Consumer IoT Security: Accompanying documents of the ETSI EN 303 645

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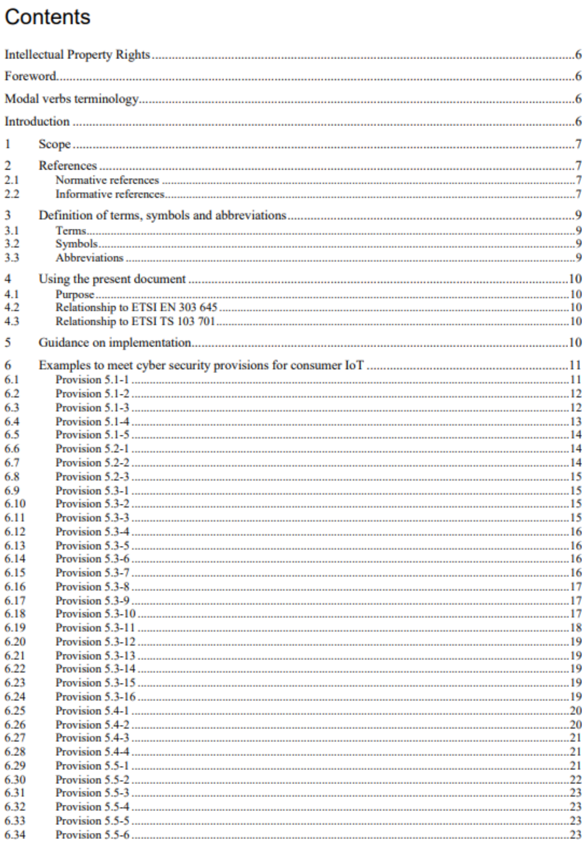
public

Q: How to implement the security measures of ETSI EN 303 645?
A: ETSI TR 103 621.



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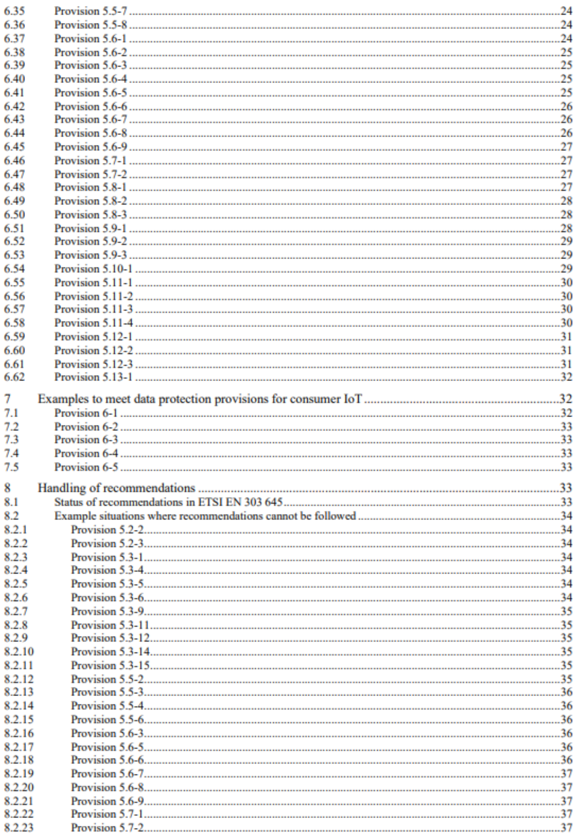

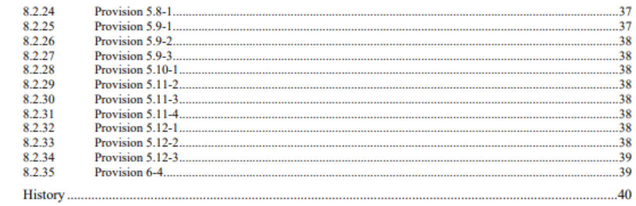

NICAL REPORT

Guide to Cyber Security for Consumer Internet of Things

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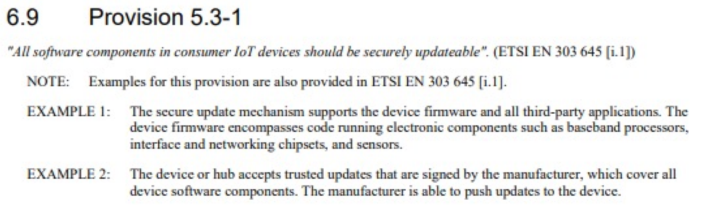
A: ETSI TR 103 621.

Example from ETSI TR 103 621:



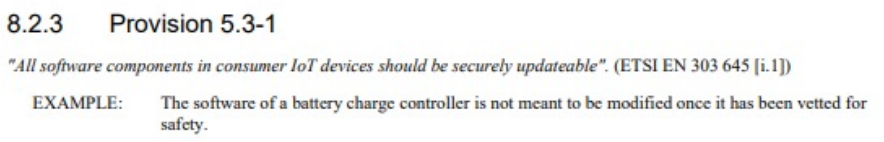
6.9 Provision 5.3-1

"All software components in consumer IoT devices should be securely updateable". (ETSI EN 303 645 [i.1])

NOTE: Examples for this provision are also provided in ETSI EN 303 645 [i.1].

