Decommissioning Report

# Revision

Version 5

1/19/22 8:11 AM

# SME

Charles Wilson

# Abstract

This document describes the process used to create the decommissioning report.

# Group / Owner

DevOps / Information Systems Security Developer

# Motivation

This document is motivated by the need to have formal processes in place for managing and reporting on the decommissioning of deployed safety-critical, cyber-physical systems for certification of compliance to standards such as **ISO 21434** and **ISO** **26262**.

# License

This work was created by **Motional** and is licensed under the **Creative Commons Attribution-Share Alike (CC BY-SA-4.0)** License.

[**https://creativecommons.org/licenses/by/4.0/legalcode**](https://creativecommons.org/licenses/by/4.0/legalcode)

# Overview

Decommissioning of vehicles comes in two forms:

* RMA (Return Merchandise Authorization) **[1]**
* EoL (End-of-Life)

Although both cases entail taking the vehicle out of the field, each requires unique security activities. When it is necessary to return a component for failure analysis, there is a need to maintain as much of the relevant state as possible. This poses many issues as the relevant information may be entangled with other security-relevant information which we desire not to expose. Things are less complicated when the desire is to permanently remove a vehicle from service as it is far easier to scrub a system entirely **[3]** than selectively remove sensitive information.

Both cases are discussed in detail in the **Decommissioning Plan** **[2]** created during the foundation phase.

# Reports

### Non-RMA-necessary Asset Removal Report

The **non-RMA-necessary Asset Removal Report** details the security-relevant elements removed and associated activities performed in order to make a component ready for return to supplier for repair.

The report should be organized into summary and details sections. The summary includes:

* Name of the component
* Description of the component
* Component SKU
* Component serial number
* Image of the component

The details section contains one or more activities. Each of these is organized into summary and activity step sections. The summary includes:

* activity title (unique)
* security-relevant element impacted
* Description of the activity’s scope

Individual activities steps include:

* Activity step number (unique)
* Security-relevant element impacted
* Action taken
* Verification step

It is recommended that the report be generated from a portable data representation so that it can be programmatically manipulated.

### Cybersecurity Decommissioning Report

The **Cybersecurity Decommissioning Report** details the security-relevant elements removed and associated activities performed in order to make a component ready for disposal.

The report should be organized into summary and details sections. The summary includes:

* Name of the component
* Description of the component
* Component SKU
* Component serial number
* Image of the component
* List of all security-relevant elements (used to cross-check activity list)
* Description of disposal mechanism

The details section contains one or more activities. Each of these is organized into summary and activity steps sections. The summary includes:

* activity title (unique)
* security-relevant element impacted
* Description of the activity’s scope

Individual activity steps include:

* Activity step number (unique)
* Security-relevant element impacted
* Action taken
* Verification step

It is recommended that the report be generated from a portable data representation so that it can be programmatically manipulated.

# References

1. **Return merchandise authorization**[**https://en.wikipedia.org/wiki/Return\_merchandise\_authorization**](https://en.wikipedia.org/wiki/Return_merchandise_authorization)
2. **Decommissioning Plan** (AVCDL secondary document)
3. **NIST SP 800-88 r1 – Guidelines for Media Sanitization**[**https://nvlpubs.nist.gov/nistpubs/SpecialPublications/NIST.SP.800-88r1.pdf**](https://nvlpubs.nist.gov/nistpubs/SpecialPublications/NIST.SP.800-88r1.pdf)