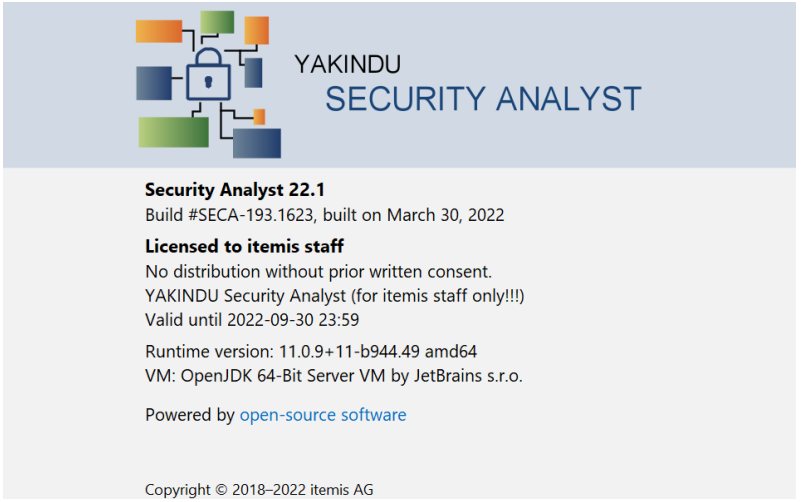
Security Analyst 22.1

Release Notes



It’s been a while since our last release but it was worth the wait. We have a feature packed and improved spring update available for you including the following changes:

Threat scenario support

To get even closer to the ISO/SAE 21434, we are now supporting threat scenarios as a dedicated element. A threat scenario realizes one or many damage scenarios and is itself realized by specific attack steps that build an attack tree. It references a threat class, which provides the compromised cybersecurity property.

Threat Scenario TS.7**:** Spoofing on CAN Bus

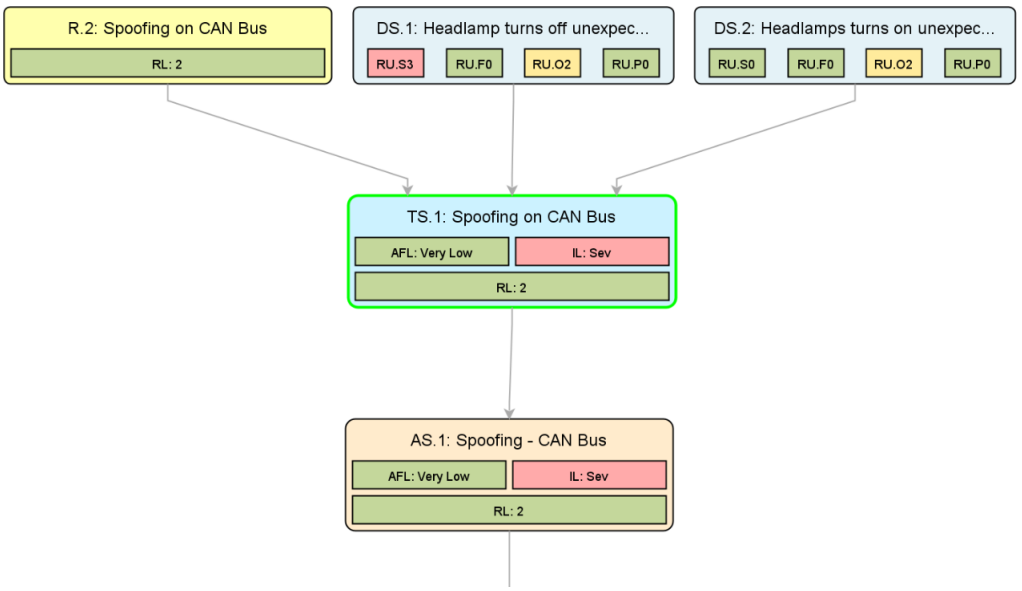
<no description> **Edit**

{

Cause of Compromise	TC.1: Spoofing
Acts on	Ch.1: CAN Bus
Compromises	C: Confidentiality, I: Integrity
Threatens	+
Attack Tree	AS.1
Realizes	DS.1: Headlamp turns off unexpectedly
	DS.2: Headlamps turns on unexpectedly
Damped by	A.1
Risk Level	⊞ 2

