSM-1.NetworkAsset]: SSM-1.NetAsset * [E.Info.SSM-1.PrivacyAsset]: SSM-1.PrivAsset * [E.Info.SSM-1.SecurityAsset]: SSM-1.SecAsset |
| **Instructions** | 1. Refer to the instructions provided in the Assessments Unit Table(s) below and perform the actions required. 2. Once the Assessment Unit Table(s) completed, indicate in the table of verdict below whether each statement is True or False and assign a verdict based on the "Assignment of verdict". |

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| **Assessment Unit Table - [E.Info.SSM-1.NetworkAsset]** | | |
| **Test Items** | Network assets (NetFunc, NetFuncConfig) persistently stored on the equipment as documented in the worksheet SSM-1.NetAsset | |
| **Instructions** | 1. List all the Test Items by writing their names in the column "Name" below. 2. For each Test Item, perform the assessment units described in the standard(s) applied and functionally confirm each case (C) listed below by indicating Y (yes) or N (no) in the respective column. | |
| 1. The network asset is "persistently stored solely via secure storage mechanisms as documented in [E.Info.SSM-1.NetworkAsset.SSM]" | | |
| **Name** | **C1** | **Evaluator's comments** |
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| **Assessment Unit Table - [E.Info.SSM-1.PrivacyAsset]** | | |
| **Test Items** | Privacy assets (PrivFunc, PrivFuncConfig, PersoInfo) persistently stored on the equipment as documented in the worksheet SSM-1.PrivAsset | |
| **Instructions** | 1. List all the Test Items by writing their names in the column "Name" below. 2. For each Test Item, perform the assessment units described in the standard(s) applied and functionally confirm each case (C) listed below by indicating Y (yes) or N (no) in the respective column. | |
| 1. The privacy asset is "persistently stored solely via secure storage mechanisms as documented in [E.Info.SSM-1.PrivacyAsset.SSM]" | | |
| **Name** | **C1** | **Evaluator's comments** |
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| --- | --- | --- |
| **Assessment Unit Table - [E.Info.SSM-1.FinancialAsset]** | | |
| **Test Items** | Financial assets (FinData, FinFunc, FinFuncConfig) persistently stored on the equipment as documented in the worksheet SSM-1.FinAsset | |
| **Instructions** | 1. List all the Test Items by writing their names in the column "Name" below. 2. For each Test Item, perform the assessment units described in the standard(s) applied and functionally confirm each case (C) listed below by indicating Y (yes) or N (no) in the respective column. | |
| 1. The financial asset is “persistently stored solely via secure storage mechanisms documented in [E.Info.SSM-1.FinancialAsset.SSM]” | | |
| **Name** | **C1** | **Evaluator's comments** |
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| **Assessment Unit Table - [E.Info.SSM-1.SecurityAsset]** | | |
| **Test Items** | Security assets (SecFunc, SecParam) persistently stored on the equipment as documented in the worksheet SSM-1.SecAsset | |
| **Instructions** | 1. List all the Test Items by writing their names in the column "Name" below. 2. For each Test Item, perform the assessment units described in the standard(s) applied and functionally confirm each case (C) listed below by indicating Y (yes) or N (no) in the respective column. | |
| 1. The security asset is "persistently stored solely via secure storage mechanisms as documented in [E.Info.SSM-1.SecurityAsset.SSM]" | | |
| **Name** | **C1** | **Evaluator's comments** |
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| 1. Only Ys in the case columns (Cx) in the Assessment Unit Tables (True/False) | |  |
| **Assignment of verdict** | **PASS** assigned if statement 1 is True | |
| **FAIL** assigned if statement 1 is False | |
| **NOT APPLICABLE** assigned in other cases | |
| **Evaluator's comments** |  | |
| **Verdict** | |  |

### [SSM-2] Appropriate integrity protection for secure storage mechanisms

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| **SSM-2 Conceptual Assessment** | |
| **Standards** | EN 18031-1, EN 18031-2, EN 18031-3 |
| **Preconditions** | * None |
| **Identifiers: Worksheets** | * [E.Info.SSM-2.SSM]: SSM-2.SSM |
| **Test Items** | * Storage mechanisms (StorageMech) documented in the worksheet SSM-2.SSM |
| **Instructions** | 1. List all the Test Items provided in the worksheet(s) by writing their names in the column "Name" below. Include the Decision Tree result in the column "DT result" (Pass, Fail or NA). Indicate in the column "Is justif. provided?" whether a justification is provided in the respective worksheet by writing Y(es) or N(o). 2. For each Test Item in the table, review the justification and indicate in the column "Is justif. correct?" whether it is correct. Provide comments where necessary. 3. Finally, indicate in the table of verdict below whether each statement is True or False and assign a verdict based on the "Assignment of verdict". |
| **Notes** | * The Decision Tree requires to answer DT.SSM-2.DN-1 "for each persistently stored [asset]". Given the number of assets that can be stored, this can lead to many paths to be documented and reviewed. Instead, Zealience suggests to only document one path for each secure storage mechanism documented in the worksheet SSM-2.SSM. If the secure storage protects the integrity of one asset, it can be assumed that the integrity of the other assets stored is also protected. This leads to the following change of DT.SSM-2.DN-1: "Is the integrity of the asset[s] protected to ensure that attacks on secure storage do not lead to [their] manipulation". This change does not impact the outcome of the Decision Tree. |

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| **Name** | **DT result (P/F)** | **Is justif. provided? (Y/N)** | **Is justif. correct? (Y/N)** | **Evaluator's comments** |
| **[E.Info.SSM-2.SSM]** | | | | |
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| 1. Only Ps in column "DT result" (True/False) | |  |
| 2. Only Ys in columns "Is justif. provided" and "Is justif. correct" (True/False) | |  |
| **Assignment of verdict** | **PASS** assigned if statements 1 and 2 are True | |
| **FAIL** assigned if statements 1 or 2 are False | |
| **NOT APPLICABLE** assigned in other cases | |
| **Evaluator's comments** |  | |
| **Verdict** | |  |

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| **SSM-2 Functional Sufficiency Assessment** | |
| **Standards** | EN 18031-1, EN 18031-2, EN 18031-3 |
| **Preconditions** | * "The equipment is in an operational state" |
| **Identifiers: Worksheets** | * [E.Info.SSM-2.SSM]: SSM-2.SSM |
| **Instructions** | 1. Refer to the instructions provided in the Assessments Unit Table(s) below and perform the actions required. 2. Once the Assessment Unit Table(s) completed, indicate in the table of verdict below whether each statement is True or False and assign a verdict based on the "Assignment of verdict". |
| **Notes** | * A secure storage mechanism may rely on multiple implementation categories to protect the integrity of assets stored. In such cases, the same secure storage mechanism needs to be listed in each relevant Assessment Unit Table below so that all its implementation categories will be assessed independently. |

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| **Assessment Unit Table - [AU.SSM-2.DigitalSignature]** | | | | |
| **Test Items** | Secure storage mechanisms (StorageMech) with implementation category [IC.SSM-2.DigitalSignature] as documented in the worksheet SSM-2.SSM | | | |
| **Instructions** | 1. List all the Test Items by writing their names in the column "Name" below. 2. For each Test Item, perform the assessment units described in the standard(s) applied and functionally confirm each case (C) listed below by indicating Y (yes) or N (no) in the respective column. | | | |
| 1. The secure storage mechanism "is implemented according to [E.Info.SSM-2.SSM.DigitalSignature]" 2. "The secret used to digitally sign the […] assets cannot be intercepted, deduced, or extracted" 3. "A modification of the […] assets without valid signature is detected by the secure storage mechanism" | | | | |
| **Name** | **C1** | **C2** | **C3** | **Evaluator's comments** |
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| **Assessment Unit Table - [AU.SSM-2.AccessControl]** | | | |
| **Test Items** | Secure storage mechanisms (StorageMech) with implementation category [IC.SSM-2.AccessControl] as documented in the worksheet SSM-2.SSM | | |
| **Instructions** | 1. List all the Test Items by writing their names in the column "Name" below. 2. For each Test Item, perform the assessment units described in the standard(s) applied and functionally confirm each case (C) listed below by indicating Y (yes) or N (no) in the respective column. | | |
| 1. The secure storage mechanism "is implemented according to [E.Info.SSM-2.SSM.AccessControl]" 2. "An unauthorized modification of the stored […] assets is denied" | | | |
| **Name** | **C1** | **C2** | **Evaluator's comments** |
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| **Assessment Unit Table - [AU.SSM-2.OTProgrammable]** | | | |
| **Test Items** | Secure storage mechanisms (StorageMech) with implementation category [IC.SSM-2.OTProgrammable] as documented in the worksheet SSM-2.SSM | | |
| **Instructions** | 1. List all the Test Items by writing their names in the column "Name" below. 2. For each Test Item, perform the assessment units described in the standard(s) applied and functionally confirm each case (C) listed below by indicating Y (yes) or N (no) in the respective column. | | |
| 1. The secure storage mechanism "is implemented according to [E.Info.SSM-2.SSM.OTProgrammable]" 2. "A modification of the […] assets is not possible" | | | |
| **Name** | **C1** | **C2** | **Evaluator's comments** |
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| **Assessment Unit Table - [AU.SSM-2.HardwareProtection]** | | | |
| **Test Items** | Secure storage mechanisms (StorageMech) with implementation category [IC.SSM-2.HardwareProtection] as documented in the worksheet SSM-2.SSM | | |
| **Instructions** | 1. List all the Test Items by writing their names in the column "Name" below. 2. For each Test Item, perform the assessment units described in the standard(s) applied and functionally confirm each case (C) listed below by indicating Y (yes) or N (no) in the respective column. | | |
| 1. The secure storage mechanism "is implemented according to [E.Info.SSM-2.SSM.HardwareProtection]" 2. "An unauthorized modification of the […] assets is not possible or can be detected by the secure storage mechanism" | | | |
| **Name** | **C1** | **C2** | **Evaluator's comments** |
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| **Assessment Unit Table - [AU.SSM-2.Generic]** | | | |
| **Test Items** | Secure storage mechanisms (StorageMech) with implementation category [IC.SSM-2.Generic] as documented in the worksheet SSM-2.SSM | | |
| **Instructions** | 1. List all the Test Items by writing their names in the column "Name" below. 2. For each Test Item, perform the assessment units described in the standard(s) applied and functionally confirm each case (C) listed below by indicating Y (yes) or N (no) in the respective column. | | |
| 1. The secure storage mechanism "is implemented according to [E.Info.SSM-2.SSM.Generic]" 2. "An unauthorized modification of the […] assets is not possible or can be detected by the secure storage mechanism" | | | |
| **Name** | **C1** | **C2** | **Evaluator's comments** |
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| --- | --- | --- |
| 1. Only Ys in the case columns (Cx) in the Assessment Unit Tables (True/False) | |  |
| **Assignment of verdict** | **PASS** assigned if statement 1 is True | |
| **FAIL** assigned if statement 1 is False | |
| **NOT APPLICABLE** assigned in other cases | |
| **Evaluator's comments** |  | |
| **Verdict** | |  |

### [SSM-3] Appropriate confidentiality protection for secure storage mechanisms

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| **SSM-3 Conceptual Assessment** | |
| **Standards** | EN 18031-1, EN 18031-2, EN 18031-3 |
| **Preconditions** | * None |
| **Identifiers: Worksheets** | * [E.Info.SSM-3.SSM]: SSM-3.SSM |
| **Test Items** | * Storage mechanisms (StorageMech) documented in the worksheet SSM-3.SSM |
| **Instructions** | 1. List all the Test Items provided in the worksheet(s) by writing their names in the column "Name" below. Include the Decision Tree result in the column "DT result" (Pass, Fail or NA). Indicate in the column "Is justif. provided?" whether a justification is provided in the respective worksheet by writing Y(es) or N(o). 2. For each Test Item in the table, review the justification and indicate in the column "Is justif. correct?" whether it is correct. Provide comments where necessary. 3. Finally, indicate in the table of verdict below whether each statement is True or False and assign a verdict based on the "Assignment of verdict". |
| **Notes** | * The Decision Tree requires to answer DT.SSM-3.DN-1 "for each stored confidential security parameter and…". Given the number of assets that can be stored, this can lead to many paths to be documented and reviewed. Instead, Zealience suggests to only document one path for each secure storage mechanism. If the secure storage protects the confidentiality of one asset, it can be assumed that the confidentiality of the other assets stored is also protected. This leads to the following change of DT.SSM-3.DN-1: "Is the secrecy of the confidential [assets] protected to ensure that attacks on secure storage do not lead to [their] disclosure". This change does not impact the outcome of the Decision Tree. |

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| **Name** | **DT result (P/F)** | **Is justif. provided? (Y/N)** | **Is justif. correct? (Y/N)** | **Evaluator's comments** |
| **[E.Info.SSM-3.SSM]** | | | | |
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| 1. Only Ps in column "DT result" (True/False) | |  |
| 2. Only Ys in columns "Is justif. provided" and "Is justif. correct" (True/False) | |  |
| **Assignment of verdict** | **PASS** assigned if statements 1 and 2 are True | |
| **FAIL** assigned if statements 1 or 2 are False | |
| **NOT APPLICABLE** assigned in other cases | |
| **Evaluator's comments** |  | |
| **Verdict** | |  |

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| **SSM-3 Functional Completeness Assessment** | |
| **Standards** | EN 18031-1, EN 18031-2, EN 18031-3 |
| **Preconditions** | * The equipment is in an operational state |
| **Identifiers: Worksheets** | * [E.Info.SSM-3.SSM]: SSM-3.SSM |
| **Test Items** | * Confidential financial assets (FinData, FinFunc, FinFuncConfig) documented in the worksheet SSM-3.SSM * Confidential network function configurations (NetFuncConfig) documented in the worksheet SSM-3.SSM * Confidential privacy assets (PersoInfo, PrivFuncConfig) documented in the worksheet SSM-3.SSM * Confidential security parameters (SecParam) documented in the worksheet SSM-3.SSM |
| **Instructions** | 1. Perform the assessment units described in the standard(s) applied and report in the table below any relevant Test Items that are not documented in the worksheet(s). 2. Finally, indicate in the table of verdict below whether each statement is True or False and assign a verdict based on the "Assignment of verdict". |

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| **Relevant Test Items not documented** | **Evaluator's comments** |
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| 1. No entries in column "Relevant Test Items not documented" (True/False) | |  |
| **Assignment of verdict** | **PASS** assigned if statement 1 is True | |
| **FAIL** assigned if statement 1 is False | |
| **NOT APPLICABLE** assigned in other cases | |
| **Evaluator's comments** |  | |
| **Verdict** | |  |

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| **SSM-3 Functional Sufficiency Assessment** | |
| **Standards** | EN 18031-1, EN 18031-2, EN 18031-3 |
| **Preconditions** | * "The equipment is in an operational state" |
| **Identifiers: Worksheets** | * [E.Info.SSM-3.SSM]: SSM-3.SSM |
| **Instructions** | 1. Refer to the instructions provided in the Assessments Unit Table(s) below and perform the actions required. 2. Once the Assessment Unit Table(s) completed, indicate in the table of verdict below whether each statement is True or False and assign a verdict based on the "Assignment of verdict". |
| **Notes** | * A secure storage mechanism may rely on multiple implementation categories to protect the confidentiality of assets stored. In such cases, the same secure storage mechanism needs to be listed in each relevant Assessment Unit Table below so that all its implementation categories will be assessed independently. |

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| **Assessment Unit Table - [AU.SSM-3.Encryption]** | | | | |
| **Test Items** | Secure storage mechanisms (StorageMech) with implementation category [IC.SSM-3.Encryption] as documented in the worksheet SSM-3.SSM | | | |
| **Instructions** | 1. List all the Test Items by writing their names in the column "Name" below. 2. For each Test Item, perform the assessment units described in the standard(s) applied and functionally confirm each case (C) listed below by indicating Y (yes) or N (no) in the respective column. | | | |
| 1. The storage mechanism "is implemented according to [E.Info.SSM-3.SSM.Encryption]" 2. "The secret used to encrypt the confidential [assets] cannot be intercepted, deducted, or extracted" 3. "Reading the confidential [assets] without access to the secret used for decryption is not possible" | | | | |
| **Name** | **C1** | **C2** | **C3** | **Evaluator's comments** |
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| **Assessment Unit Table - [AU.SSM-3.AccessControl]** | | | |
| **Test Items** | Secure storage mechanisms (StorageMech) with implementation category [IC.SSM-3.AccessControl] as documented in the worksheet SSM-3.SSM | | |
| **Instructions** | 1. List all the Test Items by writing their names in the column "Name" below. 2. For each Test Item, perform the assessment units described in the standard(s) applied and functionally confirm each case (C) listed below by indicating Y (yes) or N (no) in the respective column. | | |
| 1. The secure storage mechanism "is implemented according to [E.Info.SSM-3.SSM.AccessControl]" 2. "An unauthorized reading of the stored confidential [assets] is denied" | | | |
| **Name** | **C1** | **C2** | **Evaluator's comments** |
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| **Assessment Unit Table - [AU.SSM-3.HardwareProtection]** | | | | |
| **Test Items** | Secure storage mechanisms (StorageMech) with implementation category [IC.SSM-3.HardwareProtection] as documented in the worksheet SSM-3.SSM | | | |
| **Instructions** | 1. List all the Test Items by writing their names in the column "Name" below. 2. For each Test Item, perform the assessment units described in the standard(s) applied and functionally confirm each case (C) listed below by indicating Y (yes) or N (no) in the respective column. | | | |
| 1. The secure storage mechanism "is implemented according to [E.Info.SSM-3.SSM.HardwareProtection]" 2. "The mechanism used to protect the confidentiality of the stored confidential [assets] cannot be broken or bypassed" 3. "An unauthorized reading of the stored […] assets is not possible" | | | | |
| **Name** | **C1** | **C2** | **C3** | **Evaluator's comments** |
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| **Assessment Unit Table - [AU.SSM-3.Generic]** | | | |
| **Test Items** | Secure storage mechanisms (StorageMech) with implementation category [IC.SSM-3.Generic] as documented in the worksheet SSM-3.SSM | | |
| **Instructions** | 1. List all the Test Items by writing their names in the column "Name" below. 2. For each Test Item, perform the assessment units described in the standard(s) applied and functionally confirm each case (C) listed below by indicating Y (yes) or N (no) in the respective column. | | |
| 1. The secure storage mechanism "is implemented according to [E.Info.SSM-3.SSM.Generic]" 2. "An unauthorized reading of the stored confidential [assets] is not possible" | | | |
| **Name** | **C1** | **C2** | **Evaluator's comments** |
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| --- | --- | --- |
| 1. Only Ys in the case columns (Cx) in the Assessment Unit Tables (True/False) | |  |
| **Assignment of verdict** | **PASS** assigned if statement 1 is True | |
| **FAIL** assigned if statement 1 is False | |
| **NOT APPLICABLE** assigned in other cases | |
| **Evaluator's comments** |  | |
| **Verdict** | |  |