EXAMPLE 1: The secure update mechanism supports the device firmware and all third-party applications. The device firmware encompasses code running electronic components such as baseband processors, interface and networking chipsets, and sensors.

EXAMPLE 2: The device or hub accepts trusted updates that are signed by the manufacturer, which cover all device software components. The manufacturer is able to push updates to the device.

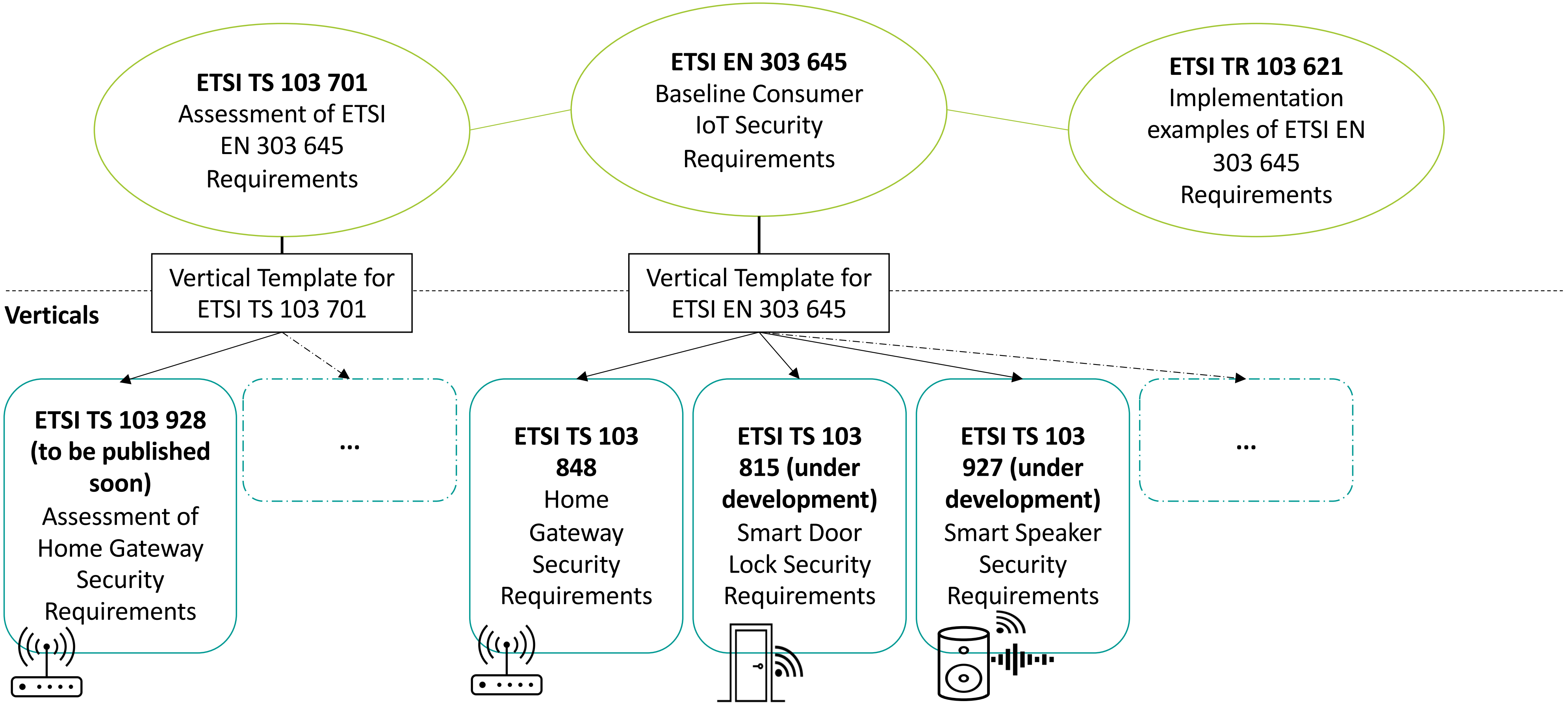


8.2.3 Provision 5.3-1

"All software components in consumer IoT devices should be securely updateable". (ETSI EN 303 645 [i.1])

EXAMPLE: The software of a battery charge controller is not meant to be modified once it has been vetted for safety.

Overview of ETSI‘s CIoT security documents including **verticals**



ETSI TS 103 701
Assessment of ETSI EN 303 645 Requirements

ETSI EN 303 645
Baseline Consumer IoT Security Requirements

ETSI TR 103 621
Implementation examples of ETSI EN 303 645 Requirements

Vertical Template for ETSI TS 103 701

Vertical Template for ETSI EN 303 645

Verticals

ETSI TS 103 928 (to be published soon)
Assessment of Home Gateway Security Requirements

...

