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Validation Report SIMCA®-online 17   2022-03-03 17:09

	Role	Name	Date
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Content

1   Introduction

The purpose of the **Validation report** is to summarize and document the found differences that require corrective actions from the validation activities performed.

The scope of the validation tasks performed are described in paragraph 2.1 in the Validation plan.

1.1   Notation and Notes

'US' followed by a number refers to a User Story in Azure DevOps.

'WI' followed by a number refers to a Work Item in Azure DevOps. May be Bug, User Story, Feature etc.

'VTC' followed by a number refers to a Test Case in Azure DevOps that has been written as a Validation Test Case, VTC. All files referenced here can be found in the New functionality folder in the validation package.

Note: Approving this document includes approval of all subdocuments and results referred to in this document.

2   Validation Report Summary

The purpose of the **Validation report** is to summarize and document the found differences that needs corrective actions from the validation activities performed and listed in the Validation plan.

The numerical validation of SIMCA-online 17 was done versus SIMCA-online 16.1.2 and specification using TestComplete. The outcome is included in the validation package together with the selected models as well as all projects.

The graphical validation versus SIMCA-online 16 and SIMCA 17 was done on a number of projects and models under Windows 10. The copied/printed plots are included electronically in the validation package.

New functionality was validated versus specification or SIMCA. The outcome is included in the validation package.

2.1   Validation Package Content

The validation package includes files and folders as follows:

- SIMCA-online 17 validation documentation pdf, a compilation of validation documents including this document, Validation report SIMCA-online 17.

- Bugs folder – Lists details for the bugs referenced in the validation package, if any.

- Graphical validation folder – Documents containing the compared graphs.

- Projects folder – SIMCA project files (.usp) used during the validation.

- New functionality folder – New functionality and improvements have been validated and available in a folder named 'New functionality' in the validation package.

- Numerical validation folder – Holding the background and results for the numerical comparisons.

3   Validation Task Results

3.1   Data Analytics Correctness – Desktop Numerical

In the numerical comparison versus SIMCA-online 16.1.2, no differences were found. Rounding differences are not included.

3.2   Data Analytics Correctness – Desktop Graphical

In the graphical comparison of plots and lists versus SIMCA-online 16 and SIMCA 17, no differences that require a corrective action were found.

3.3   Data Analytics Correctness – Web API

In the numerical verification of the Web API used in the SIMCA-online web client, no differences that require a corrective action were found.

3.4 Automated Regression

In the automated regression covering group permissions, audit trail, Python preprocessing plugin and reset alarm in the web client, no differences requiring a corrective action were found.

3.5 New Functionality

New functionality described in user stories closed during the development of SIMCA-online 17 was validated and can be found in Validation of New Functionality Summary.docx and New functionality folder.

The results from the VTCs run during the validation are documented in the files found in the New functionality folder.

No differences that require a corrective action were found when running the validation test cases.

4 Verification of Installed Software

To verify that your license of the software has been correctly installed follow the instruction here:

1. In SIMCA-online, click **File | Help** and under About SIMCA-online ..., verify that the version is SIMCA-online 17.0.0.55175.

2. Open one of the .pdfs in the Graphical validation folder in the full validation of SIMCA-online.

3. Open the corresponding project in the software, found in the Projects folder.

4. Open the corresponding project in the software, found in the Projects folder, use DBMaker as database and let it provide data. Use for instance Sovring for continuous and Lubrizolow for batch.

5. Create and compare one of the plots. The plots should content wise be identical.

For SIMCA-online Web Client:

1. In the desktop client, with the project used for the above verification, click Web Client on the Home tab.

2. Using one of the supported browsers (Chrome, Edge, Safari), log in using your SIMCA-online user credentials.

3. Click the main menu, About, and verify that the version is SIMCA-online Client version 17.0.0. (build 52356).

4. Open one of the trend plots. The plots should content wise be identical.

5 Source Code

All source code for the final version of a full release is transferred to electronic media and kept at the Umeå office.

6 Routines

The relevant routines are stored in Azure DevOps in the QualityManual and QualityManagementSystem folders.

7 Bug Handling

Work items describing bugs found are stored electronically in Azure DevOps. Bugs that require a corrective action are listed in the tables in paragraph 3.

8 Validation Conclusion

All bugs found between the release of SIMCA-online 16.1.2 and the release of SIMCA-online 17 that remain not fixed were considered unimportant and therefore not fixed.

All differences found during the validation process are described in detail in the Validation Task Results.docx document.

All differences that require a corrective action are listed under paragraph 3, and the WIs referenced to are stored in Azure DevOps and available in the Bugs-folder.

None of the found differences are serious. The used routines together with the validation ensure that SIMCA-online 17 gives correct results and is reliable.