## [SCM] Secure communication mechanism

### [SCM-1] Applicability of secure communication mechanisms

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| --- | --- |
| **SCM-1 Conceptual Assessment** | |
| **Standards** | EN 18031-1, EN 18031-2, EN 18031-3 |
| **Preconditions** | * None |
| **Identifiers: Worksheets** | * [E.Info.SCM-1.FinancialAsset]: SCM-1.FinAsset * [E.Info.SCM-1.NetworkAsset]: SCM-1.NetAsset * [E.Info.SCM-1.NetworkInterface]: SCM-1.NetIntf * [E.Info.SCM-1.PrivacyAsset]: SCM-1.PrivAsset * [E.Info.SCM-1.SCM]: SCM-1.SCM * [E.Info.SCM-1.SecurityAsset]: SCM-1.SecAsset |
| **Test Items** | * Financial assets (FinData, FinFunc, FinFuncConfig) communicated over network interfaces as documented in the worksheet SCM-1.FinAsset * Network assets (NetFunc, NetFuncConfig) communicated over network interfaces as documented in the worksheet SCM-1.NetAsset * Privacy assets (PersoInfo, PrivFunc, PrivFuncConfig) communicated over network interfaces as documented in the worksheet SCM-1.PrivAsset * Security assets (SecFunc, SecParam) stored and communicated over network interfaces as documented in the worksheet SCM-1.SecAsset |
| **Instructions** | 1. List all the Test Items provided in the worksheet(s) by writing their names in the column "Name" below. Include the Decision Tree result in the column "DT result" (Pass, Fail or NA). Indicate in the column "Is justif. provided?" whether a justification is provided in the respective worksheet by writing Y(es) or N(o). 2. For each Test Item in the table, review the justification and indicate in the column "Is justif. correct?" whether it is correct. Provide comments where necessary. 3. Finally, indicate in the table of verdict below whether each statement is True or False and assign a verdict based on the "Assignment of verdict". |
| **Notes** | * There is a mismatch in the standards between the Decision Tree figure (which reads "For each communication of […] assets via network interface") and the text of the Assessment Units (which reads "For each network interface documented in [E.Info.SCM-1.NetworkInterface]"). Considering the text of the Decision Nodes, Zealience believes that the text of the Assessment Units should be: For each communicated asset via network interface, check whether the path through the decision tree documented in [E.Info.SCM-1.xxxAsset] ends with "NOT APPLICABLE" or "PASS" (with [E.Info.SCM-1.xxxAsset] being the identifier of the relevant Test Items). * When EN 18031-3 is applied, the Decision Tree results for security and financial assets can only be PASS or FAIL. |

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| **Name** | **DT result (P/F/NA)** | **Is justif. provided? (Y/N)** | **Is justif. correct? (Y/N)** | **Evaluator's comments** |
| **[E.Info.SCM-1.FinancialAsset]** | | | | |
|  |  |  |  |  |
| **[E.Info.SCM-1.NetworkAsset]** | | | | |
|  |  |  |  |  |
| **[E.Info.SCM-1.PrivacyAsset]** | | | | |
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| **[E.Info.SCM-1.SecurityAsset]** | | | | |
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| --- | --- | --- |
| 1. At least one P in column "DT result" (True/False) | |  |
| 2. No Fs in column "DT result" (True/False) | |  |
| 3. Only Ys in columns "Is justif. provided" and "Is justif. correct" (True/False) | |  |
| **Assignment of verdict** | **PASS** assigned if statements 1, 2 and 3 are True | |
| **FAIL** assigned if statements 2 or 3 are False | |
| **NOT APPLICABLE** assigned in other cases | |
| **Evaluator's comments** |  | |
| **Verdict** | |  |

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| --- | --- |
| **SCM-1 Functional Completeness Assessment** | |
| **Standards** | EN 18031-1, EN 18031-2, EN 18031-3 |
| **Preconditions** | * The equipment is in an operational state |
| **Identifiers: Worksheets** | * [E.Info.SCM-1.FinancialAsset]: SCM-1.FinAsset * [E.Info.SCM-1.NetworkAsset]: SCM-1.NetAsset * [E.Info.SCM-1.PrivacyAsset]: SCM-1.PrivAsset * [E.Info.SCM-1.SecurityAsset]: SCM-1.SecAsset |
| **Test Items** | * Financial assets (FinData, FinFunc, FinFuncConfig) communicated over network interfaces as documented in the worksheet SCM-1.FinAsset * Network assets (NetFunc, NetFuncConfig) communicated over network interfaces as documented in the worksheet SCM-1.NetAsset * Privacy assets (PrivFunc, PrivFuncConfig, PersoInfo) communicated over network interfaces as documented in the worksheet SCM-1.PrivAsset * Security assets (SecFunc, SecParam) stored and communicated over network interfaces as documented in the worksheet SCM-1.SecAsset |
| **Instructions** | 1. Perform the assessment units described in the standard(s) applied and report in the table below any relevant Test Items that are not documented in the worksheet(s). 2. Finally, indicate in the table of verdict below whether each statement is True or False and assign a verdict based on the "Assignment of verdict". |

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| **Relevant Test Items not documented** | **Evaluator's comments** |
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| 1. No entries in column "Relevant Test Items not documented" (True/False) | |  |
| **Assignment of verdict** | **PASS** assigned if statement 1 is True | |
| **FAIL** assigned if statement 1 is False | |
| **NOT APPLICABLE** assigned in other cases | |
| **Evaluator's comments** |  | |
| **Verdict** | |  |

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| **SCM-1 Functional Sufficiency Assessment** | |
| **Standards** | EN 18031-1, EN 18031-2, EN 18031-3 |
| **Preconditions** | * "The equipment is in an operational state" |
| **Identifiers: Worksheets** | * [E.Info.SCM-1.FinancialAsset]: SCM-1.FinAsset * [E.Info.SCM-1.NetworkAsset]: SCM-1.NetAsset * [E.Info.SCM-1.PrivacyAsset]: SCM-1.PrivAsset * [E.Info.SCM-1.SecurityAsset]: SCM-1.SecAsset |
| **Instructions** | 1. Refer to the instructions provided in the Assessments Unit Table(s) below and perform the actions required. 2. Once the Assessment Unit Table(s) completed, indicate in the table of verdict below whether each statement is True or False and assign a verdict based on the "Assignment of verdict". |

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| **Assessment Unit Table - [E.Info.SCM-1.NetworkAsset]** | | |
| **Test Items** | Network assets (NetFunc, NetFuncConfig) documented in the worksheet SCM-1.NetAsset | |
| **Instructions** | 1. List all the Test Items by writing their names in the column "Name" below. 2. For each Test Item, perform the assessment units described in the standard(s) applied and functionally confirm each case (C) listed below by indicating Y (yes) or N (no) in the respective column. | |
| 1. The communication mechanism(s) used to communicate this network asset exists as documented in [E.Info.SCM-1.SCM]. | | |
| **Name** | **C1** | **Evaluator's comments** |
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| **Assessment Unit Table - [E.Info.SCM-1.PrivacyAsset]** | | |
| **Test Items** | Privacy assets (PersoInfo, PrivFunc, PrivFuncConfig) documented in the worksheet SCM-1.PrivAsset | |
| **Instructions** | 1. List all the Test Items by writing their names in the column "Name" below. 2. For each Test Item, perform the assessment units described in the standard(s) applied and functionally confirm each case (C) listed below by indicating Y (yes) or N (no) in the respective column. | |
| 1. The communication mechanism(s) used to communicate this privacy asset exists as documented in [E.Info.SCM-1.SCM]. | | |
| **Name** | **C1** | **Evaluator's comments** |
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| **Assessment Unit Table - [E.Info.SCM-1.FinancialAsset]** | | |
| **Test Items** | Financial assets (FinData, FinFunc, FinFuncConfig) documented in the worksheet SCM-1.FinAsset | |
| **Instructions** | 1. List all the Test Items by writing their names in the column "Name" below. 2. For each Test Item, perform the assessment units described in the standard(s) applied and functionally confirm each case (C) listed below by indicating Y (yes) or N (no) in the respective column. | |
| 1. The communication mechanism(s) used to communicate this financial asset exists as documented in [E.Info.SCM-1.SCM]. | | |
| **Name** | **C1** | **Evaluator's comments** |
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| **Assessment Unit Table - [E.Info.SCM-1.SecurityAsset]** | | |
| **Test Items** | Security assets (SecFunc, SecParam) documented in the worksheet SCM-1.SecAsset | |
| **Instructions** | 1. List all the Test Items by writing their names in the column "Name" below. 2. For each Test Item, perform the assessment units described in the standard(s) applied and functionally confirm each case (C) listed below by indicating Y (yes) or N (no) in the respective column. | |
| 1. The communication mechanism(s) used to communicate this security asset exists as documented in [E.Info.SCM-1.SCM]. | | |
| **Name** | **C1** | **Evaluator's comments** |
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| 1. Only Ys in the case columns (Cx) in the Assessment Unit Tables (True/False) | |  |
| **Assignment of verdict** | **PASS** assigned if statement 1 is True | |
| **FAIL** assigned if statement 1 is False | |
| **NOT APPLICABLE** assigned in other cases | |
| **Evaluator's comments** |  | |
| **Verdict** | |  |

### [SCM-2] Appropriate integrity and authenticity protection for secure communication mechanisms

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| **SCM-2 Conceptual Assessment** | |
| **Standards** | EN 18031-1, EN 18031-2, EN 18031-3 |
| **Preconditions** | * None |
| **Identifiers: Worksheets** | * [E.Info.SCM-2.FinancialAsset]: SCM-1.FinAsset * [E.Info.SCM-2.NetworkAsset]: SCM-1.NetAsset * [E.Info.SCM-2.NetworkInterface]: SCM-1.NetIntf * [E.Info.SCM-2.PrivacyAsset]: SCM-1.PrivAsset * [E.Info.SCM-2.SCM]: SCM-2.SCM * [E.Info.SCM-2.SecurityAsset]: SCM-1.SecAsset |
| **Test Items** | * Secure communication mechanism (ComMech) documented in the worksheet SCM-2.SCM |
| **Instructions** | 1. List all the Test Items provided in the worksheet(s) by writing their names in the column "Name" below. Include the Decision Tree result in the column "DT result" (Pass, Fail or NA). Indicate in the column "Is justif. provided?" whether a justification is provided in the respective worksheet by writing Y(es) or N(o). 2. For each Test Item in the table, review the justification and indicate in the column "Is justif. correct?" whether it is correct. Provide comments where necessary. 3. Finally, indicate in the table of verdict below whether each statement is True or False and assign a verdict based on the "Assignment of verdict". |
| **Notes** | * The Decision Tree requires to answer the decision nodes "for each communication of […] assets". Similarly to SSM-2, Zealience suggests only document one path for each secure communication mechanism documented in the worksheet SCM-2.SCM (instead of one path for each asset communicated). If the communication mechanism protects the integrity and authenticity of one asset, it can be assumed that the integrity and authenticity of the other assets communicated are also protected. This leads to the following change of DT.SCM-2.DN-1: "Are best practices applied to protect the integrity and authenticity of the communicated asset[s]?" This change does not impact the outcome of the Decision Tree. * When EN 18031-3 is applied, the Decision Tree results for communication mechanisms used to transfer security and financial assets can only be PASS or FAIL. |

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| **Name** | **DT result (P/F/NA)** | **Is justif. provided? (Y/N)** | **Is justif. correct? (Y/N)** | **Evaluator's comments** |
| **[E.Info.SCM-2.SCM]** | | | | |
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| 1. At least one P in column "DT result" (True/False) | |  |
| 2. No Fs in column "DT result" (True/False) | |  |
| 3. Only Ys in columns "Is justif. provided" and "Is justif. correct" (True/False) | |  |
| **Assignment of verdict** | **PASS** assigned if statements 1, 2 and 3 are True | |
| **FAIL** assigned if statements 2 or 3 are False | |
| **NOT APPLICABLE** assigned in other cases | |
| **Evaluator's comments** |  | |
| **Verdict** | |  |

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| **SCM-2 Functional Sufficiency Assessment** | |
| **Standards** | EN 18031-1, EN 18031-2, EN 18031-3 |
| **Preconditions** | * "The equipment is in an operational state" |
| **Identifiers: Worksheets** | * [E.Info.SCM-2.SCM]: SCM-2.SCM |
| **Instructions** | 1. Refer to the instructions provided in the Assessments Unit Table(s) below and perform the actions required. 2. Once the Assessment Unit Table(s) completed, indicate in the table of verdict below whether each statement is True or False and assign a verdict based on the "Assignment of verdict". |
| **Notes** | * The Assessment Units of the standards read "For each security asset documented in [E.Info.SCM-2.SecurityAsset] and [network/privacy/financial] asset …" (depending on the standards applied). Zealience considers that these assets expected in [E.Info.SCM-2.xxxAsset] are those documented in [E.Info.SCM-1.xxxAsset] (i.e. assets that are communicated over network interfaces) for which the path through the decision tree documented in [E.Info.DT.SCM-1] ends with PASS (i.e. assets that are communicated over a secure communication mechanism). The secure communication mechanism(s) used to communicate such assets (i.e. communication mechanisms required per SCM-1) must fulfil SCM-2 (i.e. "apply best practices to protect the integrity and authenticity of […] assets communicated"), unless, in EN 18031-1 and EN 18031-2, a deviation from best practice is inevitable for interoperability reasons (in EN 18031-3, no deviation is allowed). * The Assessment Units of the standards instruct to consider "the equipment states documented". They are documented in the worksheet SCM-1.SCM under [E.Info.SCM-1.SCM.States]. |

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| **Assessment Unit Table - [AU.SCM-2.ManufSecret]** | | | | | |
| **Test Items** | Secure communication mechanisms (ComMech) with implementation category [IC.SCM-2.ManufSecret] as documented in the worksheet SCM-2.SCM | | | | |
| **Instructions** | 1. List all the Test Items by writing their names in the column "Name" below. 2. For each Test Item, perform the assessment units described in the standard(s) applied and functionally confirm each case (C) listed below by indicating Y (yes) or N (no) in the respective column. | | | | |
| 1. "The secret introduced during production cannot be intercepted while the equipment is communicating via network" 2. "A manipulated message is not accepted as being of integrity" 3. "An unauthorized message is not accepted as authentic" 4. (If channel-based communication is used) "A successful MitM attack is not possible […]" (If channel-based communication is not used, input '-') | | | | | |
| **Name** | **C1** | **C2** | **C3** | **C4** | **Evaluator's comments** |
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| **Assessment Unit Table - [AU.SCM-2.SecChanExchange]** | | | | | |
| **Test Items** | Secure communication mechanisms (ComMech) with implementation category [IC.SCM-2.SecChanExchange] as documented in the worksheet SCM-2.SCM | | | | |
| **Instructions** | 1. List all the Test Items by writing their names in the column "Name" below. 2. For each Test Item, perform the assessment units described in the standard(s) applied and functionally confirm each case (C) listed below by indicating Y (yes) or N (no) in the respective column. | | | | |
| 1. "The secret cannot be intercepted using the assessed communication mechanism" 2. "A manipulated message is not accepted as being of integrity" 3. "An unauthorized message is not accepted as authentic" 4. (If channel-based communication is used) "A successful MitM attack is not possible […]" (If channel-based communication is not used, input '-') | | | | | |
| **Name** | **C1** | **C2** | **C3** | **C4** | **Evaluator's comments** |
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| **Assessment Unit Table - [AU.SCM-2.PKI-based]** | | | | | |
| **Test Items** | Secure communication mechanisms (ComMech) with implementation category [IC.SCM-2.PKI-based] as documented in the worksheet SCM-2.SCM | | | | |
| **Instructions** | 1. List all the Test Items by writing their names in the column "Name" below. 2. For each Test Item, perform the assessment units described in the standard(s) applied and functionally confirm each case (C) listed below by indicating Y (yes) or N (no) in the respective column. | | | | |
| 1. "A forged certificate is not accepted" 2. "A manipulated message is not accepted as being of integrity" 3. "An unauthorized message is not accepted as authentic" 4. (If channel-based communication is used) "A successful MitM attack is not possible […]" (If channel-based communication is not used, input '-') | | | | | |
| **Name** | **C1** | **C2** | **C3** | **C4** | **Evaluator's comments** |
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| **Assessment Unit Table - [AU.SCM-2.ThirdPartyTrust]** | | | | | |
| **Test Items** | Secure communication mechanisms (ComMech) with implementation category [IC.SCM-2.ThirdPartyTrust] as documented in the worksheet SCM-2.SCM | | | | |
| **Instructions** | 1. List all the Test Items by writing their names in the column "Name" below. 2. For each Test Item, perform the assessment units described in the standard(s) applied and functionally confirm each case (C) listed below by indicating Y (yes) or N (no) in the respective column. | | | | |
| 1. "The response of the third party cannot be manipulated" 2. "A manipulated message is not accepted as being of integrity" 3. "An unauthorized message is not accepted as authentic" 4. (If channel-based communication is used) "A successful MitM attack is not possible […]" (If channel-based communication is not used, input '-') | | | | | |
| **Name** | **C1** | **C2** | **C3** | **C4** | **Evaluator's comments** |
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| **Assessment Unit Table - [AU.SCM-2.Generic]** | | | | | |
| **Test Items** | Secure communication mechanisms (ComMech) with implementation category [IC.SCM-2.Generic] as documented in the worksheet SCM-2.SCM | | | | |
| **Instructions** | 1. List all the Test Items by writing their names in the column "Name" below. 2. For each Test Item, perform the assessment units described in the standard(s) applied and functionally confirm each case (C) listed below by indicating Y (yes) or N (no) in the respective column. | | | | |
| 1. "Secrets used for the protection of authenticity and integrity cannot be intercepted and misused" 2. "A manipulated message is not accepted as being of integrity" 3. "An unauthorized message is not accepted as authentic" 4. (If channel-based communication is used) "A successful MitM attack is not possible […]" (If channel-based communication is not used, input '-') | | | | | |
| **Name** | **C1** | **C2** | **C3** | **C4** | **Evaluator's comments** |
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| 1. Only Ys in the case columns (Cx) in the Assessment Unit Tables (True/False) | |  |
| **Assignment of verdict** | **PASS** assigned if statement 1 is True | |
| **FAIL** assigned if statement 1 is False | |
| **NOT APPLICABLE** assigned in other cases | |
| **Evaluator's comments** |  | |
| **Verdict** | |  |

### [SCM-3] Appropriate confidentiality protection for secure communication mechanisms

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| **SCM-3 Conceptual Assessment** | |
| **Standards** | EN 18031-1, EN 18031-2, EN 18031-3 |
| **Preconditions** | * None |
| **Identifiers: Worksheets** | * [E.Info.SCM-3.FinancialAsset]: SCM-1.FinAsset * [E.Info.SCM-3.NetworkAsset]: SCM-1.NetAsset * [E.Info.SCM-3.NetworkInterface]: SCM-1.NetIntf * [E.Info.SCM-3.PrivacyAsset]: SCM-1.PrivAsset * [E.Info.SCM-3.SCM]: SCM-3.SCM * [E.Info.SCM-3.SecurityAsset]: SCM-1.SecAsset |
| **Test Items** | * Secure communication mechanism (ComMech) |
| **Instructions** | 1. List all the Test Items provided in the worksheet(s) by writing their names in the column "Name" below. Include the Decision Tree result in the column "DT result" (Pass, Fail or NA). Indicate in the column "Is justif. provided?" whether a justification is provided in the respective worksheet by writing Y(es) or N(o). 2. For each Test Item in the table, review the justification and indicate in the column "Is justif. correct?" whether it is correct. Provide comments where necessary. 3. Finally, indicate in the table of verdict below whether each statement is True or False and assign a verdict based on the "Assignment of verdict". |
| **Notes** | * The Decision Tree requires to answer the decision nodes "for each communication of […] assets where confidentiality protection is needed". Similarly to SSM-3, Zealience suggests to only document one path for each secure communication mechanism documented in the worksheet SCM-3.SCM (instead of one path for each asset communicated). If the communication mechanism protects the confidentiality of one asset, it can be assumed that the confidentiality of the other assets communicated are also protected. This leads to the following change of DT.SCM-3.DN-1: "[Are] best practices applied to protect the confidentiality of the communicated asset[s]?" This change does not impact the outcome of the Decision Tree. * When EN 18031-3 is applied, the Decision Tree results for communication mechanisms used to transfer security and financial assets can only be PASS or FAIL. |

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| **Name** | **DT result (P/F/NA)** | **Is justif. provided? (Y/N)** | **Is justif. correct? (Y/N)** | **Evaluator's comments** |
| **[E.Info.SCM-3.SCM]** | | | | |
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| 1. At least one P in column "DT result" (True/False) | |  |
| 2. No Fs in column "DT result" (True/False) | |  |
| 3. Only Ys in columns "Is justif. provided" and "Is justif. correct" (True/False) | |  |
| **Assignment of verdict** | **PASS** assigned if statements 1, 2 and 3 are True | |
| **FAIL** assigned if statements 2 or 3 are False | |
| **NOT APPLICABLE** assigned in other cases | |
| **Evaluator's comments** |  | |
| **Verdict** | |  |