ETSI TS 103 848
Home Gateway Security Requirements

ETSI TS 103 815 (under development)
Smart Door Lock Security Requirements

ETSI TS 103 927 (under development)
Smart Speaker Security Requirements

...

Q: Are EN 303 645’s security measures different or of different importance depending on the type of device?
A: See ETSI Verticals for the ETSI EN 303 645.

- Some possible modifactions on security measures of ETSI EN 303 645 in a corresponding vertical
  - Promotion: make „should“ to „shall“
  - Exclusion: exclude a recommendation as it is not applicable to the device dealt with in the vertical
  - Extension: extending the original provision from the EN 303 645 with another related provision
  - ... (please see the vertical templates)
- Example (from ETSI EN 303 645):

Provision 5.3-1 All software components in consumer IoT devices should be securely updatable.

Vertical example - Smart Door Lock (SDL):

Provision SDL 5.3-1 (extended) An update of the device shall not change the locking status of the device.

NOTE: A lock, which was closed before an update, is still closed during and after an update.

Thank you for your attention!

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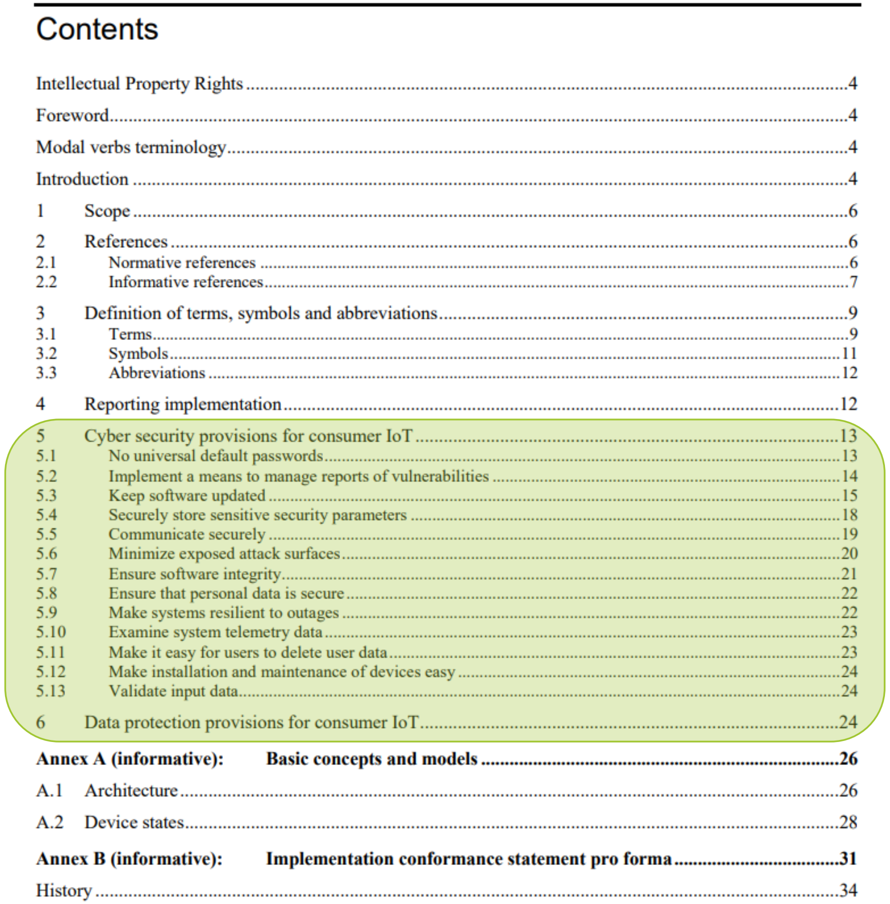
Backup

Motivation

- The ETSI EN 303 645 requires a lot of security measures
- The ETSI TS 103 701 assesses the implementation of these security measures
- But how to implement these security measures?
- Are the security measures different or of different importance depending on the type of device?



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Q: Are EN 303 645’s security measures different or of different importance depending on the type of device?
A: See ETSI Verticals for the ETSI EN 303 645.

- ETSI TC CYBER created vertical templates for the ETSI EN 303 645 ecosystem:
  - to write vertical standards based on ETSI EN 303 645 and
  - to write vertical standards based on ETSI TS 103 701
- Verticals already publicly available:
  - ETSI TS 103 848 Home Gateway Security Requirements as ETSI EN 303 645 vertical
  - Smart Speaker Security requirements as EN 303 645 vertical (only intermediate draft version)
- Verticals under development:
  - Home Gateway Test Specification as TS 103 701 vertical (close to publication)
  - Smart Door Lock Security requirements as EN 303 645 vertical
  - Smart Speaker Security requirements as EN 303 645 vertical (final version)