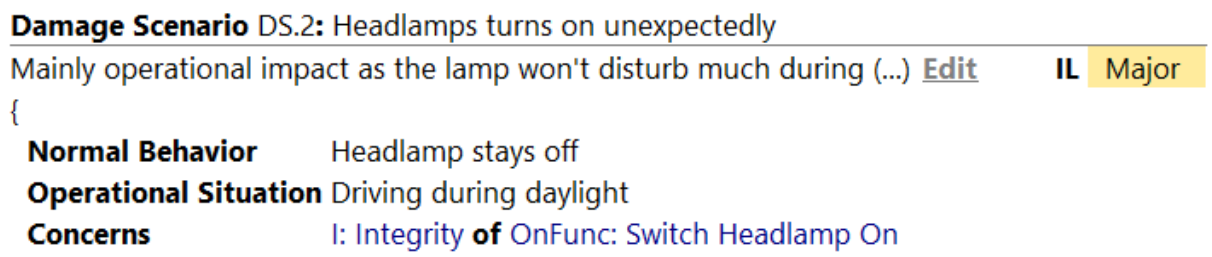
}

This change is also reflected in the attack tree graphing, new report items, revamped assistants and an updated tutorial.

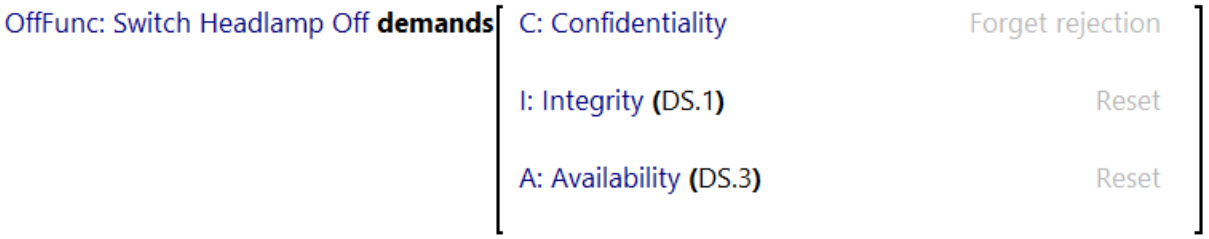


Qualified assets

Identifying assets has changed. There are no more intermediate entities, namely security objectives, needed. Instead, asset identification is now all about identifying assets that might cause damages if threatened. The information is bundled within the updated damage scenario element.



The asset identification assistant takes care of creating new damage scenarios for you and creates the qualified asset. We take care of your existing security objectives and migrate them with maintaining the risk level of your TARAs in mind.

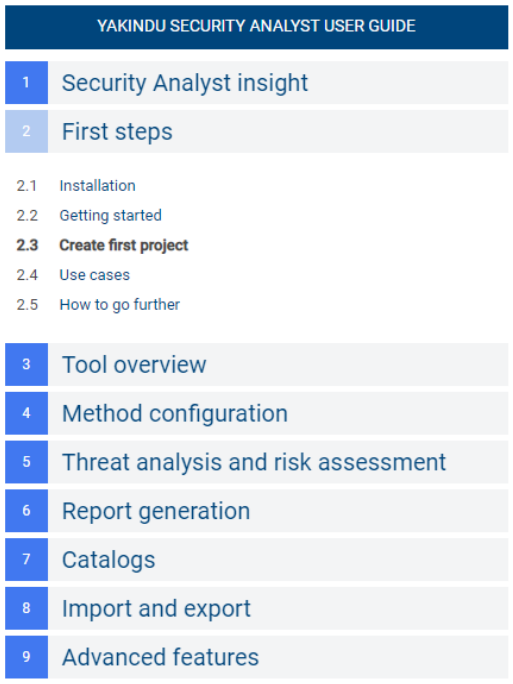


New user guide

For Security Analyst 22.1, we revamped our user guide. As part of this we updated the terminology to focus on ISO/SAE 21434 terms, filled it with additional contents, and moved the user guide to our itemis Security Analyst product web page: [New user guide]