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| **SCM-3 Functional Sufficiency Assessment** | |
| **Standards** | EN 18031-1, EN 18031-2, EN 18031-3 |
| **Preconditions** | * "The equipment is in an operational state" |
| **Identifiers: Worksheets** | * [E.Info.SCM-3.SCM]: SCM-3.SCM |
| **Instructions** | 1. Refer to the instructions provided in the Assessments Unit Table(s) below and perform the actions required. 2. Once the Assessment Unit Table(s) completed, indicate in the table of verdict below whether each statement is True or False and assign a verdict based on the "Assignment of verdict". |
| **Notes** | * The Assessment Units of the standards begin with "Perform a legitimate communication for each security asset documented in [E.Info.SCM-3.SecurityAsset] and […], between the equipment and an authorized communication endpoint" (other assets can be network, privacy or financial, depending on the standards applied). Zealience considers that these assets expected in [E.Info.SCM-3.xxxAsset] are the confidential assets documented in [E.Info.SCM-1.xxxAsset] (i.e. confidential assets that are communicated over network interfaces) for which the path through the decision tree documented in [E.Info.DT.SCM-1] ends with PASS (i.e. confidential assets that are communicated over a secure communication mechanism). The secure communication mechanism(s) used to communicate such confidential assets (i.e. communication mechanisms required per SCM-1) must fulfil SCM-3 (i.e. "apply best practices to protect confidentiality of communicated […] assets where confidentiality protection of those is needed") unless, in EN 18031-1 and EN 18031-2, a deviation from best practice is inevitable for interoperability reasons (in EN 18031-3, no deviation is allowed). * The Assessment Units of the standards instruct to consider "the equipment states documented". They are documented in [E.Info.SCM-1.SCM.States]. |

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| **Assessment Unit Table - [AU.SCM-3.MessageEnc]** | | | |
| **Test Items** | Secure communication mechanisms (ComMech) with implementation category [IC.SCM-3.MessageEnc] as documented in the worksheet SCM-3.SCM | | |
| **Instructions** | 1. List all the Test Items by writing their names in the column "Name" below. 2. For each Test Item, perform the assessment units described in the standard(s) applied and functionally confirm each case (C) listed below by indicating Y (yes) or N (no) in the respective column. | | |
| 1. "The key inside the message which is used to encrypt the payload cannot be disclosed" 2. "The communicated […] assets cannot be eavesdropped." | | | |
| **Name** | **C1** | **C2** | **Evaluator's comments** |
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| **Assessment Unit Table - [AU.SCM-3.ChannelEnc]** | | | |
| **Test Items** | Secure communication mechanisms (ComMech) with implementation category [IC.SCM-3.ChannelEnc] as documented in the worksheet SCM-3.SCM | | |
| **Instructions** | 1. List all the Test Items by writing their names in the column "Name" below. 2. For each Test Item, perform the assessment units described in the standard(s) applied and functionally confirm each case (C) listed below by indicating Y (yes) or N (no) in the respective column. | | |
| 1. "The key which is used to encrypt the messages inside the communication channel cannot be intercepted" 2. "The communicated […] assets cannot be eavesdropped" | | | |
| **Name** | **C1** | **C2** | **Evaluator's comments** |
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| **Assessment Unit Table - [AU.SCM-3.Generic]** | | | |
| **Test Items** | Secure communication mechanisms (ComMech) with implementation category [IC.SCM-3.Generic] as documented in the worksheet SCM-3.SCM | | |
| **Instructions** | 1. List all the Test Items by writing their names in the column "Name" below. 2. For each Test Item, perform the assessment units described in the standard(s) applied and functionally confirm each case (C) listed below by indicating Y (yes) or N (no) in the respective column. | | |
| 1. "The secret used to encrypt the message cannot be intercepted or eavesdropped" 2. "The encrypted content of the message cannot be eavesdropped or disclosed" | | | |
| **Name** | **C1** | **C2** | **Evaluator's comments** |
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| 1. Only Ys in the case columns (Cx) in the Assessment Unit Tables (True/False) | |  |
| **Assignment of verdict** | **PASS** assigned if statement 1 is True | |
| **FAIL** assigned if statement 1 is False | |
| **NOT APPLICABLE** assigned in other cases | |
| **Evaluator's comments** |  | |
| **Verdict** | |  |

### [SCM-4] Appropriate replay protection for secure communication mechanisms

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| **SCM-4 Conceptual Assessment** | |
| **Standards** | EN 18031-1, EN 18031-2, EN 18031-3 |
| **Preconditions** | * None |
| **Identifiers: Worksheets** | * [E.Info.SCM-4.FinancialAsset]: SCM-1.FinAsset * [E.Info.SCM-4.NetworkAsset]: SCM-1.NetAsset * [E.Info.SCM-4.NetworkInterface]: SCM-1.NetIntf * [E.Info.SCM-4.PrivacyAsset]: SCM-1.PrivAsset * [E.Info.SCM-4.SCM]: SCM-4.SCM * [E.Info.SCM-4.SecurityAsset]: SCM-1.SecAsset |
| **Test Items** | * Secure communication mechanism (ComMech) |
| **Instructions** | 1. List all the Test Items provided in the worksheet(s) by writing their names in the column "Name" below. Include the Decision Tree result in the column "DT result" (Pass, Fail or NA). Indicate in the column "Is justif. provided?" whether a justification is provided in the respective worksheet by writing Y(es) or N(o). 2. For each Test Item in the table, review the justification and indicate in the column "Is justif. correct?" whether it is correct. Provide comments where necessary. 3. Finally, indicate in the table of verdict below whether each statement is True or False and assign a verdict based on the "Assignment of verdict". |
| **Notes** | * The Decision Tree requires to answer the decision nodes "for each communication of […] assets". Similarly to SCM-2, Zealience suggests to only document one path for each secure communication mechanism documented in the worksheet SCM-4.SCM (instead of one path for each asset communicated). It is assumed that the replay protection (or lack thereof) of a communication mechanism will be the same for all assets communicated through this mechanism. This leads to the following change of DT.SCM-4.DN-1: "Are best practices applied to protect the communicated asset[s] against reply attacks?" This change does not impact the outcome of the Decision Tree. * In case of a communication mechanism documented as not applying best practice for replay protection because a duplicate transfer does not pose a threat, it is important to review all communicated assets (especially confidential assets) to assess whether it is the case that a duplicate transfer does not pose a threat. * When EN 18031-3 is applied, communication mechanisms used to transfer security or financial assets cannot deviate from best practice due to interoperability reasons. |

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| **Name** | **DT result (P/F/NA)** | **Is justif. provided? (Y/N)** | **Is justif. correct? (Y/N)** | **Evaluator's comments** |
| **[E.Info.SCM-4.SCM]** | | | | |
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| 1. At least one P in column "DT result" (True/False) | |  |
| 2. No Fs in column "DT result" (True/False) | |  |
| 3. Only Ys in columns "Is justif. provided" and "Is justif. correct" (True/False) | |  |
| **Assignment of verdict** | **PASS** assigned if statements 1, 2 and 3 are True | |
| **FAIL** assigned if statements 2 or 3 are False | |
| **NOT APPLICABLE** assigned in other cases | |
| **Evaluator's comments** |  | |
| **Verdict** | |  |

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| **SCM-4 Functional Sufficiency Assessment** | |
| **Standards** | EN 18031-1, EN 18031-2, EN 18031-3 |
| **Preconditions** | * "The equipment is in an operational state" |
| **Identifiers: Worksheets** | * [E.Info.SCM-4.SCM]: SCM-4.SCM |
| **Instructions** | 1. Refer to the instructions provided in the Assessments Unit Table(s) below and perform the actions required. 2. Once the Assessment Unit Table(s) completed, indicate in the table of verdict below whether each statement is True or False and assign a verdict based on the "Assignment of verdict". |
| **Notes** | * The Assessment Units instruct to "perform a legitimate communication for each […] asset documented in [E.Info.SCM-4.[…]Asset], between the equipment and an authorized communication endpoint". These assets are those communicated through the communication mechanisms documented in [E.Info.SCM-4.SCM]. For each of these communication mechanisms, refer to the assets they communicate in the respective identifier [E.Info.SCM-1.xxxAsset] (with xxxAsset being SecurityParameter for example) and perform the Assessment Units. * The Assessment Units instruct to consider "the equipment states documented". They are documented in [E.Info.SCM-1.SCM.States]. |

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| **Assessment Unit Table - [AU.SCM-4.SeqNumb]** | | |
| **Test Items** | Secure communication mechanisms (ComMech) with implementation category [IC.SCM-4.SeqNumb] as documented in the worksheet SCM-4.SCM | |
| **Instructions** | 1. List all the Test Items by writing their names in the column "Name" below. 2. For each Test Item, perform the assessment units described in the standard(s) applied and functionally confirm each case (C) listed below by indicating Y (yes) or N (no) in the respective column. | |
| 1. "The incoming message (part of the communication of […] assets) with a repeating sequence number is not accepted" | | |
| **Name** | **C1** | **Evaluator's comments** |
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| **Assessment Unit Table - [AU.SCM-4.TimeStamp]** | | |
| **Test Items** | Secure communication mechanisms (ComMech) with implementation category [IC.SCM-4.TimeStamp] as documented in the worksheet SCM-4.SCM | |
| **Instructions** | 1. List all the Test Items by writing their names in the column "Name" below. 2. For each Test Item, perform the assessment units described in the standard(s) applied and functionally confirm each case (C) listed below by indicating Y (yes) or N (no) in the respective column. | |
| 1. "The incoming message (part of the communication of […] assets) with an irregular timestamp is not accepted" | | |
| **Name** | **C1** | **Evaluator's comments** |
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| **Assessment Unit Table - [AU.SCM-4.OneTimeEncKey]** | | | |
| **Test Items** | Secure communication mechanisms (ComMech) with implementation category [IC.SCM-4.OneTimeEncKey] as documented in the worksheet SCM-4.SCM | | |
| **Instructions** | 1. List all the Test Items by writing their names in the column "Name" below. 2. For each Test Item, perform the assessment units described in the standard(s) applied and functionally confirm each case (C) listed below by indicating Y (yes) or N (no) in the respective column. | | |
| 1. "The encryption key cannot be intercepted" 2. "The duplicate (binary copy) of an already accepted message (part of the communication of […] assets) is not accepted again" | | | |
| **Name** | **C1** | **C2** | **Evaluator's comments** |
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| **Assessment Unit Table - [AU.SCM-4.Generic]** | | |
| **Test Items** | Secure communication mechanisms (ComMech) with implementation category [IC.SCM-4.Generic] as documented in the worksheet SCM-4.SCM | |
| **Instructions** | 1. List all the Test Items by writing their names in the column "Name" below. 2. For each Test Item, perform the assessment units described in the standard(s) applied and functionally confirm each case (C) listed below by indicating Y (yes) or N (no) in the respective column. | |
| 1. "The duplicate (binary copy) of an already accepted message (part of the communication of […] assets) is not accepted again" | | |
| **Name** | **C1** | **Evaluator's comments** |
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| --- | --- | --- |
| 1. Only Ys in the case columns (Cx) in the Assessment Unit Tables (True/False) | |  |
| **Assignment of verdict** | **PASS** assigned if statement 1 is True | |
| **FAIL** assigned if statement 1 is False | |
| **NOT APPLICABLE** assigned in other cases | |
| **Evaluator's comments** |  | |
| **Verdict** | |  |

## [RLM] Resilience mechanism

### [RLM-1] Applicability and appropriateness of resilience mechanisms

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| **RLM-1 Conceptual Assessment** | |
| **Standards** | EN 18031-1 |
| **Preconditions** | * None |
| **Identifiers: Worksheets** | * [E.Info.RLM-1.NetworkInterface]: RLM-1.RLM * [E.Info.RLM-1.RLM]: RLM-1.RLM |
| **Test Items** | * Network interfaces (NetIntf) documented in the worksheet RLM-1.RLM |
| **Instructions** | 1. List all the Test Items provided in the worksheet(s) by writing their names in the column "Name" below. Include the Decision Tree result in the column "DT result" (Pass, Fail or NA). Indicate in the column "Is justif. provided?" whether a justification is provided in the respective worksheet by writing Y(es) or N(o). 2. For each Test Item in the table, review the justification and indicate in the column "Is justif. correct?" whether it is correct. Provide comments where necessary. 3. Finally, indicate in the table of verdict below whether each statement is True or False and assign a verdict based on the "Assignment of verdict". |

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| **Name** | **DT result (P/F/NA)** | **Is justif. provided? (Y/N)** | **Is justif. correct? (Y/N)** | **Evaluator's comments** |
| **[E.Info.RLM-1.NetworkInterface]** | | | | |
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| 1. At least one P in column "DT result" (True/False) | |  |
| 2. No Fs in column "DT result" (True/False) | |  |
| 3. Only Ys in columns "Is justif. provided" and "Is justif. correct" (True/False) | |  |
| **Assignment of verdict** | **PASS** assigned if statements 1, 2 and 3 are True | |
| **FAIL** assigned if statements 2 or 3 are False | |
| **NOT APPLICABLE** assigned in other cases | |
| **Evaluator's comments** |  | |
| **Verdict** | |  |

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| **RLM-1 Functional Completeness Assessment** | |
| **Standards** | EN 18031-1 |
| **Preconditions** | * "The equipment is in an operational state and each network interface documented in [E.Info.RLM-1.NetworkInterface] needs to either be enabled or configured so that each network interface can be tested." * "Where [E.Info.RLM-1.RLM] are used, documentation is provided that specifies information on what to configure/ the required configuration of the RLM to be able to test the implemented mechanisms." |
| **Identifiers: Worksheets** | * [E.Info.RLM-1.NetworkInterface]: RLM-1.RLM * [E.Info.RLM-1.RLM]: RLM-1.RLM |
| **Test Items** | * Network interfaces (NetIntf) documented in the worksheet RLM-1.RLM * Resilience mechanisms documented in the worksheet RLM-1.RLM |
| **Instructions** | 1. Perform the assessment units described in the standard(s) applied and report in the table below any relevant Test Items that are not documented in the worksheet(s). 2. Finally, indicate in the table of verdict below whether each statement is True or False and assign a verdict based on the "Assignment of verdict". |

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| **Relevant Test Items not documented** | **Evaluator's comments** |
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| 1. No entries in column "Relevant Test Items not documented" (True/False) | |  |
| **Assignment of verdict** | **PASS** assigned if statement 1 is True | |
| **FAIL** assigned if statement 1 is False | |
| **NOT APPLICABLE** assigned in other cases | |
| **Evaluator's comments** |  | |
| **Verdict** | |  |

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| **RLM-1 Functional Sufficiency Assessment** | |
| **Standards** | EN 18031-1 |
| **Preconditions** | * "The equipment is in an operational state and each [E.Info.RLM-1.NetworkInterface] is either enabled or configured." * "Where [E.Info.RLM-1.RLM] are used the information on what to configure to be able to test the implemented mechanisms is provided." |
| **Identifiers: Worksheets** | * [E.Info.RLM-1.NetworkInterface]: RLM-1.RLM * [E.Info.RLM-1.RLM]: RLM-1.RLM |
| **Instructions** | 1. Refer to the instructions provided in the Assessments Unit Table(s) below and perform the actions required. 2. Once the Assessment Unit Table(s) completed, indicate in the table of verdict below whether each statement is True or False and assign a verdict based on the "Assignment of verdict". |

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| **Assessment Unit Table - [E.Info.RLM-1.NetworkInterface]** | | | |
| **Test Items** | Network interfaces (NetIntf) documented in the worksheet RLM-1.RLM | | |
| **Instructions** | 1. List all the Test Items by writing their names in the column "Name" below. 2. For each Test Item, perform the assessment units described in the standard(s) applied and functionally confirm each case (C) listed below by indicating Y (yes) or N (no) in the respective column. | | |
| 1. The network interface is capable of returning to a defined state after a simulated DoS attack. 2. The resilience mechanism(s) documented for that network interface is implemented as described. | | | |
| **Name** | **C1** | **C2** | **Evaluator's comments** |
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| --- | --- | --- |
| 1. Only Ys in the case columns (Cx) in the Assessment Unit Tables (True/False) | |  |
| **Assignment of verdict** | **PASS** assigned if statement 1 is True | |
| **FAIL** assigned if statement 1 is False | |
| **NOT APPLICABLE** assigned in other cases | |
| **Evaluator's comments** |  | |
| **Verdict** | |  |

## [NMM] Network monitoring mechanism

### [NMM-1] Applicability and appropriateness of network monitoring mechanisms

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| **NMM-1 Conceptual Assessment** | |
| **Standards** | EN 18031-1 |
| **Preconditions** | * None |
| **Identifiers: Worksheets** | * [E.Info.NMM-1.NMM]: NMM-1.NMM |
| **Test Items** | * Network monitoring mechanisms (NetMonMech) documented in the worksheet NMM-1.NMM |
| **Instructions** | 1. List all the Test Items provided in the worksheet(s) by writing their names in the column "Name" below. Include the Decision Tree result in the column "DT result" (Pass, Fail or NA). Indicate in the column "Is justif. provided?" whether a justification is provided in the respective worksheet by writing Y(es) or N(o). 2. For each Test Item in the table, review the justification and indicate in the column "Is justif. correct?" whether it is correct. Provide comments where necessary. 3. Finally, indicate in the table of verdict below whether each statement is True or False and assign a verdict based on the "Assignment of verdict". |
| **Notes** | * If the device is not a network equipment, the verdict must be NOT APPLICABLE. * The Decision Tree figure focuses on the equipment alone, implying that only one path through the Decision Tree is sufficient. However, the Assessment Units reads "For each path through the decision tree". Zealience suggests documenting the paths as follows: For each network monitoring mechanism declared, answer DT.TCM-1.DN-2 with Yes, which leads to a DT result of PASS. The evaluator will then review the justification provided for each network monitoring mechanism. If no network monitoring mechanisms are declared, the verdict must be FAIL. |

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| **Name** | **DT result (P/F/NA)** | **Is justif. provided? (Y/N)** | **Is justif. correct? (Y/N)** | **Evaluator's comments** |
| **[E.Info.NMM-1.NMM]** | | | | |
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| 1. At least one P in column "DT result" (True/False) | |  |
| 2. No Fs in column "DT result" (True/False) | |  |
| 3. Only Ys in columns "Is justif. provided" and "Is justif. correct" (True/False) | |  |
| **Assignment of verdict** | **PASS** assigned if statements 1, 2 and 3 are True | |
| **FAIL** assigned if statements 2 or 3 are False | |
| **NOT APPLICABLE** assigned in other cases | |
| **Evaluator's comments** |  | |
| **Verdict** | |  |

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| **NMM-1 Functional Sufficiency Assessment** | |
| **Standards** | EN 18031-1 |
| **Preconditions** | * "The equipment is operational and if available setup or configuration which is related to the traffic between networks did take place." * "Physical network connection to communicate between networks is established." |
| **Identifiers: Worksheets** | * [E.Info.NMM-1.NMM]: NMM-1.NMM |
| **Instructions** | 1. Refer to the instructions provided in the Assessments Unit Table(s) below and perform the actions required. 2. Once the Assessment Unit Table(s) completed, indicate in the table of verdict below whether each statement is True or False and assign a verdict based on the "Assignment of verdict". |
| **Notes** | * If the device is not a network equipment, the verdict must be NOT APPLICABLE. |

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| **Assessment Unit Table - [AU.NMM-1.GTPFiltering]** | | | | |
| **Test Items** | Network monitoring mechanisms (NetMonMech) with implementation category [IC.NMM-1.GTPFiltering] as documented in the worksheet NMM-1.NMM | | | |
| **Instructions** | 1. List all the Test Items by writing their names in the column "Name" below. 2. For each Test Item, perform the assessment units described in the standard(s) applied and functionally confirm each case (C) listed below by indicating Y (yes) or N (no) in the respective column. | | | |
| 1. "GTP messages are monitored by the network equipment" 2. "GTP messages sender authorization is verified by the network equipment" 3. "The network equipment is able to define and apply rules for the different GTP messages" | | | | |
| **Name** | **C1** | **C2** | **C3** | **Evaluator's comments** |
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| **Assessment Unit Table - [AU.NMM-1.IPPacketFiltering]** | | | | |
| **Test Items** | Network monitoring mechanisms (NetMonMech) with implementation category [IC.NMM-1.IPPacketFiltering] as documented in the worksheet NMM-1.NMM | | | |
| **Instructions** | 1. List all the Test Items by writing their names in the column "Name" below. 2. For each Test Item, perform the assessment units described in the standard(s) applied and functionally confirm each case (C) listed below by indicating Y (yes) or N (no) in the respective column. | | | |
| 1. "A simulated ICMP based DoS attack is detected" 2. "A simulated ARP based DoS attack is detected" 3. "Measure to limit the effect of such DoS attacks are put in place" | | | | |
| **Name** | **C1** | **C2** | **C3** | **Evaluator's comments** |
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| **Assessment Unit Table - [AU.NMM-1.Generic]** | | | |
| **Test Items** | Network monitoring mechanisms (NetMonMech) with implementation category [IC.NMM-1.Generic] as documented in the worksheet NMM-1.NMM | | |
| **Instructions** | 1. List all the Test Items by writing their names in the column "Name" below. 2. For each Test Item, perform the assessment units described in the standard(s) applied and functionally confirm each case (C) listed below by indicating Y (yes) or N (no) in the respective column. | | |
| 1. "The traffic and protocol types which are part of the traffic between networks processed by the network equipment are documented in [E.Info.NMM-1.NMM.NetworkEquipment]" 2. The network monitoring mechanism is implemented as documented in [E.Info.NMM-1.NMM] | | | |
| **Name** | **C1** | **C2** | **Evaluator's comments** |
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| 1. Only Ys in the case columns (Cx) in the Assessment Unit Tables (True/False) | |  |
| **Assignment of verdict** | **PASS** assigned if statement 1 is True | |
| **FAIL** assigned if statement 1 is False | |
| **NOT APPLICABLE** assigned in other cases | |
| **Evaluator's comments** |  | |
| **Verdict** | |  |

## [TCM] Traffic control mechanism

### [TCM-1] Applicability of and appropriate traffic control mechanisms

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| **TCM-1 Conceptual Assessment** | |
| **Standards** | EN 18031-1 |
| **Preconditions** | * None |
| **Identifiers: Worksheets** | * [E.Info.TCM-1.TCM]: TCM-1.TCM |
| **Test Items** | * Traffic control mechanisms (TrafConMech) documented in the worksheet TCM-1.TCM |
| **Instructions** | 1. List all the Test Items provided in the worksheet(s) by writing their names in the column "Name" below. Include the Decision Tree result in the column "DT result" (Pass, Fail or NA). Indicate in the column "Is justif. provided?" whether a justification is provided in the respective worksheet by writing Y(es) or N(o). 2. For each Test Item in the table, review the justification and indicate in the column "Is justif. correct?" whether it is correct. Provide comments where necessary. 3. Finally, indicate in the table of verdict below whether each statement is True or False and assign a verdict based on the "Assignment of verdict". |
| **Notes** | * If the device is not a network equipment, the verdict must be NOT APPLICABLE. * The Decision Tree figure focuses on the equipment alone, implying that only one path through the Decision Tree is sufficient. However, the Assessment Units reads "For each path through the decision tree". Zealience suggests documenting the paths as follows: For each traffic control mechanism declared, answer DT.NMM-1.DN-2 with Yes, which leads to a DT result of PASS. The evaluator will then review the justification provided for each traffic control mechanism. If no traffic control mechanisms are declared, the verdict must be FAIL. |

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| **Name** | **DT result (P/F/NA)** | **Is justif. provided? (Y/N)** | **Is justif. correct? (Y/N)** | **Evaluator's comments** |
| **[E.Info.TCM-1.TCM]** | | | | |
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| 1. At least one P in column "DT result" (True/False) | |  |
| 2. No Fs in column "DT result" (True/False) | |  |
| 3. Only Ys in columns "Is justif. provided" and "Is justif. correct" (True/False) | |  |
| **Assignment of verdict** | **PASS** assigned if statements 1, 2 and 3 are True | |
| **FAIL** assigned if statements 2 or 3 are False | |
| **NOT APPLICABLE** assigned in other cases | |
| **Evaluator's comments** |  | |
| **Verdict** | |  |

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| **TCM-1 Functional Sufficiency Assessment** | |
| **Standards** | EN 18031-1 |
| **Preconditions** | * "The equipment is in an operational state and if available setup or configuration did take place which is related to the traffic between networks." |
| **Identifiers: Worksheets** | * [E.Info.TCM-1.TCM]: TCM-1.TCM |
| **Instructions** | 1. Refer to the instructions provided in the Assessments Unit Table(s) below and perform the actions required. 2. Once the Assessment Unit Table(s) completed, indicate in the table of verdict below whether each statement is True or False and assign a verdict based on the "Assignment of verdict". |
| **Notes** | * If the device is not a network equipment, the verdict must be NOT APPLICABLE. |

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| **Assessment Unit Table - [AU.TCM-1.DatagramRules]** | | | | |
| **Test Items** | Traffic control mechanisms (TrafConMech) with implementation category [IC.TCM-1.DatagramRules] as documented in the worksheet TCM-1.TCM | | | |
| **Instructions** | 1. List all the Test Items by writing their names in the column "Name" below. 2. For each Test Item, perform the assessment units described in the standard(s) applied and functionally confirm each case (C) listed below by indicating Y (yes) or N (no) in the respective column. | | | |
| 1. "Datagrams are monitored by the network equipment" 2. "A simulated anomalous patterns and malicious traffic is detected and discarded or blocked" 3. "Datagrams with not authorized source or address destination are detected and discarded or blocked" | | | | |
| **Name** | **C1** | **C2** | **C3** | **Evaluator's comments** |
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| **Assessment Unit Table - [AU.TCM-1.TrafficSeparation]** | | |
| **Test Items** | Traffic control mechanisms (TrafConMech) with implementation category [IC.TCM-1.TrafficSeparation] as documented in the worksheet TCM-1.TCM | |
| **Instructions** | 1. List all the Test Items by writing their names in the column "Name" below. 2. For each Test Item, perform the assessment units described in the standard(s) applied and functionally confirm each case (C) listed below by indicating Y (yes) or N (no) in the respective column. | |
| 1. "For each different network domain, traffic forwarding between the network domains is not allowed by the network equipment" | | |
| **Name** | **C1** | **Evaluator's comments** |
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| **Assessment Unit Table - [AU.TCM-1.Generic]** | | |
| **Test Items** | Traffic control mechanisms (TrafConMech) with implementation category [IC.TCM-1.Generic] as documented in the worksheet TCM-1.TCM | |
| **Instructions** | 1. List all the Test Items by writing their names in the column "Name" below. 2. For each Test Item, perform the assessment units described in the standard(s) applied and functionally confirm each case (C) listed below by indicating Y (yes) or N (no) in the respective column. | |
| 1. "The traffic forwarded by the network equipment is controlled and the controls are implemented as described in [E.Info.TCM-1.TCM]" | | |
| **Name** | **C1** | **Evaluator's comments** |
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| 1. Only Ys in the case columns (Cx) in the Assessment Unit Tables (True/False) | |  |
| **Assignment of verdict** | **PASS** assigned if statement 1 is True | |
| **FAIL** assigned if statement 1 is False | |
| **NOT APPLICABLE** assigned in other cases | |
| **Evaluator's comments** |  | |
| **Verdict** | |  |

## [LGM] Logging mechanism

### [LGM-1] Applicability of logging mechanisms

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| **LGM-1 Conceptual Assessment** | |
| **Standards** | EN 18031-2, EN 18031-3 |
| **Preconditions** | * None |
| **Identifiers: Worksheets** | * [E.Info.LGM-1.FinancialAssetEvent]: LGM-1.AssetEvent * [E.Info.LGM-1.PrivacyAssetEvent]: LGM-1.AssetEvent |
| **Test Items** | * Events (LogEvent) documented in the worksheet LGM-1.AssetEvent |
| **Instructions** | 1. List all the Test Items provided in the worksheet(s) by writing their names in the column "Name" below. Include the Decision Tree result in the column "DT result" (Pass, Fail or NA). Indicate in the column "Is justif. provided?" whether a justification is provided in the respective worksheet by writing Y(es) or N(o). 2. For each Test Item in the table, review the justification and indicate in the column "Is justif. correct?" whether it is correct. Provide comments where necessary. 3. Finally, indicate in the table of verdict below whether each statement is True or False and assign a verdict based on the "Assignment of verdict". |

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| **Name** | **DT result (P/F/NA)** | **Is justif. provided? (Y/N)** | **Is justif. correct? (Y/N)** | **Evaluator's comments** |
| **[E.Info.LGM-1.PrivacyAssetEvent] - [E.Info.LGM-1.FinancialAssetEvent]** | | | | |
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| 1. At least one P in column "DT result" (True/False) | |  |
| 2. No Fs in column "DT result" (True/False) | |  |
| 3. Only Ys in columns "Is justif. provided" and "Is justif. correct" (True/False) | |  |
| **Assignment of verdict** | **PASS** assigned if statements 1, 2 and 3 are True | |
| **FAIL** assigned if statements 2 or 3 are False | |
| **NOT APPLICABLE** assigned in other cases | |
| **Evaluator's comments** |  | |
| **Verdict** | |  |

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| **LGM-1 Functional Sufficiency Assessment** | |
| **Standards** | EN 18031-2, EN 18031-3 |
| **Preconditions** | * "The equipment is in an operational state." |
| **Identifiers: Worksheets** | * [E.Info.LGM-1.FinancialAssetEvent]: LGM-1.AssetEvent * [E.Info.LGM-1.PrivacyAssetEvent]: LGM-1.AssetEvent |
| **Instructions** | 1. Refer to the instructions provided in the Assessments Unit Table(s) below and perform the actions required. 2. Once the Assessment Unit Table(s) completed, indicate in the table of verdict below whether each statement is True or False and assign a verdict based on the "Assignment of verdict". |
| **Notes** | * For this assessment, the standard requires to assess whether logging mechanisms required per LGM-1 are implemented. This means that only the events logged by logging mechanisms (i.e. the events with a PASS in the previous conceptual assessment) will be in scope of this assessment. |

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| **Assessment Unit Table - [E.Info.LGM-1.PrivacyAssetEvent] - [E.Info.LGM-1.FinancialAssetEvent]** | | | |
| **Test Items** | Events (LogEvent) that are logged by logging mechanisms as documented in the worksheet LGM-1.AssetEvent | | |
| **Instructions** | 1. List all the Test Items by writing their names in the column "Name" below. 2. For each Test Item, perform the assessment units described in the standard(s) applied and functionally confirm each case (C) listed below by indicating Y (yes) or N (no) in the respective column. | | |
| 1. The event can be generated as documented. 2. The log data can be accessed as documented. | | | |
| **Name** | **C1** | **C2** | **Evaluator's comments** |
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| 1. Only Ys in the case columns (Cx) in the Assessment Unit Tables (True/False) | |  |
| **Assignment of verdict** | **PASS** assigned if statement 1 is True | |
| **FAIL** assigned if statement 1 is False | |
| **NOT APPLICABLE** assigned in other cases | |
| **Evaluator's comments** |  | |
| **Verdict** | |  |

### [LGM-2] Persistent storage of log data

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| --- | --- |
| **LGM-2 Conceptual Assessment** | |
| **Standards** | EN 18031-2, EN 18031-3 |
| **Preconditions** | * None |
| **Identifiers: Worksheets** | * [E.Info.LGM-2.LGM]: LGM-2.LGM |
| **Test Items** | * (see Notes) * Logging mechanisms (LogMech) documented in the worksheet LGM-2.LGM |
| **Instructions** | 1. List all the Test Items provided in the worksheet(s) by writing their names in the column "Name" below. Include the Decision Tree result in the column "DT result" (Pass, Fail or NA). Indicate in the column "Is justif. provided?" whether a justification is provided in the respective worksheet by writing Y(es) or N(o). 2. For each Test Item in the table, review the justification and indicate in the column "Is justif. correct?" whether it is correct. Provide comments where necessary. 3. Finally, indicate in the table of verdict below whether each statement is True or False and assign a verdict based on the "Assignment of verdict". |
| **Notes** | * The standard expects to document the paths through the Decision Tree “for each logged event”. Zealience recommends instead documenting them for each logging mechanism since it is the logging mechanism which defines where the logs are stored. Doing so also reduces the number of paths to document, and hence to evaluate. |

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| **Name** | **DT result (P/F/NA)** | **Is justif. provided? (Y/N)** | **Is justif. correct? (Y/N)** | **Evaluator's comments** |
| **[E.Info.LGM-2.LGM]** | | | | |
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| --- | --- | --- |
| 1. At least one P in column "DT result" (True/False) | |  |
| 2. No Fs in column "DT result" (True/False) | |  |
| 3. Only Ys in columns "Is justif. provided" and "Is justif. correct" (True/False) | |  |
| **Assignment of verdict** | **PASS** assigned if statements 1, 2 and 3 are True | |
| **FAIL** assigned if statements 2 or 3 are False | |
| **NOT APPLICABLE** assigned in other cases | |
| **Evaluator's comments** |  | |
| **Verdict** | |  |

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| --- | --- |
| **LGM-2 Functional Sufficiency Assessment** | |
| **Standards** | EN 18031-2, EN 18031-3 |
| **Preconditions** | * "The equipment is in an operational state." |
| **Identifiers: Worksheets** | * [E.Info.LGM-2.LGM]: LGM-2.LGM |
| **Instructions** | 1. Refer to the instructions provided in the Assessments Unit Table(s) below and perform the actions required. 2. Once the Assessment Unit Table(s) completed, indicate in the table of verdict below whether each statement is True or False and assign a verdict based on the "Assignment of verdict". |
| **Notes** | * According to the Required Information for LGM-2, log data of events can be stored in the equipment's persistent storage (documented in [E.Info.LGM-2.LGM.InternalStorage]) or outside the equipment (documented in [E.Info.LGM-2.LGM.ExternalStorage]). In this Functional Sufficiency Assessment, only the log data stored in the equipment's persistent storage will be assessed. |

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| **Assessment Unit Table - [E.Info.LGM-2.LGM]** | | |
| **Test Items** | Logging mechanisms (LogMech) storing log data in the equipment's persistent storage according to [E.Info.LGM-2.LGM.InternalStorage] as documented in the worksheet LGM-2.LGM | |
| **Instructions** | 1. List all the Test Items by writing their names in the column "Name" below. 2. For each Test Item, perform the assessment units described in the standard(s) applied and functionally confirm each case (C) listed below by indicating Y (yes) or N (no) in the respective column. | |
| 1. The log data of the related event logged by the logging mechanism is present in the equipment's storage. | | |
| **Name** | **C1** | **Evaluator's comments** |
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| --- | --- | --- |
| 1. Only Ys in the case columns (Cx) in the Assessment Unit Tables (True/False) | |  |
| **Assignment of verdict** | **PASS** assigned if statement 1 is True | |
| **FAIL** assigned if statement 1 is False | |
| **NOT APPLICABLE** assigned in other cases | |
| **Evaluator's comments** |  | |
| **Verdict** | |  |

### [LGM-3] Minimum number of persistently stored events

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| --- | --- |
| **LGM-3 Conceptual Assessment** | |
| **Standards** | EN 18031-2, EN 18031-3 |
| **Preconditions** | * None |
| **Identifiers: Worksheets** | * [E.Info.LGM-3.Events]: LGM-3.LGM * [E.Info.LGM-3.Quantity]: LGM-3.LGM |
| **Test Items** | * Logging mechanisms (LogMech) (see Notes) storing data in the equipment's persistent storage as documented in the worksheet LGM-3.LGM |
| **Instructions** | 1. List all the Test Items provided in the worksheet(s) by writing their names in the column "Name" below. Include the Decision Tree result in the column "DT result" (Pass, Fail or NA). Indicate in the column "Is justif. provided?" whether a justification is provided in the respective worksheet by writing Y(es) or N(o). 2. For each Test Item in the table, review the justification and indicate in the column "Is justif. correct?" whether it is correct. Provide comments where necessary. 3. Finally, indicate in the table of verdict below whether each statement is True or False and assign a verdict based on the "Assignment of verdict". |
| **Notes** | * The Decision Tree focuses on the “equipment” and asks a single question which encompasses all logging mechanisms required per LGM-1. Instead, Zealience suggests answering this question for each logging mechanism * The identifier [E.Info.LGM-3.LGM] is not officially used in the standard. Given the note above, it makes sense to introduce it. |

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| **Name** | **DT result (P/F)** | **Is justif. provided? (Y/N)** | **Is justif. correct? (Y/N)** | **Evaluator's comments** |
| **[E.Info.LGM-3.LGM]** | | | | |
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| 1. Only Ps in column "DT result" (True/False) | |  |
| 2. Only Ys in columns "Is justif. provided" and "Is justif. correct" (True/False) | |  |
| **Assignment of verdict** | **PASS** assigned if statements 1 and 2 are True | |
| **FAIL** assigned if statements 1 or 2 are False | |
| **NOT APPLICABLE** assigned in other cases | |
| **Evaluator's comments** |  | |
| **Verdict** | |  |

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| --- | --- |
| **LGM-3 Functional Sufficiency Assessment** | |
| **Standards** | EN 18031-2, EN 18031-3 |
| **Preconditions** | * "The equipment is in an operational state." |
| **Identifiers: Worksheets** | * [E.Info.LGM-3.Events]: LGM-3.LGM * [E.Info.LGM-3.Quantity]: LGM-3.LGM |
| **Instructions** | 1. Refer to the instructions provided in the Assessments Unit Table(s) below and perform the actions required. 2. Once the Assessment Unit Table(s) completed, indicate in the table of verdict below whether each statement is True or False and assign a verdict based on the "Assignment of verdict". |

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| **Assessment Unit Table - [E.Info.LGM-3.LGM]** | | | |
| **Test Items** | Logging mechanisms (LogMech) storing log data in the equipment's persistent storage according to [E.Info.LGM-3.LGM] as documented in the worksheet LGM-3.LGM | | |
| **Instructions** | 1. List all the Test Items by writing their names in the column "Name" below. 2. For each Test Item, perform the assessment units described in the standard(s) applied and functionally confirm each case (C) listed below by indicating Y (yes) or N (no) in the respective column. | | |
| 1. The number of logged events documented in [E.Info.LGM-3.Quantity] can be generated. 2. The number of logged events stored in the equipment's persistent storage matches the number documented in [E.Info.LGM-3.Quantity]. | | | |
| **Name** | **C1** | **C2** | **Evaluator's comments** |
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| --- | --- | --- |
| 1. Only Ys in the case columns (Cx) in the Assessment Unit Tables (True/False) | |  |
| **Assignment of verdict** | **PASS** assigned if statement 1 is True | |
| **FAIL** assigned if statement 1 is False | |
| **NOT APPLICABLE** assigned in other cases | |
| **Evaluator's comments** |  | |
| **Verdict** | |  |

### [LGM-4] Time-related information of persistently stored log data

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| --- | --- |
| **LGM-4 Conceptual Assessment** | |
| **Standards** | EN 18031-2, EN 18031-3 |
| **Preconditions** | * None |
| **Identifiers: Worksheets** | * [E.Info.LGM-4.Events]: LGM-4.LGM * [E.Info.LGM-4.LGM]: LGM-4.LGM |
| **Test Items** | * Logging mechanisms (LogMech) (see Notes) storing log data in the equipment's persistent storage as documented in the worksheet LGM-4.LGM |
| **Instructions** | 1. List all the Test Items provided in the worksheet(s) by writing their names in the column "Name" below. Include the Decision Tree result in the column "DT result" (Pass, Fail or NA). Indicate in the column "Is justif. provided?" whether a justification is provided in the respective worksheet by writing Y(es) or N(o). 2. For each Test Item in the table, review the justification and indicate in the column "Is justif. correct?" whether it is correct. Provide comments where necessary. 3. Finally, indicate in the table of verdict below whether each statement is True or False and assign a verdict based on the "Assignment of verdict". |
| **Notes** | * The Decision Tree for requirement LGM-4 seems to be incorrect. Based on the information expected by the section Required Information, Zealience interprets that if real-time information is available on the equipment, the log data must include a timestamp, while if no real-time information is available, the log data must include time-related information (i.e. a means to track the sequence/order of occurrences of the log data). Therefore, answering Yes to DN-1 should not go into DN-2. Instead, Zealience suggests the following modification: If a real-time source is available, answer DT.LGM-4.DN-1: Yes leads to PASS while No leads to FAIL. If a real-time source is not available, answer only DT.LGM-4.DN-2: Yes leads to PASS while No leads to FAIL. * The standard expects to document the path through the Decision Tree “for each log data of an event […]”. Zealience recommends instead documenting it for each logging mechanism since it is the logging mechanism which adds timestamps/time-related information to the log data. Doing so also reduces the number of paths to document, and hence to evaluate. |