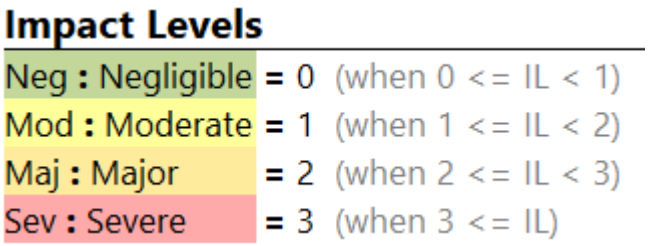
Note: The user guide will be continuously updated to eventually cover all the features and capabilities of itemis Security Analyst.

The user guide is searchable via the corresponding blue search box. Furthermore, you can navigate to the chapter of interest yourself via clicking the title or the “more” button. On the next page you can find the requested contents and use the navigation on the left hand side to navigate further:

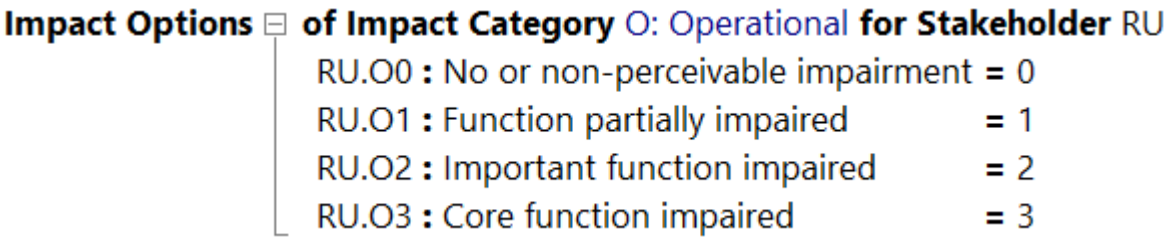


Enhanced impact level determination

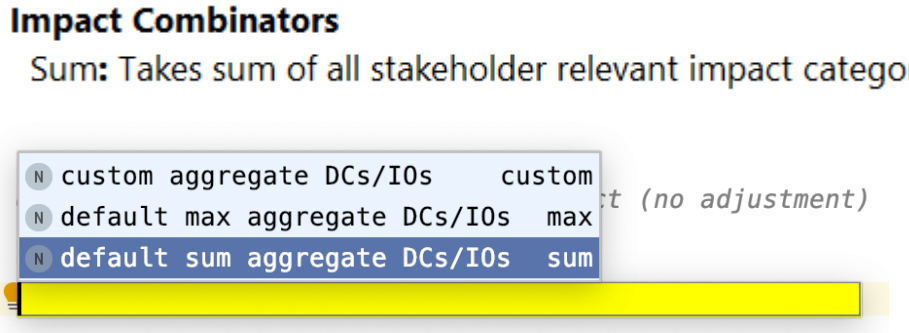
Impact level declarations are now spiced up with numeric values attached to them. Impact options aggregating to 2 would end up as a major impact level.



The same applies to the declaration of impact options. Instead of directly referring to the impact levels, you may now declare numeric values per option. Having this, it is possible to realize more powerful aggregation functions that work on these values.

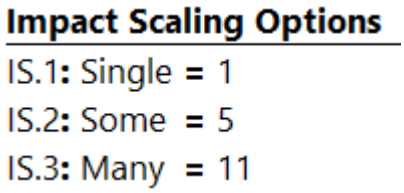


While extending the foundation of impact determination, we added an additional default aggregator. Next to the default “MAX” aggregation we also allow adding up the values with a new “SUM” aggregator. This can be modified in the inspector of the risk model at your method configuration. Just add a new aggregator in the impact combinator section. In the inspector you may choose the sum aggregator default instead of the max aggregator default.