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| --- | --- | --- | --- | --- |
| **Name** | **DT result (P/F)** | **Is justif. provided? (Y/N)** | **Is justif. correct? (Y/N)** | **Evaluator's comments** |
| **[E.Info.LGM-4.LGM]** | | | | |
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| --- | --- | --- |
| 1. Only Ps in column "DT result" (True/False) | |  |
| 2. Only Ys in columns "Is justif. provided" and "Is justif. correct" (True/False) | |  |
| **Assignment of verdict** | **PASS** assigned if statements 1 and 2 are True | |
| **FAIL** assigned if statements 1 or 2 are False | |
| **NOT APPLICABLE** assigned in other cases | |
| **Evaluator's comments** |  | |
| **Verdict** | |  |

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| --- | --- |
| **LGM-4 Functional Sufficiency Assessment** | |
| **Standards** | EN 18031-2, EN 18031-3 |
| **Preconditions** | * "The equipment is in an operational state." |
| **Identifiers: Worksheets** | * [E.Info.LGM-4.Events]: LGM-4.LGM * [E.Info.LGM-4.LGM]: LGM-4.LGM |
| **Instructions** | 1. Refer to the instructions provided in the Assessments Unit Table(s) below and perform the actions required. 2. Once the Assessment Unit Table(s) completed, indicate in the table of verdict below whether each statement is True or False and assign a verdict based on the "Assignment of verdict". |

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| **Assessment Unit Table - [E.Info.LGM-4.LGM]** | | |
| **Test Items** | Logging mechanisms (LogMech) storing log data in the equipment's persistent storage that are documented in the worksheet LGM-4.LGM as relying on real-time information according to [E.Info.LGM-4.LGM.Timestamp] | |
| **Instructions** | 1. List all the Test Items by writing their names in the column "Name" below. 2. For each Test Item, perform the assessment units described in the standard(s) applied and functionally confirm each case (C) listed below by indicating Y (yes) or N (no) in the respective column. | |
| 1. The "log data persistently stored on the equipment includes timestamps as documented in [E.Info.LGM-4.LGM.Timestamp] when real time information is available" | | |
| **Name** | **C1** | **Evaluator's comments** |
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| --- | --- | --- |
| **Assessment Unit Table - [E.Info.LGM-4.LGM]** | | |
| **Test Items** | Logging mechanisms (LogMech) storing log data in the equipment's persistent storage that are documented in the worksheet LGM-4.LGM as relying on time-related information according to [E.Info.LGM-4.LGM.Timerelated] | |
| **Instructions** | 1. List all the Test Items by writing their names in the column "Name" below. 2. For each Test Item, perform the assessment units described in the standard(s) applied and functionally confirm each case (C) listed below by indicating Y (yes) or N (no) in the respective column. | |
| 1. The "log data persistently stored on the equipment includes time-related information as documented in [E.Info.LGM-4.LGM.Timerelated] when real time information is not available" | | |
| **Name** | **C1** | **Evaluator's comments** |
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| 1. Only Ys in the case columns (Cx) in the Assessment Unit Tables (True/False) | |  |
| **Assignment of verdict** | **PASS** assigned if statement 1 is True | |
| **FAIL** assigned if statement 1 is False | |
| **NOT APPLICABLE** assigned in other cases | |
| **Evaluator's comments** |  | |
| **Verdict** | |  |

## [DLM] Deletion mechanism

### [DLM-1] Applicability of deletion mechanisms

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| --- | --- |
| **DLM-1 Conceptual Assessment** | |
| **Standards** | EN 18031-2 |
| **Preconditions** | * None |
| **Identifiers: Worksheets** | * [E.Info.DLM-1.DLM]: DLM-1.PersoInfo, DLM-1.SenSecParam * [E.Info.DLM-1.PersonalData]: DLM-1.PersoInfo * [E.Info.DLM-1.SenSecParam]:DLM-1.SenSecParam |
| **Test Items** | * (See Notes) * Personal Information (PersoInfo) stored on the equipment as documented in the worksheet DLM-1.PersoInfo * Security Parameters (SecParam) that are stored on the equipment and must be deleted prior to disposing or replacing the equipment as documented in the worksheet DLM-1.SenSecParam |
| **Instructions** | 1. List all the Test Items provided in the worksheet(s) by writing their names in the column "Name" below. Include the Decision Tree result in the column "DT result" (Pass, Fail or NA). Indicate in the column "Is justif. provided?" whether a justification is provided in the respective worksheet by writing Y(es) or N(o). 2. For each Test Item in the table, review the justification and indicate in the column "Is justif. correct?" whether it is correct. Provide comments where necessary. 3. Finally, indicate in the table of verdict below whether each statement is True or False and assign a verdict based on the "Assignment of verdict". |
| **Notes** | * The text of the requirement uses the terms "personal data" and "personal information" interchangeably. Zealience interprets that all personal information stored on the equipment should be in scope of this requirement. * The requirement DLM-1 mandates that there must be a deletion mechanism to delete sensitive security parameters stored in the equipment. However, this requirement is confusing since there are security parameters that cannot/should not be deleted (e.g., public key used to verify the integrity and authenticity of updates). The assessor should discern whether a given security parameter must be deleted to fulfil DLM-1. Zealience interprets such security parameters as those relating to the users (e.g., user-defined passwords). |

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| **Name** | **DT result (P/F)** | **Is justif. provided? (Y/N)** | **Is justif. correct? (Y/N)** | **Evaluator's comments** |
| **[E.Info.DLM-1.PersonalData]** | | | | |
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| **[E.Info.DLM-1.SenSecParam]** | | | | |
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| 1. Only Ps in column "DT result" (True/False) | |  |
| 2. Only Ys in columns "Is justif. provided" and "Is justif. correct" (True/False) | |  |
| **Assignment of verdict** | **PASS** assigned if statements 1 and 2 are True | |
| **FAIL** assigned if statements 1 or 2 are False | |
| **NOT APPLICABLE** assigned in other cases | |
| **Evaluator's comments** |  | |
| **Verdict** | |  |

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| --- | --- |
| **DLM-1 Functional Completeness Assessment** | |
| **Standards** | EN 18031-2 |
| **Preconditions** | * The equipment is in an operational state |
| **Identifiers: Worksheets** | * [E.Info.DLM-1.PersonalData]: DLM-1.PersoInfo * [E.Info.DLM-1.SenSecParam]:DLM-1.SenSecParam |
| **Test Items** | * Personal Information (PersoInfo) stored on the equipment as documented in the worksheet DLM-1.PersoInfo * Security Parameters (SecParam) that are stored on the equipment and must be deleted prior to disposing or replacing the equipment as documented in the worksheet DLM-1.SenSecParam |
| **Instructions** | 1. Perform the assessment units described in the standard(s) applied and report in the table below any relevant Test Items that are not documented in the worksheet(s). 2. Finally, indicate in the table of verdict below whether each statement is True or False and assign a verdict based on the "Assignment of verdict". |
| **Notes** | * The text of the requirement uses the terms "personal data" and "personal information" interchangeably. Zealience interprets that all personal information stored on the equipment should be in scope of this requirement. * The requirement DLM-1 mandates that there must be a deletion mechanism to delete sensitive security parameters stored in the equipment. However, this requirement is confusing since there are security parameters that cannot/should not be deleted (e.g., public key used to verify the integrity and authenticity of updates). The assessor should discern whether a given security parameter must be deleted to fulfil DLM-1. Zealience interprets such security parameters as those relating to the users (e.g., user-defined passwords). |

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| **Relevant Test Items not documented** | **Evaluator's comments** |
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| 1. No entries in column "Relevant Test Items not documented" (True/False) | |  |
| **Assignment of verdict** | **PASS** assigned if statement 1 is True | |
| **FAIL** assigned if statement 1 is False | |
| **NOT APPLICABLE** assigned in other cases | |
| **Evaluator's comments** |  | |
| **Verdict** | |  |

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| **DLM-1 Functional Sufficiency Assessment** | |
| **Standards** | EN 18031-2 |
| **Preconditions** | * "The equipment is in an operational state" |
| **Identifiers: Worksheets** | * [E.Info.DLM-1.DLM]: DLM-1.PersoInfo, DLM-1.SenSecParam * [E.Info.DLM-1.PersonalData]: DLM-1.PersoInfo * [E.Info.DLM-1.SenSecParam]: DLM-1.SenSecParam |
| **Instructions** | 1. Refer to the instructions provided in the Assessments Unit Table(s) below and perform the actions required. 2. Once the Assessment Unit Table(s) completed, indicate in the table of verdict below whether each statement is True or False and assign a verdict based on the "Assignment of verdict". |

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| **Assessment Unit Table - [E.Info.DLM-1.PersonalData]** | | |
| **Test Items** | Personal information (PersoInfo) stored on the equipment as documented in the worksheet DLM-1.PersoInfo | |
| **Instructions** | 1. List all the Test Items by writing their names in the column "Name" below. 2. For each Test Item, perform the assessment units described in the standard(s) applied and functionally confirm each case (C) listed below by indicating Y (yes) or N (no) in the respective column. | |
| 1. The personal information can be deleted by the deletion mechanism(s) as documented in [E.Info.DLM-1.DLM] | | |
| **Name** | **C1** | **Evaluator's comments** |
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| **Assessment Unit Table - [E.Info.DLM-1.SenSecParam]** | | |
| **Test Items** | Security Parameters (SecParam) that are stored on the equipment and must be deleted prior to disposing or replacing the equipment as documented in the worksheet DLM-1.SenSecParam | |
| **Instructions** | 1. List all the Test Items by writing their names in the column "Name" below. 2. For each Test Item, perform the assessment units described in the standard(s) applied and functionally confirm each case (C) listed below by indicating Y (yes) or N (no) in the respective column. | |
| 1. The security parameter can be deleted by the deletion mechanism(s) as documented in [E.Info.DLM-1.DLM] | | |
| **Name** | **C1** | **Evaluator's comments** |
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| --- | --- | --- |
| 1. Only Ys in the case columns (Cx) in the Assessment Unit Tables (True/False) | |  |
| **Assignment of verdict** | **PASS** assigned if statement 1 is True | |
| **FAIL** assigned if statement 1 is False | |
| **NOT APPLICABLE** assigned in other cases | |
| **Evaluator's comments** |  | |
| **Verdict** | |  |

## [UNM] User notification mechanism

### [UNM-1] Applicability of user notification mechanisms

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| --- | --- |
| **UNM-1 Conceptual Assessment** | |
| **Standards** | EN 18031-2 |
| **Preconditions** | * None |
| **Identifiers: Worksheets** | * [E.Info.UNM-1.PersonalInformation]: UNM-1.PersoInfo |
| **Test Items** | * Personal Information (PersoInfo) stored on the equipment as documented in the worksheet UNM-1.PersoInfo |
| **Instructions** | 1. List all the Test Items provided in the worksheet(s) by writing their names in the column "Name" below. Include the Decision Tree result in the column "DT result" (Pass, Fail or NA). Indicate in the column "Is justif. provided?" whether a justification is provided in the respective worksheet by writing Y(es) or N(o). 2. For each Test Item in the table, review the justification and indicate in the column "Is justif. correct?" whether it is correct. Provide comments where necessary. 3. Finally, indicate in the table of verdict below whether each statement is True or False and assign a verdict based on the "Assignment of verdict". |
| **Notes** | * The Decision Tree of the requirement reads "For each personal information" followed by "For each use case where changes …". In order to minimize the number of paths to be documented, Zealience suggests to only document one path for each personal information. This leads to a slight change of DT.UNM-1.DN-2: "[Are all] use cases covered by a user notification mechanism". This change does not impact the outcome of the Decision Tree. |

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| **Name** | **DT result (P/F/NA)** | **Is justif. provided? (Y/N)** | **Is justif. correct? (Y/N)** | **Evaluator's comments** |
| **[E.Info.UNM-1.PersonalInformation]** | | | | |
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| --- | --- | --- |
| 1. At least one P in column "DT result" (True/False) | |  |
| 2. No Fs in column "DT result" (True/False) | |  |
| 3. Only Ys in columns "Is justif. provided" and "Is justif. correct" (True/False) | |  |
| **Assignment of verdict** | **PASS** assigned if statements 1, 2 and 3 are True | |
| **FAIL** assigned if statements 2 or 3 are False | |
| **NOT APPLICABLE** assigned in other cases | |
| **Evaluator's comments** |  | |
| **Verdict** | |  |

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| **UNM-1 Functional Completeness Assessment** | |
| **Standards** | EN 18031-2 |
| **Preconditions** | * The equipment is in an operational state |
| **Identifiers: Worksheets** | * [E.Info.UNM-1.PersonalInformation]: UNM-1.PersoInfo |
| **Test Items** | * Personal Information (PersoInfo) stored on the equipment as documented in the worksheet UNM-1.PersoInfo |
| **Instructions** | 1. Perform the assessment units described in the standard(s) applied and report in the table below any relevant Test Items that are not documented in the worksheet(s). 2. Finally, indicate in the table of verdict below whether each statement is True or False and assign a verdict based on the "Assignment of verdict". |

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| **Relevant Test Items not documented** | **Evaluator's comments** |
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| --- | --- | --- |
| 1. No entries in column "Relevant Test Items not documented" (True/False) | |  |
| **Assignment of verdict** | **PASS** assigned if statement 1 is True | |
| **FAIL** assigned if statement 1 is False | |
| **NOT APPLICABLE** assigned in other cases | |
| **Evaluator's comments** |  | |
| **Verdict** | |  |

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| **UNM-1 Functional Sufficiency Assessment** | |
| **Standards** | EN 18031-2 |
| **Preconditions** | * "The equipment is in an operational state" |
| **Identifiers: Worksheets** | * [E.Info.UNM-1.PersonalInformation]: UNM-1.PersoInfo |
| **Instructions** | 1. Refer to the instructions provided in the Assessments Unit Table(s) below and perform the actions required. 2. Once the Assessment Unit Table(s) completed, indicate in the table of verdict below whether each statement is True or False and assign a verdict based on the "Assignment of verdict". |

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| **Assessment Unit Table - [E.Info.UNM-1.PersonalInformation]** | | |
| **Test Items** | Personal information (PersoInfo) stored on the equipment as documented in the worksheet UNM-1.PersoInfo | |
| **Instructions** | 1. List all the Test Items by writing their names in the column "Name" below. 2. For each Test Item, perform the assessment units described in the standard(s) applied and functionally confirm each case (C) listed below by indicating Y (yes) or N (no) in the respective column. | |
| 1. There is "at least one user notification mechanism documented in [E.Info.UNM-1.PersonalInformation.UseCase.Notification] for each use case documented in [E.Info.UNM-1. PersonalInformation.UseCase]" for this Test Item. | | |
| **Name** | **C1** | **Evaluator's comments** |
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| --- | --- | --- |
| 1. Only Ys in the case columns (Cx) in the Assessment Unit Tables (True/False) | |  |
| **Assignment of verdict** | **PASS** assigned if statement 1 is True | |
| **FAIL** assigned if statement 1 is False | |
| **NOT APPLICABLE** assigned in other cases | |
| **Evaluator's comments** |  | |
| **Verdict** | |  |

### [UNM-2] Appropriate user notification content

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| --- | --- |
| **UNM-2 Conceptual Assessment** | |
| **Standards** | EN 18031-2 |
| **Preconditions** | * None |
| **Identifiers: Worksheets** | * [E.Info.UNM-2.Notifications]: UNM-2.Notif |
| **Test Items** | * (See Notes) * Personal Information (PersoInfo) stored on the equipment as documented in the worksheet UNM-2.Notif |
| **Instructions** | 1. List all the Test Items provided in the worksheet(s) by writing their names in the column "Name" below. Include the Decision Tree result in the column "DT result" (Pass, Fail or NA). Indicate in the column "Is justif. provided?" whether a justification is provided in the respective worksheet by writing Y(es) or N(o). 2. For each Test Item in the table, review the justification and indicate in the column "Is justif. correct?" whether it is correct. Provide comments where necessary. 3. Finally, indicate in the table of verdict below whether each statement is True or False and assign a verdict based on the "Assignment of verdict". |
| **Notes** | * The requirement UNM-2 instructs to perform this assessment "for each user notification mechanism that is required per UNM-1" followed by "for each notification…". However, in order to streamline the Technical Documentation creation and review, Zealience suggests to perform the assessment for each personal information, as a continuation of UNM-1. This enables to leverage the information already provided for UNM-1 and the overlaps in the Required Information of UNM-1 and UNM-2 (e.g. [E.Info.UNM-1.PersonalInformation.UseCase] and [E.Info.UNM-2.Notifications.UseCase]). * Moreover, in order to minimize the number of paths to be documented, Zealience suggests a slight change for DT.UNM-2.DN-1: "[Do] the notifications describe the change and how the change…". By answering for all notifications at once, only one path needs to be documented per Personal Information. This change does not impact the outcome of the Decision Tree. |

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| --- | --- | --- | --- | --- |
| **Name** | **DT result (P/F)** | **Is justif. provided? (Y/N)** | **Is justif. correct? (Y/N)** | **Evaluator's comments** |
| **[E.Info.UNM-2.Notifications]** | | | | |
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| --- | --- | --- |
| 1. Only Ps in column "DT result" (True/False) | |  |
| 2. Only Ys in columns "Is justif. provided" and "Is justif. correct" (True/False) | |  |
| **Assignment of verdict** | **PASS** assigned if statements 1 and 2 are True | |
| **FAIL** assigned if statements 1 or 2 are False | |
| **NOT APPLICABLE** assigned in other cases | |
| **Evaluator's comments** |  | |
| **Verdict** | |  |

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| --- | --- |
| **UNM-2 Functional Sufficiency Assessment** | |
| **Standards** | EN 18031-2 |
| **Preconditions** | * "The equipment is in an operational state" |
| **Identifiers: Worksheets** | * [E.Info.UNM-2.Notifications]: UNM-2.Notif |
| **Instructions** | 1. Refer to the instructions provided in the Assessments Unit Table(s) below and perform the actions required. 2. Once the Assessment Unit Table(s) completed, indicate in the table of verdict below whether each statement is True or False and assign a verdict based on the "Assignment of verdict". |

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| --- | --- | --- | --- |
| **Assessment Unit Table - [E.Info.UNM-2.Notifications]** | | | |
| **Test Items** | Personal information (PersoInfo) stored on the equipment as documented in the worksheet UNM-2.Notif | | |
| **Instructions** | 1. List all the Test Items by writing their names in the column "Name" below. 2. For each Test Item, perform the assessment units described in the standard(s) applied and functionally confirm each case (C) listed below by indicating Y (yes) or N (no) in the respective column. | | |
| 1. The content of each notification for the Test Item matches the description provided in [E.Info.UNM-2.Notifications.UseCase.Content] 2. The content of each notification for the Test Item "includes content as required per UNM-2" | | | |
| **Name** | **C1** | **C2** | **Evaluator's comments** |
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| --- | --- | --- |
| 1. Only Ys in the case columns (Cx) in the Assessment Unit Tables (True/False) | |  |
| **Assignment of verdict** | **PASS** assigned if statement 1 is True | |
| **FAIL** assigned if statement 1 is False | |
| **NOT APPLICABLE** assigned in other cases | |
| **Evaluator's comments** |  | |
| **Verdict** | |  |

## [CCK] Confidential cryptographic keys

### [CCK-1] Appropriate CCKs

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| --- | --- |
| **CCK-1 Conceptual Assessment** | |
| **Standards** | EN 18031-1, EN 18031-2, EN 18031-3 |
| **Preconditions** | * None |
| **Identifiers: Worksheets** | * [E.Info.CCK-1.CCK]: CCK-1.CCK |
| **Test Items** | * Security parameters (SecParam) documented in the worksheet CCK-1.CCK as confidential cryptographic keys that are preinstalled or generated by the equipment |
| **Instructions** | 1. List all the Test Items provided in the worksheet(s) by writing their names in the column "Name" below. Include the Decision Tree result in the column "DT result" (Pass, Fail or NA). Indicate in the column "Is justif. provided?" whether a justification is provided in the respective worksheet by writing Y(es) or N(o). 2. For each Test Item in the table, review the justification and indicate in the column "Is justif. correct?" whether it is correct. Provide comments where necessary. 3. Finally, indicate in the table of verdict below whether each statement is True or False and assign a verdict based on the "Assignment of verdict". |

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| --- | --- | --- | --- | --- |
| **Name** | **DT result (P/F/NA)** | **Is justif. provided? (Y/N)** | **Is justif. correct? (Y/N)** | **Evaluator's comments** |
| **[E.Info.CCK-1.CCK]** | | | | |
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| 1. At least one P in column "DT result" (True/False) | |  |
| 2. No Fs in column "DT result" (True/False) | |  |
| 3. Only Ys in columns "Is justif. provided" and "Is justif. correct" (True/False) | |  |
| **Assignment of verdict** | **PASS** assigned if statements 1, 2 and 3 are True | |
| **FAIL** assigned if statements 2 or 3 are False | |
| **NOT APPLICABLE** assigned in other cases | |
| **Evaluator's comments** |  | |
| **Verdict** | |  |

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| --- | --- |
| **CCK-1 Functional Completeness Assessment** | |
| **Standards** | EN 18031-1, EN 18031-2, EN 18031-3 |
| **Preconditions** | * The equipment is in an operational state |
| **Identifiers: Worksheets** | * [E.Info.CCK-1.CCK]: CCK-1.CCK |
| **Test Items** | * Security parameters (SecParam) documented in the worksheet CCK-1.CCK as confidential cryptographic keys that are preinstalled or generated by the equipment |
| **Instructions** | 1. Perform the assessment units described in the standard(s) applied and report in the table below any relevant Test Items that are not documented in the worksheet(s). 2. Finally, indicate in the table of verdict below whether each statement is True or False and assign a verdict based on the "Assignment of verdict". |

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| **Relevant Test Items not documented** | **Evaluator's comments** |
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| --- | --- | --- |
| 1. No entries in column "Relevant Test Items not documented" (True/False) | |  |
| **Assignment of verdict** | **PASS** assigned if statement 1 is True | |
| **FAIL** assigned if statement 1 is False | |
| **NOT APPLICABLE** assigned in other cases | |
| **Evaluator's comments** |  | |
| **Verdict** | |  |

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| --- | --- |
| **CCK-1 Functional Sufficiency Assessment** | |
| **Standards** | EN 18031-1, EN 18031-2, EN 18031-3 |
| **Preconditions** | * "The equipment is in an operational state" |
| **Identifiers: Worksheets** | * [E.Info.CCK-1.CCK]: CCK-1.CCK |
| **Instructions** | 1. Refer to the instructions provided in the Assessments Unit Table(s) below and perform the actions required. 2. Once the Assessment Unit Table(s) completed, indicate in the table of verdict below whether each statement is True or False and assign a verdict based on the "Assignment of verdict". |

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| **Assessment Unit Table - [E.Info.CCK-1.CCK]** | | |
| **Test Items** | Security parameters (SecParam) documented as confidential cryptographic keys (either preinstalled or generated by the equipment) in the worksheet CCK-1.CCK | |
| **Instructions** | 1. List all the Test Items by writing their names in the column "Name" below. 2. For each Test Item, perform the assessment units described in the standard(s) applied and functionally confirm each case (C) listed below by indicating Y (yes) or N (no) in the respective column. | |
| 1. "The CCK's length documented in [E.Info.CCK-1.CCK] is implemented in accordance with [E.Info.CCK-1.CCK.SecurityStrength]" | | |
| **Name** | **C1** | **Evaluator's comments** |
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| --- | --- | --- |
| 1. Only Ys in the case columns (Cx) in the Assessment Unit Tables (True/False) | |  |
| **Assignment of verdict** | **PASS** assigned if statement 1 is True | |
| **FAIL** assigned if statement 1 is False | |
| **NOT APPLICABLE** assigned in other cases | |
| **Evaluator's comments** |  | |
| **Verdict** | |  |

### [CCK-2] CCK generation mechanisms

|  |  |
| --- | --- |
| **CCK-2 Conceptual Assessment** | |
| **Standards** | EN 18031-1, EN 18031-2, EN 18031-3 |
| **Preconditions** | * None |
| **Identifiers: Worksheets** | * [E.Info.CCK-2.CCK]: CCK-2.CCK (see Notes) * [E.Info.CCK-2.Generation]: CCK-2.Generation |
| **Test Items** | * Confidential cryptographic keys (SecParam) generated by the equipment as documented in the worksheet CCK-2.CCK * Key generation mechanisms (KeyGenMech) documented in the worksheet CCK-2.Generation |
| **Instructions** | 1. List all the Test Items provided in the worksheet(s) by writing their names in the column "Name" below. Include the Decision Tree result in the column "DT result" (Pass, Fail or NA). Indicate in the column "Is justif. provided?" whether a justification is provided in the respective worksheet by writing Y(es) or N(o). 2. For each Test Item in the table, review the justification and indicate in the column "Is justif. correct?" whether it is correct. Provide comments where necessary. 3. Finally, indicate in the table of verdict below whether each statement is True or False and assign a verdict based on the "Assignment of verdict". |
| **Notes** | * The identifier [E.Info.CCK-2.CCK] is not an official identifier used in the standards. However, Zealience recommends using it to document the cryptographic keys generated and the selected path through the Decision Tree of CCK-2. Dissociating the key generation mechanisms (documented in [E.Info.CCK-2.Generation]) from the keys themselves (documented in [E.Info.CCK-2.CCK]) makes the application of the Decision Tree easier: For each key generation mechanism ([E.Info.CCK-2.Generation]), go to the keys it generates ([E.Info.CCK-2.Generation.CCK]) by referring to [E.Info.CCK-2.CCK]. For each key generated, review the path through the Decision Tree. |

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| **Name** | **DT result (P/F/NA)** | **Is justif. provided? (Y/N)** | **Is justif. correct? (Y/N)** | **Evaluator's comments** |
| **[E.Info.CCK-2.CCK]** | | | | |
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| --- | --- | --- |
| 1. At least one P in column "DT result" (True/False) | |  |
| 2. No Fs in column "DT result" (True/False) | |  |
| 3. Only Ys in columns "Is justif. provided" and "Is justif. correct" (True/False) | |  |
| **Assignment of verdict** | **PASS** assigned if statements 1, 2 and 3 are True | |
| **FAIL** assigned if statements 2 or 3 are False | |
| **NOT APPLICABLE** assigned in other cases | |
| **Evaluator's comments** |  | |
| **Verdict** | |  |

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| --- | --- |
| **CCK-2 Conceptual completeness assessment of documentation** | |
| **Standards** | EN 18031-1, EN 18031-2, EN 18031-3 |
| **Preconditions** | * The equipment is in an operational state |
| **Identifiers: Worksheets** | * [E.Info.CCK-1.CCK]: CCK-1.CCK * [E.Info.CCK-2.Generation]: CCK-2.Generation |
| **Test Items** | * Key generation mechanisms (KeyGenMech) documented in the worksheet CCK-2.Generation |
| **Instructions** | 1. Perform the assessment units described in the standard(s) applied and report in the table below any relevant Test Items that are not documented in the worksheet(s). 2. Finally, indicate in the table of verdict below whether each statement is True or False and assign a verdict based on the "Assignment of verdict". |

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| **Relevant Test Items not documented** | **Evaluator's comments** |
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| --- | --- | --- |
| 1. No entries in column "Relevant Test Items not documented" (True/False) | |  |
| **Assignment of verdict** | **PASS** assigned if statement 1 is True | |
| **FAIL** assigned if statement 1 is False | |
| **NOT APPLICABLE** assigned in other cases | |
| **Evaluator's comments** |  | |
| **Verdict** | |  |

### [CCK-3] Preventing static default values for preinstalled CCKs

|  |  |
| --- | --- |
| **CCK-3 Conceptual Assessment** | |
| **Standards** | EN 18031-1, EN 18031-2, EN 18031-3 |
| **Preconditions** | * None |
| **Identifiers: Worksheets** | * [E.Info.CCK-3.CCK]: CCK-3.CCK |
| **Test Items** | * Security parameters (SecParam) documented as preinstalled confidential cryptographic keys in the worksheet CCK-3.CCK |
| **Instructions** | 1. List all the Test Items provided in the worksheet(s) by writing their names in the column "Name" below. Include the Decision Tree result in the column "DT result" (Pass, Fail or NA). Indicate in the column "Is justif. provided?" whether a justification is provided in the respective worksheet by writing Y(es) or N(o). 2. For each Test Item in the table, review the justification and indicate in the column "Is justif. correct?" whether it is correct. Provide comments where necessary. 3. Finally, indicate in the table of verdict below whether each statement is True or False and assign a verdict based on the "Assignment of verdict". |

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| --- | --- | --- | --- | --- |
| **Name** | **DT result (P/F/NA)** | **Is justif. provided? (Y/N)** | **Is justif. correct? (Y/N)** | **Evaluator's comments** |
| **[E.Info.CCK-3.CCK]** | | | | |
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| --- | --- | --- |
| 1. At least one P in column "DT result" (True/False) | |  |
| 2. No Fs in column "DT result" (True/False) | |  |
| 3. Only Ys in columns "Is justif. provided" and "Is justif. correct" (True/False) | |  |
| **Assignment of verdict** | **PASS** assigned if statements 1, 2 and 3 are True | |
| **FAIL** assigned if statements 2 or 3 are False | |
| **NOT APPLICABLE** assigned in other cases | |
| **Evaluator's comments** |  | |
| **Verdict** | |  |

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| --- | --- |
| **CCK-3 Functional Completeness Assessment** | |
| **Standards** | EN 18031-1, EN 18031-2, EN 18031-3 |
| **Preconditions** | * The equipment is in an operational state |
| **Identifiers: Worksheets** | * [E.Info.CCK-3.CCK]: CCK-3.CCK |
| **Test Items** | * Security parameters (SecParam) documented as preinstalled confidential cryptographic keys in the worksheet CCK-3.CCK |
| **Instructions** | 1. Perform the assessment units described in the standard(s) applied and report in the table below any relevant Test Items that are not documented in the worksheet(s). 2. Finally, indicate in the table of verdict below whether each statement is True or False and assign a verdict based on the "Assignment of verdict". |

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| **Relevant Test Items not documented** | **Evaluator's comments** |
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| --- | --- | --- |
| 1. No entries in column "Relevant Test Items not documented" (True/False) | |  |
| **Assignment of verdict** | **PASS** assigned if statement 1 is True | |
| **FAIL** assigned if statement 1 is False | |
| **NOT APPLICABLE** assigned in other cases | |
| **Evaluator's comments** |  | |
| **Verdict** | |  |

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| --- | --- |
| **CCK-3 Functional Sufficiency Assessment** | |
| **Standards** | EN 18031-1, EN 18031-2, EN 18031-3 |
| **Preconditions** | * "Two instances of the equipment are in a factory default state." |
| **Identifiers: Worksheets** | * [E.Info.CCK-3.CCK]: CCK-3.CCK |
| **Instructions** | 1. Refer to the instructions provided in the Assessments Unit Table(s) below and perform the actions required. 2. Once the Assessment Unit Table(s) completed, indicate in the table of verdict below whether each statement is True or False and assign a verdict based on the "Assignment of verdict". |

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| --- | --- | --- | --- |
| **Assessment Unit Table - [E.Info.CCK-3.CCK]** | | | |
| **Test Items** | Security parameters (SecParam) documented as preinstalled confidential cryptographic keys in the worksheet CCK-3.CCK and claimed to be practically unique per equipment according to [E.Info.CCK-3.CCK.Unique] | | |
| **Instructions** | 1. List all the Test Items by writing their names in the column "Name" below. 2. For each Test Item, perform the assessment units described in the standard(s) applied and functionally confirm each case (C) listed below by indicating Y (yes) or N (no) in the respective column. | | |
| 1. (If the CCKs are accessible) The two CCKS "are not the same and there is no obvious way to derive one from the other" (if the CCKs are not accessible, input '-') 2. ("if the CCKs are not accessible but come together with associated accessible public cryptographic keys, e.g. private/public key pairs") The two public keys are not the same (if the CCKs do not come with associated public keys, input '-') | | | |
| **Name** | **C1** | **C2** | **Evaluator's comments** |
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| --- | --- | --- |
| 1. Only Ys in the case columns (Cx) in the Assessment Unit Tables (True/False) | |  |
| **Assignment of verdict** | **PASS** assigned if statement 1 is True | |
| **FAIL** assigned if statement 1 is False | |
| **NOT APPLICABLE** assigned in other cases | |
| **Evaluator's comments** |  | |
| **Verdict** | |  |

## [GEC] General equipment capabilities

### [GEC-1] Up-to-date software and hardware with no publicly known exploitable vulnerabilities

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| --- | --- |
| **GEC-1 Conceptual Assessment** | |
| **Standards** | EN 18031-1, EN 18031-2, EN 18031-3 |
| **Preconditions** | * None |
| **Identifiers: Worksheets** | * [E.Info.GEC-1.HardwareDocumentation]: GEC-1.HWDoc * [E.Info.GEC-1.ListOfVulnerabilities]: GEC-1.ListVuln * [E.Info.GEC-1.SoftwareDocumentation]: GEC-1.SWDoc |
| **Test Items** | * (See Notes) * Hardware (HW) documented in the worksheet GEC-1.HWDoc * Software (SW) documented in the worksheet GEC-1.SWDoc * Vulnerabilities (Vuln) documented in the worksheet GEC-1.ListVuln |
| **Instructions** | 1. List all the Test Items provided in the worksheet(s) by writing their names in the column "Name" below. Include the Decision Tree result in the column "DT result" (Pass, Fail or NA). Indicate in the column "Is justif. provided?" whether a justification is provided in the respective worksheet by writing Y(es) or N(o). 2. For each Test Item in the table, review the justification and indicate in the column "Is justif. correct?" whether it is correct. Provide comments where necessary. 3. Finally, indicate in the table of verdict below whether each statement is True or False and assign a verdict based on the "Assignment of verdict". |
| **Notes** | * Modification of Step 1 of the Instructions: The logic of the Decision Tree for GEC-1 makes it difficult to document the required information in a table (especially due to the change of scope of the logic, which starts with "For each software and hardware" and then goes to "For each […] publicly known exploitable vulnerability"). To facilitate the documentation creation and review, Zealience suggests breaking the Decision Tree in two parts: The first part (containing only the decision node DN-1) is to be documented in the worksheet GEC-1.SWDoc and GEC-1.HWDoc, and the second part (containing DN-2 to 5) is to be documented in GEC-1.ListVuln. * For the Test Items "Software (SW)" and "Hardware (HW)": Zealience recommends only listing in the table below those which have their DT result documented as PASS (i.e. DT.GEC-1.DN-1 is "No"). Perform Step 1 as described only for those. The others (i.e. DT.GEC-1.DN-1 is "Yes") can be ignored, since their assessment will be done through Test Item "Vuln". * For the Test Items "Vulnerabilities (Vuln)": Perform Step 1 as described. |

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| **Name** | **DT result (P/F/NA)** | **Is justif. provided? (Y/N)** | **Is justif. correct? (Y/N)** | **Evaluator's comments** |
| **[E.Info.GEC-1.HardwareDocumentation]** | | | | |
|  |  |  |  |  |
| **[E.Info.GEC-1.ListOfVulnerabilities]** | | | | |
|  |  |  |  |  |
| **[E.Info.GEC-1.SoftwareDocumentation]** | | | | |
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| --- | --- | --- |
| 1. At least one P in column "DT result" (True/False) | |  |
| 2. No Fs in column "DT result" (True/False) | |  |
| 3. Only Ys in columns "Is justif. provided" and "Is justif. correct" (True/False) | |  |
| **Assignment of verdict** | **PASS** assigned if statements 1, 2 and 3 are True | |
| **FAIL** assigned if statements 2 or 3 are False | |
| **NOT APPLICABLE** assigned in other cases | |
| **Evaluator's comments** |  | |
| **Verdict** | |  |

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| --- | --- |
| **GEC-1 Functional Completeness Assessment** | |
| **Standards** | EN 18031-1, EN 18031-2, EN 18031-3 |
| **Preconditions** | * The equipment is in an operational state * "The date for the source of the vulnerabilities to be used in the assessment of the list of publicly known exploitable vulnerabilities is recent." |
| **Identifiers: Worksheets** | * [E.Info.GEC-1.ListOfVulnerabilities] : GEC-1.ListVuln |
| **Test Items** | * Vulnerabilities (Vuln) documented in the worksheet GEC-1.ListVuln |
| **Instructions** | 1. Perform the assessment units described in the standard(s) applied and report in the table below any relevant Test Items that are not documented in the worksheet(s). 2. Finally, indicate in the table of verdict below whether each statement is True or False and assign a verdict based on the "Assignment of verdict". |

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| **Relevant Test Items not documented** | **Evaluator's comments** |
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| --- | --- | --- |
| 1. No entries in column "Relevant Test Items not documented" (True/False) | |  |
| **Assignment of verdict** | **PASS** assigned if statement 1 is True | |
| **FAIL** assigned if statement 1 is False | |
| **NOT APPLICABLE** assigned in other cases | |
| **Evaluator's comments** |  | |
| **Verdict** | |  |

|  |  |
| --- | --- |
| **GEC-1 Functional Sufficiency Assessment** | |
| **Standards** | EN 18031-1, EN 18031-2, EN 18031-3 |
| **Preconditions** | * "The equipment is in an operational state" * "The date for the source of the vulnerabilities to be used in the assessment of the list of publicly known exploitable vulnerabilities is recent." |
| **Identifiers: Worksheets** | * [E.Info.GEC-1.ListOfVulnerabilities]: GEC-1.ListVuln |
| **Instructions** | 1. Refer to the instructions provided in the Assessments Unit Table(s) below and perform the actions required. 2. Once the Assessment Unit Table(s) completed, indicate in the table of verdict below whether each statement is True or False and assign a verdict based on the "Assignment of verdict". |

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| **Assessment Unit Table - [E.Info.GEC-1.ListOfVulnerabilities]** | | |
| **Test Items** | Vulnerabilities (Vuln) documented in the worksheet GEC-1.ListVuln | |
| **Instructions** | 1. List all the Test Items by writing their names in the column "Name" below. 2. For each Test Item, perform the assessment units described in the standard(s) applied and functionally confirm each case (C) listed below by indicating Y (yes) or N (no) in the respective column. | |
| 1. The measures documented in [E.Info.GEC-1.ListOfVulnerabilities] to ensure that the Test Item, if exploited, is not able to affect the assets, have been implemented as described. | | |
| **Name** | **C1** | **Evaluator's comments** |
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| --- | --- | --- |
| 1. Only Ys in the case columns (Cx) in the Assessment Unit Tables (True/False) | |  |
| **Assignment of verdict** | **PASS** assigned if statement 1 is True | |
| **FAIL** assigned if statement 1 is False | |
| **NOT APPLICABLE** assigned in other cases | |
| **Evaluator's comments** |  | |
| **Verdict** | |  |