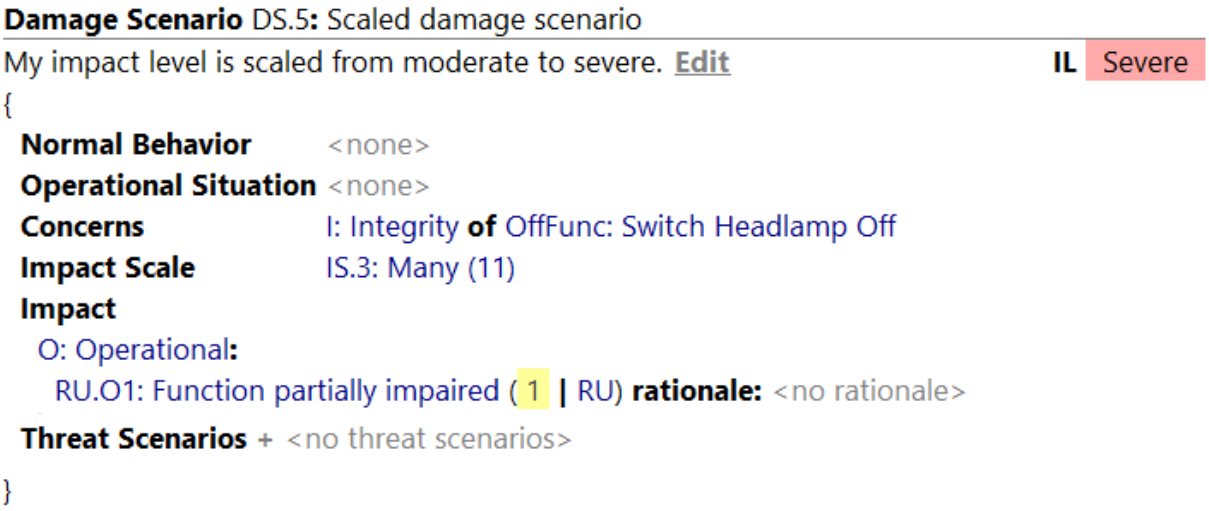


Impact scaling

It is now possible to define your own set of scaling options with a numeric value attached to it. By default the following three options are available:

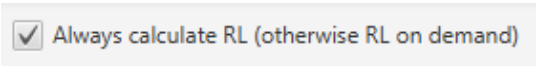


Having enhanced impact determination in place, Security Analyst uses the provided values per damage scenario and applies impact scaling to it. In the following example, we are scaling the moderate (1) rating with the impact scale “IS.3: Many (11)” which aggregates to a severe impact level.



On-demand re-calculation

In order to improve the performance for large models, you may now disable the immediate re-calculation of all risks on each change. The corresponding setting can be found in “Settings > Appearance & Behavior > Security Analyst General”:

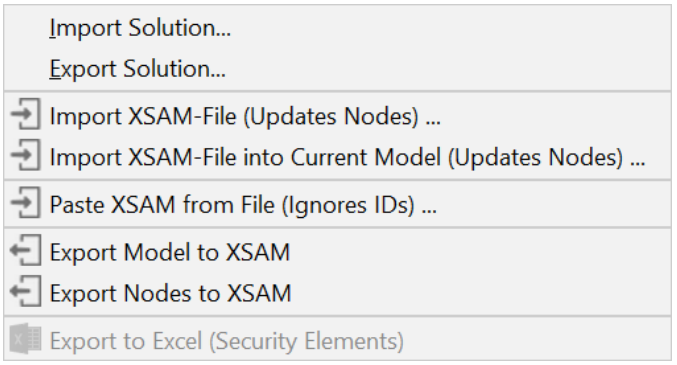


The on-demand re-calculation can be triggered when selecting a risk related element. The recalculate button will show up in the toolbar as follows:

Import and export enhancements

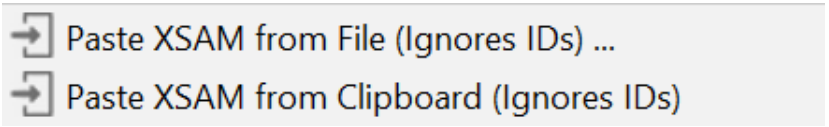
Export

It is now possible to **select multiple elements** from the project navigation tree and export them **to one xsam file**. It uses the same semantics as "*Export model to XSAM"* and stores the selected contents (e.g. chunks / root nodes) under a `<mps:RootNodes>` xml tag, but only exports the selected Chunks.