### [GEC-2] Limit exposure of services via related network interfaces

|  |  |
| --- | --- |
| **GEC-2 Conceptual Assessment** | |
| **Standards** | EN 18031-1, EN 18031-2, EN 18031-3 |
| **Preconditions** | * None |
| **Identifiers: Worksheets** | * [E.Info.GEC-2.FinancialAsset]: GEC.FinAsset * [E.Info.GEC-2.NetworkAsset]: GEC.NetAsset * [E.Info.GEC-2.NetworkInterface.Exposure]: GEC-2.NetIntfAndServ * [E.Info.GEC-2.PrivacyAsset]: GEC.PrivAsset * [E.Info.GEC-2.SecurityAsset]: GEC.SecAsset * [E.Info.GEC-2.Setup]: GEC-2.Setup (if applicable) |
| **Test Items** | * Financial functions (FinFunc) documented in the worksheet GEC-2.NetIntfAndServ as services exposed via network interfaces * Network functions (NetFunc) documented in the worksheet GEC-2.NetIntfAndServ as services exposed via network interfaces * Network interfaces (NetIntf) documented in the worksheet GEC-2.NetIntfAndServ * Privacy functions (PrivFunc) documented in the worksheet GEC-2.NetIntfAndServ as services exposed via network interfaces * Security functions (SecFunc) documented in the worksheet GEC-2.NetIntfAndServ as services exposed via network interfaces |
| **Instructions** | 1. List all the Test Items provided in the worksheet(s) by writing their names in the column "Name" below. Include the Decision Tree result in the column "DT result" (Pass, Fail or NA). Indicate in the column "Is justif. provided?" whether a justification is provided in the respective worksheet by writing Y(es) or N(o). 2. For each Test Item in the table, review the justification and indicate in the column "Is justif. correct?" whether it is correct. Provide comments where necessary. 3. Finally, indicate in the table of verdict below whether each statement is True or False and assign a verdict based on the "Assignment of verdict". |
| **Notes** | * For this requirement, functions (e.g. security functions) can be documented either as service exposed via network interface or as assets accessible via network interface. For example, an SSH server exposed in factory default state can be declared as a security function and documented in [E.Info.GEC-2.NetworkInterface.Exposure]. Other functions that are not services exposed via network interface, yet accessible via network interface, would be documented as assets in their respective identifier (e.g. [E.Info.GEC-2.SecurityAsset] for a security function). |

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| **Name** | **DT result (P/F/NA)** | **Is justif. provided? (Y/N)** | **Is justif. correct? (Y/N)** | **Evaluator's comments** |
| **[E.Info.GEC-2.NetworkInterface.Exposure]** | | | | |
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| 1. At least one P in column "DT result" (True/False) | |  |
| 2. No Fs in column "DT result" (True/False) | |  |
| 3. Only Ys in columns "Is justif. provided" and "Is justif. correct" (True/False) | |  |
| **Assignment of verdict** | **PASS** assigned if statements 1, 2 and 3 are True | |
| **FAIL** assigned if statements 2 or 3 are False | |
| **NOT APPLICABLE** assigned in other cases | |
| **Evaluator's comments** |  | |
| **Verdict** | |  |

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| **GEC-2 Functional Completeness Assessment** | |
| **Standards** | EN 18031-1, EN 18031-2, EN 18031-3 |
| **Preconditions** | * "The equipment is in the factory default state and if available setup or another configuration did not take place until now." * "Physical network connections to check the exposure of services (via network interfaces) are established." |
| **Identifiers: Worksheets** | * [E.Info.GEC-2.NetworkInterface.Exposure]: GEC-2.NetIntfAndServ * [E.Info.GEC-2.Setup]: GEC-2.Setup (if applicable) |
| **Test Items** | * Financial functions (FinFunc) documented in the worksheet GEC-2.NetIntfAndServ as services exposed via network interfaces * Network functions (NetFunc) documented in the worksheet GEC-2.NetIntfAndServ as services exposed via network interfaces * Network interfaces (NetIntf) documented in the worksheet GEC-2.NetIntfAndServ * Privacy functions (PrivFunc) documented in the worksheet GEC-2.NetIntfAndServ as services exposed via network interfaces * Security functions (SecFunc) documented in the worksheet GEC-2.NetIntfAndServ as services exposed via network interfaces |
| **Instructions** | 1. Perform the assessment units described in the standard(s) applied and report in the table below any relevant Test Items that are not documented in the worksheet(s). 2. Finally, indicate in the table of verdict below whether each statement is True or False and assign a verdict based on the "Assignment of verdict". |
| **Notes** | * For this requirement, functions (e.g. security functions) can be documented either as service exposed via network interface or as assets accessible via network interface. For example, an SSH server exposed in factory default state can be declared as a security function and documented in [E.Info.GEC-2.NetworkInterface.Exposure]. Other functions that are not services exposed via network interface, yet accessible via network interface, would be documented as assets in their respective identifier (e.g. [E.Info.GEC-2.SecurityAsset] for a security function). |

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| **Relevant Test Items not documented** | **Evaluator's comments** |
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| 1. No entries in column "Relevant Test Items not documented" (True/False) | |  |
| **Assignment of verdict** | **PASS** assigned if statement 1 is True | |
| **FAIL** assigned if statement 1 is False | |
| **NOT APPLICABLE** assigned in other cases | |
| **Evaluator's comments** |  | |
| **Verdict** | |  |

### [GEC-3] Configuration of optional services and the related exposed network interfaces

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| **GEC-3 Conceptual Assessment** | |
| **Standards** | EN 18031-1, EN 18031-2, EN 18031-3 |
| **Preconditions** | * None |
| **Identifiers: Worksheets** | * [E.Info.GEC-3.FinancialAsset]: GEC.FinAsset * [E.Info.GEC-3.NetworkAsset]: GEC.NetAsset * [E.Info.GEC-3.NetworkInterface.Exposure]: GEC-3.NetIntfAndServ * [E.Info.GEC-3.PrivacyAsset]: GEC.PrivAsset * [E.Info.GEC-3.SecurityAsset]: GEC.SecAsset |
| **Test Items** | * Financial functions (FinFunc) documented in the worksheet GEC-3.NetIntfAndServ as services exposed via network interfaces in factory default state * Network functions (NetFunc) documented in the worksheet GEC-3.NetIntfAndServ as services exposed via network interfaces in factory default state * Network interfaces (NetIntf) documented in the worksheet GEC-3.NetIntfAndServ as exposed in factory default state * Privacy functions (PrivFunc) documented in the worksheet GEC-3.NetIntfAndServ as services exposed via network interfaces in factory default state * Security functions (SecFunc) documented in the worksheet GEC-3.NetIntfAndServ as services exposed via network interfaces in factory default state |
| **Instructions** | 1. List all the Test Items provided in the worksheet(s) by writing their names in the column "Name" below. Include the Decision Tree result in the column "DT result" (Pass, Fail or NA). Indicate in the column "Is justif. provided?" whether a justification is provided in the respective worksheet by writing Y(es) or N(o). 2. For each Test Item in the table, review the justification and indicate in the column "Is justif. correct?" whether it is correct. Provide comments where necessary. 3. Finally, indicate in the table of verdict below whether each statement is True or False and assign a verdict based on the "Assignment of verdict". |
| **Notes** | * For this requirement, functions (e.g. security functions) can be documented either as service exposed via network interface or as assets accessible via network interface. For example, an SSH server exposed in factory default state can be declared as a security function and documented in [E.Info.GEC-3.NetworkInterface.Exposure]. Other functions that are not services exposed via network interface, yet accessible via network interface, would be documented as assets in their respective identifier (e.g. [E.Info.GEC-3.SecurityAsset] for a security function). |

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| **Name** | **DT result (P/F/NA)** | **Is justif. provided? (Y/N)** | **Is justif. correct? (Y/N)** | **Evaluator's comments** |
| **[E.Info.GEC-3.NetworkInterface.Exposure]** | | | | |
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| 1. At least one P in column "DT result" (True/False) | |  |
| 2. No Fs in column "DT result" (True/False) | |  |
| 3. Only Ys in columns "Is justif. provided" and "Is justif. correct" (True/False) | |  |
| **Assignment of verdict** | **PASS** assigned if statements 1, 2 and 3 are True | |
| **FAIL** assigned if statements 2 or 3 are False | |
| **NOT APPLICABLE** assigned in other cases | |
| **Evaluator's comments** |  | |
| **Verdict** | |  |

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| **GEC-3 Functional Completeness Assessment** | |
| **Standards** | EN 18031-1, EN 18031-2, EN 18031-3 |
| **Preconditions** | * "The equipment is in an operational state and if available the setup is done." * "The necessary privileges are available for the configuration of the settings of the optional network interfaces or optional services (exposed via network interfaces)" |
| **Identifiers: Worksheets** | * [E.Info.GEC-3.NetworkInterface.Exposure]: GEC-3.NetIntfAndServ |
| **Test Items** | * Financial functions (FinFunc) documented in the worksheet GEC-3.NetIntfAndServ as services exposed via network interfaces in factory default state * Network functions (NetFunc) documented in the worksheet GEC-3.NetIntfAndServ as services exposed via network interfaces in factory default state * Network interfaces (NetIntf) documented in the worksheet GEC-3.NetIntfAndServ as exposed in factory default state * Privacy functions (PrivFunc) documented in the worksheet GEC-3.NetIntfAndServ as services exposed via network interfaces in factory default statev * Security functions (SecFunc) documented in the worksheet GEC-3.NetIntfAndServ as services exposed via network interfaces in factory default state |
| **Instructions** | 1. Perform the assessment units described in the standard(s) applied and report in the table below any relevant Test Items that are not documented in the worksheet(s). 2. Finally, indicate in the table of verdict below whether each statement is True or False and assign a verdict based on the "Assignment of verdict". |
| **Notes** | * For this requirement, functions (e.g. security functions) can be documented either as service exposed via network interface or as assets accessible via network interface. For example, an SSH server exposed in factory default state can be declared as a security function and documented in [E.Info.GEC-3.NetworkInterface.Exposure]. Other functions that are not services exposed via network interface, yet accessible via network interface, would be documented as assets in their respective identifier (e.g. [E.Info.GEC-3.SecurityAsset] for a security function). |

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| **Relevant Test Items not documented** | **Evaluator's comments** |
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| 1. No entries in column "Relevant Test Items not documented" (True/False) | |  |
| **Assignment of verdict** | **PASS** assigned if statement 1 is True | |
| **FAIL** assigned if statement 1 is False | |
| **NOT APPLICABLE** assigned in other cases | |
| **Evaluator's comments** |  | |
| **Verdict** | |  |

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| **GEC-3 Functional Sufficiency Assessment** | |
| **Standards** | EN 18031-1, EN 18031-2, EN 18031-3 |
| **Preconditions** | * "The equipment is in an operational state and if available the setup is done." * "The necessary privileges are available for the configuration of the settings of the optional network interfaces or optional services (via network interfaces)." |
| **Identifiers: Worksheets** | * [E.Info.GEC-3.NetworkInterface.Exposure]: GEC-3.NetIntfAndServ |
| **Instructions** | 1. Refer to the instructions provided in the Assessments Unit Table(s) below and perform the actions required. 2. Once the Assessment Unit Table(s) completed, indicate in the table of verdict below whether each statement is True or False and assign a verdict based on the "Assignment of verdict". |
| **Notes** | * For this requirement, functions (e.g. security functions) can be documented either as service exposed via network interface or as assets accessible via network interface. For example, an SSH server exposed in factory default state can be declared as a security function and documented in [E.Info.GEC-3.NetworkInterface.Exposure]. Other functions that are not services exposed via network interface, yet accessible via network interface, would be documented as assets in their respective identifier (e.g. [E.Info.GEC-3.SecurityAsset] for a security function). |

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| **Assessment Unit Table - [E.Info.GEC-3.NetworkInterface.Exposure]** | | | | |
| **Test Items** | Network interfaces (NetIntf) and functions (SecFunc, NetFunc, PrivFunc, FinFunc, depending on the standards applied) documented in the worksheet GEC-3.NetIntfAndServ as exposed in factory default state | | | |
| **Instructions** | 1. List all the Test Items by writing their names in the column "Name" below. 2. For each Test Item, perform the assessment units described in the standard(s) applied and functionally confirm each case (C) listed below by indicating Y (yes) or N (no) in the respective column. | | | |
| 1. The Test Item is configurable. 2. "It is possible to at least change the status of the [Test Item] to enabled and disabled." 3. "The configuration of the settings of the [Test Item] is only possible by authorized users." (i.e. there is an access control mechanism and authentication mechanism in place) | | | | |
| **Name** | **C1** | **C2** | **C3** | **Evaluator's comments** |
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| 1. Only Ys in the case columns (Cx) in the Assessment Unit Tables (True/False) | |  |
| **Assignment of verdict** | **PASS** assigned if statement 1 is True | |
| **FAIL** assigned if statement 1 is False | |
| **NOT APPLICABLE** assigned in other cases | |
| **Evaluator's comments** |  | |
| **Verdict** | |  |

### [GEC-4] Documentation of exposed network interfaces and exposed services via network interfaces

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| **GEC-4 Conceptual Assessment** | |
| **Standards** | EN 18031-1, EN 18031-2, EN 18031-3 |
| **Preconditions** | * None |
| **Identifiers: Worksheets** | * [E.Info.GEC-4.NetworkInterface.Exposure]: GEC-4.NetIntfAndServ * [E.Info.GEC-4.UserDoc.NetworkInterface.Exposure]: GEC-4.NetIntfAndServ |
| **Test Items** | * Financial functions (FinFunc) documented in the worksheet GEC-4.NetIntfAndServ as services exposed via network interfaces * Network functions (NetFunc) documented in the worksheet GEC-4.NetIntfAndServ as services exposed via network interfaces * Network interfaces (NetIntf) documented in the worksheet GEC-4.NetIntfAndServ * Privacy functions (PrivFunc) documented in the worksheet GEC-4.NetIntfAndServ as services exposed via network interfaces * Security functions (SecFunc) documented in the worksheet GEC-4.NetIntfAndServ as services exposed via network interfaces |
| **Instructions** | 1. List all the Test Items provided in the worksheet(s) by writing their names in the column "Name" below. Include the Decision Tree result in the column "DT result" (Pass, Fail or NA). Indicate in the column "Is justif. provided?" whether a justification is provided in the respective worksheet by writing Y(es) or N(o). 2. For each Test Item in the table, review the justification and indicate in the column "Is justif. correct?" whether it is correct. Provide comments where necessary. 3. Finally, indicate in the table of verdict below whether each statement is True or False and assign a verdict based on the "Assignment of verdict". |

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| **Name** | **DT result (P/F/NA)** | **Is justif. provided? (Y/N)** | **Is justif. correct? (Y/N)** | **Evaluator's comments** |
| **[E.Info.GEC-4.NetworkInterface.Exposure]** | | | | |
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| 1. At least one P in column "DT result" (True/False) | |  |
| 2. No Fs in column "DT result" (True/False) | |  |
| 3. Only Ys in columns "Is justif. provided" and "Is justif. correct" (True/False) | |  |
| **Assignment of verdict** | **PASS** assigned if statements 1, 2 and 3 are True | |
| **FAIL** assigned if statements 2 or 3 are False | |
| **NOT APPLICABLE** assigned in other cases | |
| **Evaluator's comments** |  | |
| **Verdict** | |  |

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| **GEC-4 Functional Completeness Assessment** | |
| **Standards** | EN 18031-1, EN 18031-2, EN 18031-3 |
| **Preconditions** | * "The equipment is in a factory default state." * "Network connections to check the exposure of network interfaces and services (via network interfaces) are established." |
| **Identifiers: Worksheets** | * [E.Info.GEC-4.NetworkInterface.Exposure]: GEC-4.NetIntfAndServ |
| **Test Items** | * Financial functions (FinFunc) documented in the worksheet GEC-4.NetIntfAndServ as services exposed via network interfaces * Network functions (NetFunc) documented in the worksheet GEC-4.NetIntfAndServ as services exposed via network interfaces * Network interfaces (NetIntf) documented in the worksheet GEC-4.NetIntfAndServ * Privacy functions (PrivFunc) documented in the worksheet GEC-4.NetIntfAndServ as services exposed via network interfaces * Security functions (SecFunc) documented in the worksheet GEC-4.NetIntfAndServ as services exposed via network interfaces |
| **Instructions** | 1. Perform the assessment units described in the standard(s) applied and report in the table below any relevant Test Items that are not documented in the worksheet(s). 2. Finally, indicate in the table of verdict below whether each statement is True or False and assign a verdict based on the "Assignment of verdict". |

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| **Relevant Test Items not documented** | **Evaluator's comments** |
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| 1. No entries in column "Relevant Test Items not documented" (True/False) | |  |
| **Assignment of verdict** | **PASS** assigned if statement 1 is True | |
| **FAIL** assigned if statement 1 is False | |
| **NOT APPLICABLE** assigned in other cases | |
| **Evaluator's comments** |  | |
| **Verdict** | |  |

### [GEC-5] No unnecessary external interfaces

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| --- | --- |
| **GEC-5 Conceptual Assessment** | |
| **Standards** | EN 18031-1, EN 18031-2, EN 18031-3 |
| **Preconditions** | * None |
| **Identifiers: Worksheets** | * [E.Info.GEC-5.PhysicalExternalInterface]: GEC-5.PhysicExtIntf |
| **Test Items** | * Physical external interfaces (PhysicExtIntf) documented in the worksheet GEC-5.PhysicExtIntf |
| **Instructions** | 1. List all the Test Items provided in the worksheet(s) by writing their names in the column "Name" below. Include the Decision Tree result in the column "DT result" (Pass, Fail or NA). Indicate in the column "Is justif. provided?" whether a justification is provided in the respective worksheet by writing Y(es) or N(o). 2. For each Test Item in the table, review the justification and indicate in the column "Is justif. correct?" whether it is correct. Provide comments where necessary. 3. Finally, indicate in the table of verdict below whether each statement is True or False and assign a verdict based on the "Assignment of verdict". |

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| **Name** | **DT result (P/F)** | **Is justif. provided? (Y/N)** | **Is justif. correct? (Y/N)** | **Evaluator's comments** |
| **[E.Info.GEC-5.PhysicalExternalInterface]** | | | | |
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| 1. Only Ps in column "DT result" (True/False) | |  |
| 2. Only Ys in columns "Is justif. provided" and "Is justif. correct" (True/False) | |  |
| **Assignment of verdict** | **PASS** assigned if statements 1 and 2 are True | |
| **FAIL** assigned if statements 1 or 2 are False | |
| **NOT APPLICABLE** assigned in other cases | |
| **Evaluator's comments** |  | |
| **Verdict** | |  |

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| **GEC-5 Functional Completeness Assessment** | |
| **Standards** | EN 18031-1, EN 18031-2, EN 18031-3 |
| **Preconditions** | * "The equipment is in an operational state." |
| **Identifiers: Worksheets** | * [E.Info.GEC-5.PhysicalExternalInterface]: GEC-5.PhysicExtIntf |
| **Test Items** | * Physical external interfaces (PhysicExtIntf) documented in the worksheet GEC-5.PhysicExtIntf |
| **Instructions** | 1. Perform the assessment units described in the standard(s) applied and report in the table below any relevant Test Items that are not documented in the worksheet(s). 2. Finally, indicate in the table of verdict below whether each statement is True or False and assign a verdict based on the "Assignment of verdict". |
| **Notes** | * To complement the examples of physical external interfaces provided in the Assessment Units, Zealience also suggests the following: PIN pad, touchpad, antenna (e.g. NFC, Wi-Fi), (Ethernet or USB) port, JTAG or other debug interfaces (only if physically exposed). |

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| **Relevant Test Items not documented** | **Evaluator's comments** |
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| 1. No entries in column "Relevant Test Items not documented" (True/False) | |  |
| **Assignment of verdict** | **PASS** assigned if statement 1 is True | |
| **FAIL** assigned if statement 1 is False | |
| **NOT APPLICABLE** assigned in other cases | |
| **Evaluator's comments** |  | |
| **Verdict** | |  |

### [GEC-6] Input validation

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| **GEC-6 Conceptual Assessment** | |
| **Standards** | EN 18031-1, EN 18031-2, EN 18031-3 |
| **Preconditions** | * None |
| **Identifiers: Worksheets** | * [E.Info.GEC-6.ExternalInterface]: GEC-6.ExtIntf * [E.Info.GEC-6.Financial Asset]: GEC.FinAsset * [E.Info.GEC-6.NetworkAsset]: GEC.NetAsset * [E.Info.GEC-6.PrivacyAsset]: GEC.PrivAsset * [E.Info.GEC-6.SecurityAsset]: GEC.SecAsset |
| **Test Items** | * Machine interfaces (MachineIntf) documented in the worksheet GEC-6.ExtIntf * Network interfaces (NetIntf) documented in the worksheet GEC-6.ExtIntf * User interfaces (UserIntf) documented in the worksheet GEC-6.ExtIntf |
| **Instructions** | 1. List all the Test Items provided in the worksheet(s) by writing their names in the column "Name" below. Include the Decision Tree result in the column "DT result" (Pass, Fail or NA). Indicate in the column "Is justif. provided?" whether a justification is provided in the respective worksheet by writing Y(es) or N(o). 2. For each Test Item in the table, review the justification and indicate in the column "Is justif. correct?" whether it is correct. Provide comments where necessary. 3. Finally, indicate in the table of verdict below whether each statement is True or False and assign a verdict based on the "Assignment of verdict". |
| **Notes** | * The requirement GEC-6 focuses on the validation of inputs (received on external interfaces) which can have "potential impact on [security/privacy/network/financial] assets". Examples of such inputs can be user credentials inputted through a web application on the equipment when a user logs in. These inputs (username and password) can be used by the application to query its database to verify whether the username and password provided are valid. When these inputs are not properly validated, it can be a vulnerability which could lead to unauthorized access to the assets stored in the database (e.g., SQL injection). Therefore, the assets stored in that database can be seen as being "potentially impacted via external interfaces". * The Decision Tree reads "For each external interface" followed by "For every means of receiving input". It is unclear what constitutes a single "means of receiving input" and the level of granularity expected. Therefore, Zealience recommends the following: For each external interface documented in [E.Info.GEC-6.ExternalInterface], review the possible data inputs described in [E.Info.GEC-6.ExternalInterface.Capabilities] and how these inputs are validated as described in [E.Info.GEC-6.ExternalInterface.Validation]. There should be sufficient information in [E.Info.GEC-6.ExternalInterface.Validation] to assess DT.GEC-6.DN-2. |

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| **Name** | **DT result (P/F/NA)** | **Is justif. provided? (Y/N)** | **Is justif. correct? (Y/N)** | **Evaluator's comments** |
| **[E.Info.GEC-6.ExternalInterface]** | | | | |
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| 1. At least one P in column "DT result" (True/False) | |  |
| 2. No Fs in column "DT result" (True/False) | |  |
| 3. Only Ys in columns "Is justif. provided" and "Is justif. correct" (True/False) | |  |
| **Assignment of verdict** | **PASS** assigned if statements 1, 2 and 3 are True | |
| **FAIL** assigned if statements 2 or 3 are False | |
| **NOT APPLICABLE** assigned in other cases | |
| **Evaluator's comments** |  | |
| **Verdict** | |  |

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| **GEC-6 Functional Completeness Assessment** | |
| **Standards** | EN 18031-1, EN 18031-2, EN 18031-3 |
| **Preconditions** | * "The equipment is in an operational state and all external interfaces, which are part of the intended functionality, are either enabled or configurable to be enabled, so that each external interface can be tested." * "Where authentication is necessary to access an external interface, a means is provided to be able to test the interface." |
| **Identifiers: Worksheets** | * [E.Info.GEC-6.ExternalInterface]: GEC-6.ExtIntf |
| **Test Items** | * Machine interfaces (MachineIntf) documented in the worksheet GEC-6.ExtIntf * Network interfaces (NetIntf) documented in the worksheet GEC-6.ExtIntf * User interfaces (UserIntf) documented in the worksheet GEC-6.ExtIntf |
| **Instructions** | 1. Perform the assessment units described in the standard(s) applied and report in the table below any relevant Test Items that are not documented in the worksheet(s). 2. Finally, indicate in the table of verdict below whether each statement is True or False and assign a verdict based on the "Assignment of verdict". |

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| **Relevant Test Items not documented** | **Evaluator's comments** |
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| 1. No entries in column "Relevant Test Items not documented" (True/False) | |  |
| **Assignment of verdict** | **PASS** assigned if statement 1 is True | |
| **FAIL** assigned if statement 1 is False | |
| **NOT APPLICABLE** assigned in other cases | |
| **Evaluator's comments** |  | |
| **Verdict** | |  |

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| **GEC-6 Functional Sufficiency Assessment** | |
| **Standards** | EN 18031-1, EN 18031-2, EN 18031-3 |
| **Preconditions** | * "The equipment is in an operational state and all external interfaces, which are part of the intended functionality, are either enabled or configurable to be enabled, so that each external interface can be tested." * "Where authentication is necessary to access an external interface, a means is provided to be able to test the interface." |
| **Identifiers: Worksheets** | * [E.Info.GEC-6.ExternalInterface]: GEC-6.ExtIntf * [E.Info.GEC-6.FinancialAsset]: GEC.FinAsset * [E.Info.GEC-6.NetworkAsset]: GEC.NetAsset * [E.Info.GEC-6.PrivacyAsset]: GEC.PrivAsset * [E.Info.GEC-6.SecurityAsset]: GEC.SecAsset |
| **Instructions** | 1. Refer to the instructions provided in the Assessments Unit Table(s) below and perform the actions required. 2. Once the Assessment Unit Table(s) completed, indicate in the table of verdict below whether each statement is True or False and assign a verdict based on the "Assignment of verdict". |

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| **Assessment Unit Table - [E.Info.GEC-6.ExternalInterface]** | | | |
| **Test Items** | Network interfaces (NetIntf), user interfaces (UserIntf) and machine interfaces (MachineIntf) documented in the worksheet GEC-6.ExtIntf | | |
| **Instructions** | 1. List all the Test Items by writing their names in the column "Name" below. 2. For each Test Item, perform the assessment units described in the standard(s) applied and functionally confirm each case (C) listed below by indicating Y (yes) or N (no) in the respective column. | | |
| 1. The Test Item validates the inputs as documented in [E.Info.GEC-6.ExternalInterface.Validation] 2. The Test Item is resilient against (relevant) "attacks related to the input mechanisms" | | | |
| **Name** | **C1** | **C2** | **Evaluator's comments** |
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| 1. Only Ys in the case columns (Cx) in the Assessment Unit Tables (True/False) | |  |
| **Assignment of verdict** | **PASS** assigned if statement 1 is True | |
| **FAIL** assigned if statement 1 is False | |
| **NOT APPLICABLE** assigned in other cases | |
| **Evaluator's comments** |  | |
| **Verdict** | |  |

### [GEC-7] Documentation of external sensing capabilities

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| **GEC-7 Conceptual Assessment** | |
| **Standards** | EN 18031-2 |
| **Preconditions** | * None |
| **Identifiers: Worksheets** | * [E.Info.GEC-7.NonNetworkInterface]: GEC-7.ExtSens |
| **Test Items** | * (See Notes) * External sensors (ExtSens) "that can affect the user's or subscriber's privacy" documented in the worksheet GEC-7.ExtSens |
| **Instructions** | 1. List all the Test Items provided in the worksheet(s) by writing their names in the column "Name" below. Include the Decision Tree result in the column "DT result" (Pass, Fail or NA). Indicate in the column "Is justif. provided?" whether a justification is provided in the respective worksheet by writing Y(es) or N(o). 2. For each Test Item in the table, review the justification and indicate in the column "Is justif. correct?" whether it is correct. Provide comments where necessary. 3. Finally, indicate in the table of verdict below whether each statement is True or False and assign a verdict based on the "Assignment of verdict". |
| **Notes** | * Zealience suggests to use the term "external sensors" instead of "non-network external interfaces" as the former term may be more evocative of what to document and assess. |

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| **Name** | **DT result (P/F/NA)** | **Is justif. provided? (Y/N)** | **Is justif. correct? (Y/N)** | **Evaluator's comments** |
| **[E.Info.GEC-7.NonNetworkInterface]** | | | | |
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| 1. At least one P in column "DT result" (True/False) | |  |
| 2. No Fs in column "DT result" (True/False) | |  |
| 3. Only Ys in columns "Is justif. provided" and "Is justif. correct" (True/False) | |  |
| **Assignment of verdict** | **PASS** assigned if statements 1, 2 and 3 are True | |
| **FAIL** assigned if statements 2 or 3 are False | |
| **NOT APPLICABLE** assigned in other cases | |
| **Evaluator's comments** |  | |
| **Verdict** | |  |

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| **GEC-7 Functional Completeness Assessment** | |
| **Standards** | EN 18031-2 |
| **Preconditions** | * "The equipment is in an operational state." |
| **Identifiers: Worksheets** | * [E.Info.GEC-7.NonNetworkInterface]: GEC-7.ExtSens |
| **Test Items** | * External sensors (ExtSens) "that can affect the user's or subscriber's privacy" documented in the worksheet GEC-7.ExtSens |
| **Instructions** | 1. Perform the assessment units described in the standard(s) applied and report in the table below any relevant Test Items that are not documented in the worksheet(s). 2. Finally, indicate in the table of verdict below whether each statement is True or False and assign a verdict based on the "Assignment of verdict". |
| **Notes** | * Zealience suggests to use the term "external sensors" instead of "non-network external interfaces" as the former term may be more evocative of what to document and assess. |

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| **Relevant Test Items not documented** | **Evaluator's comments** |
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| 1. No entries in column "Relevant Test Items not documented" (True/False) | |  |
| **Assignment of verdict** | **PASS** assigned if statement 1 is True | |
| **FAIL** assigned if statement 1 is False | |
| **NOT APPLICABLE** assigned in other cases | |
| **Evaluator's comments** |  | |
| **Verdict** | |  |

### [GEC-8] Equipment Integrity

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| **GEC-8 Conceptual Assessment** | |
| **Standards** | EN 18031-3 |
| **Preconditions** | * None |
| **Identifiers: Worksheets** | * [E.Info.GEC-8.BootProcess]: GEC-8.BootProcess * [E.Info.GEC-8.PartOfSoftw]: GEC-8.PartOfSW |
| **Test Items** | * Software components (SoftComp) processing financial or security assets documented in the worksheet GEC-8.PartOfSW |
| **Instructions** | 1. List all the Test Items provided in the worksheet(s) by writing their names in the column "Name" below. Include the Decision Tree result in the column "DT result" (Pass, Fail or NA). Indicate in the column "Is justif. provided?" whether a justification is provided in the respective worksheet by writing Y(es) or N(o). 2. For each Test Item in the table, review the justification and indicate in the column "Is justif. correct?" whether it is correct. Provide comments where necessary. 3. Finally, indicate in the table of verdict below whether each statement is True or False and assign a verdict based on the "Assignment of verdict". |

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| **Name** | **DT result (P/F)** | **Is justif. provided? (Y/N)** | **Is justif. correct? (Y/N)** | **Evaluator's comments** |
| **[E.Info.GEC-8.PartOfSoftw]** | | | | |
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| 1. Only Ps in column "DT result" (True/False) | |  |
| 2. Only Ys in columns "Is justif. provided" and "Is justif. correct" (True/False) | |  |
| **Assignment of verdict** | **PASS** assigned if statements 1 and 2 are True | |
| **FAIL** assigned if statements 1 or 2 are False | |
| **NOT APPLICABLE** assigned in other cases | |
| **Evaluator's comments** |  | |
| **Verdict** | |  |

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| **GEC-8 Functional Completeness Assessment** | |
| **Standards** | EN 18031-3 |
| **Preconditions** | * "The equipment is in an operational state" |
| **Identifiers: Worksheets** | * [E.Info.GEC-8.BootProcess]: GEC-8.BootProcess * [E.Info.GEC-8.PartOfSoftw]: GEC-8.PartOfSW |
| **Test Items** | * Boot processes (BootProcess) documented in the worksheet GEC-8.BootProcess |
| **Instructions** | 1. Perform the assessment units described in the standard(s) applied and report in the table below any relevant Test Items that are not documented in the worksheet(s). 2. Finally, indicate in the table of verdict below whether each statement is True or False and assign a verdict based on the "Assignment of verdict". |

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| **Relevant Test Items not documented** | **Evaluator's comments** |
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| 1. No entries in column "Relevant Test Items not documented" (True/False) | |  |
| **Assignment of verdict** | **PASS** assigned if statement 1 is True | |
| **FAIL** assigned if statement 1 is False | |
| **NOT APPLICABLE** assigned in other cases | |
| **Evaluator's comments** |  | |
| **Verdict** | |  |

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| **GEC-8 Functional Sufficiency Assessment** | |
| **Standards** | EN 18031-3 |
| **Preconditions** | * "The equipment is in an operational state" |
| **Identifiers: Worksheets** | * [E.Info.GEC-8.BootProcess]: GEC-8.BootProcess |
| **Instructions** | 1. Refer to the instructions provided in the Assessments Unit Table(s) below and perform the actions required. 2. Once the Assessment Unit Table(s) completed, indicate in the table of verdict below whether each statement is True or False and assign a verdict based on the "Assignment of verdict". |

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| **Assessment Unit Table - [E.Info.GEC-8.BootProcess]** | | | | | |
| **Test Items** | Boot processes (BootProcess) documented in the worksheet GEC-8.BootProcess | | | | |
| **Instructions** | 1. List all the Test Items by writing their names in the column "Name" below. 2. For each Test Item, perform the assessment units described in the standard(s) applied and functionally confirm each case (C) listed below by indicating Y (yes) or N (no) in the respective column. | | | | |
| 1. "All the indicated information in [E.Info.GEC-8.BootProcess] for the boot process are consistent with the equipment under evaluation" 2. "The boot integrity process is enabled" 3. "The boot integrity process correctly cryptographically validates the integrity of the software 4. "The boot process uses a root of trust which is immutable, or mutable under cryptographically authenticated authorization" | | | | | |
| **Name** | **C1** | **C2** | **C3** | **C4** | **Evaluator's comments** |
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| 1. Only Ys in the case columns (Cx) in the Assessment Unit Tables (True/False) | |  |
| **Assignment of verdict** | **PASS** assigned if statement 1 is True | |
| **FAIL** assigned if statement 1 is False | |
| **NOT APPLICABLE** assigned in other cases | |
| **Evaluator's comments** |  | |
| **Verdict** | |  |

## [CRY] Cryptography

### [CRY-1] Best practice cryptography

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| **CRY-1 Conceptual Assessment** | |
| **Standards** | EN 18031-1, EN 18031-2, EN 18031-3 |
| **Preconditions** | * None |
| **Identifiers: Worksheets** | * [E.Info.CRY-1.Assets]: CRY-1.Assets |
| **Test Items** | * (See Notes below) * Access control mechanisms (AccCtrl) documented in the worksheet CRY-1.Assets as using cryptography * Authentication mechanisms (AuthMech) documented in the worksheet CRY-1.Assets as using cryptography * Secure communication mechanisms (ComMech) documented in the worksheet CRY-1.Assets as using cryptography * Secure storage mechanisms (StorageMech) documented in the worksheet CRY-1.Assets as using cryptography * Secure update mechanisms (UpdMech) documented in the worksheet CRY-1.Assets as using cryptography |
| **Instructions** | 1. List all the Test Items provided in the worksheet(s) by writing their names in the column "Name" below. Include the Decision Tree result in the column "DT result" (Pass, Fail or NA). Indicate in the column "Is justif. provided?" whether a justification is provided in the respective worksheet by writing Y(es) or N(o). 2. For each Test Item in the table, review the justification and indicate in the column "Is justif. correct?" whether it is correct. Provide comments where necessary. 3. Finally, indicate in the table of verdict below whether each statement is True or False and assign a verdict based on the "Assignment of verdict". |
| **Notes** | * The standards require for CRY-1 the documentation of all assets protected by cryptography under the identifier [E.Info.CRY-1.Assets]. Since this can lead to a long list of assets, Zealience recommends instead documenting all security mechanisms using cryptography to protect assets (see the list in Test Items above). * Even when secure mechanisms are documented instead of assets, it is still possible to obtain the list of assets protected by cryptography as initially expected by the standards. For any secure mechanism using cryptography, refer to the relevant worksheet/identifier. |

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| **Name** | **DT result (P/F/NA)** | **Is justif. provided? (Y/N)** | **Is justif. correct? (Y/N)** | **Evaluator's comments** |
| **[E.Info.CRY-1.Assets]** | | | | |
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| 1. At least one P in column "DT result" (True/False) | |  |
| 2. No Fs in column "DT result" (True/False) | |  |
| 3. Only Ys in columns "Is justif. provided" and "Is justif. correct" (True/False) | |  |
| **Assignment of verdict** | **PASS** assigned if statements 1, 2 and 3 are True | |
| **FAIL** assigned if statements 2 or 3 are False | |
| **NOT APPLICABLE** assigned in other cases | |
| **Evaluator's comments** |  | |
| **Verdict** | |  |

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| **CRY-1 Functional Completeness Assessment** | |
| **Standards** | EN 18031-1, EN 18031-2, EN 18031-3 |
| **Preconditions** | * "The equipment is in an operational state." |
| **Identifiers: Worksheets** | * [E.Info.CRY-1.Assets]: CRY-1.Assets |
| **Test Items** | * Access control mechanisms (AccCtrl) documented in the worksheet CRY-1.Assets as using cryptography * Authentication mechanisms (AuthMech) documented in the worksheet CRY-1.Assets as using cryptography * Secure communication mechanisms (ComMech) documented in the worksheet CRY-1.Assets as using cryptography * Secure storage mechanisms (StorageMech) documented in the worksheet CRY-1.Assets as using cryptography * Secure update mechanisms (UpdMech) documented in the worksheet CRY-1.Assets as using cryptography |
| **Instructions** | 1. Perform the assessment units described in the standard(s) applied and report in the table below any relevant Test Items that are not documented in the worksheet(s). 2. Finally, indicate in the table of verdict below whether each statement is True or False and assign a verdict based on the "Assignment of verdict". |

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| **Relevant Test Items not documented** | **Evaluator's comments** |
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| 1. No entries in column "Relevant Test Items not documented" (True/False) | |  |
| **Assignment of verdict** | **PASS** assigned if statement 1 is True | |
| **FAIL** assigned if statement 1 is False | |
| **NOT APPLICABLE** assigned in other cases | |
| **Evaluator's comments** |  | |
| **Verdict** | |  |

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| **CRY-1 Functional Sufficiency Assessment** | |
| **Standards** | EN 18031-1, EN 18031-2, EN 18031-3 |
| **Preconditions** | * "The equipment is in an operational state." |
| **Identifiers: Worksheets** | * [E.Info.CRY-1.Assets]: CRY-1.Assets |
| **Instructions** | 1. Refer to the instructions provided in the Assessments Unit Table(s) below and perform the actions required. 2. Once the Assessment Unit Table(s) completed, indicate in the table of verdict below whether each statement is True or False and assign a verdict based on the "Assignment of verdict". |

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| **Assessment Unit Table - [E.Info.CRY-1.Assets]** | | |
| **Test Items** | Access control mechanisms (AccCtrl), authentication mechanisms (AuthMech), secure communication mechanisms (ComMech), secure update mechanisms (UpdMech), secure storage mechanisms (StorageMech) documented in the worksheet CRY-1.Assets as using cryptography | |
| **Instructions** | 1. List all the Test Items by writing their names in the column "Name" below. 2. For each Test Item, perform the assessment units described in the standard(s) applied and functionally confirm each case (C) listed below by indicating Y (yes) or N (no) in the respective column. | |
| 1. The mechanism using cryptography is implemented as described and there is no sign of deviation from its documentation. | | |
| **Name** | **C1** | **Evaluator's comments** |
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| 1. Only Ys in the case columns (Cx) in the Assessment Unit Tables (True/False) | |  |
| **Assignment of verdict** | **PASS** assigned if statement 1 is True | |
| **FAIL** assigned if statement 1 is False | |
| **NOT APPLICABLE** assigned in other cases | |
| **Evaluator's comments** |  | |
| **Verdict** | |  |