Import

- You can import single nodes without the `<mps:RootNodes>` xml tag
- *Import XSAM into Current Model* without mps:modelRef attribute is now supported
- *Import XSAM* requires <mps:modelRef> to find the correct model
- If a chunk (root node) to be updated cannot be found, a new one is created automatically
- You can now copy XSAM snippets (e.g. the contents of an exported node, or text received via mail) and paste it exactly where needed:



Attack feasibility option assignment

For attack steps, controls, threat classes and control classes, new intentions are available to clean up your model (e.g. after a failing migrations or imports):

- incomplete AF options are removed automatically
- Improved error-message for duplicated AF option assignments
- The respective quickfixes can be triggered from the intentions menu (<ALT>+<ENTER>)

Assistant performance enhancement

- When a Suggestion is applied, rejected, reset ... , only the Suggestion itself is updated and not the entire assistant
- There is a checkbox next to the “Refresh” button, that allows enabling the auto refresh on each action

Pull changes from catalog (beta)

We are preparing for future automated catalog updates. Under “Settings > Appearance > Security Analyst General” you can define a threats catalog endpoint (url).
If this is configured properly and an endpoint is selected, you can pull in the catalog data via “Import/Export>Pull changes from remote Catalog” for a selected model. It acts like a “Import XSAM into Current Model” for threat catalogs. Unfortunately, without the appropriate endpoint, this is not of use for you just yet. Stay tuned!

Updated report items

- Updated reports to take into account Threat Scenarios
- Updated report items to take into account impact scaling
- Damage scenario table is split up:
    - Damage scenarios overview shows name, title, ...
    - Damage scenarios with Impact per Stakeholder shows Impact per stakeholder and impact category
- Risk table shows risk level per stakeholder
- Terminology profile (e.g. ISO21434) is used properly in reports template completion menus

Various fixes and improvements

- Fixed line breaks in descriptions
    - Editing and exporting/importing now support multiple line breaks and does no longer ignore them
- Reports chunk: Improved displaying of default control scenario
- Project tree view: Derive icons from the content, if no default content is set
- New data can now be created inline for sub-data, stored-data and transferred-data
- Control groups chunk: Fixed and extended editing of new control groups by just being able to start typing in empty chunk
- You can now change the row sorting of the risk matrix result report item
- Assumptions are not evaluated to impossible anymore; if there is nothing configured there they act like “place holders” and have no effect on the Risk calculation
- Fixed wrong results calculated when reopening the same project again

Open initiative for an exchange format

You might already know our exchange format XSAM. Starting from this, we are launching an initiative to form an open community which aims at establishing a cross-vendor, cross-tool XML-based format for eXchanging Security Analysis Models. We call it openxsam.io and recently talked about it at ASRG. If you are interested in joining the initiative, please contact us at security-analyst@itemis.de.

Additionally, we still have the knowledge base at https://www.security-analyst.org about general security analysis processes and norms.

Version Mapping

The following table can be used to determine the Security Analyst version based of the internal plugin version “com.moraad.core” that is stored in the .msd file of every solution:

```
<language slang="l:2bca1aa3-c113-4542-8ac2-2a6a30636981:
com.moraad.core" version="<com-moraad-core-version>" />
```

com.moraad.core version	Security Analyst version
78	22.1
74	21.3
73	21.2
72	21.1.1
71	21.1
64	20.4
63	20.3.1
61	20.3
59	20.2.1
58	20.2
55	20.1.1
54	20.2.1
49	19.4.1
48	19.4
46	19.3.1
44	19.3
41	19.2
37	2.5.1