

System Test Report

(System Test Report)

(TINF19C, SWE I Praxisprojekt 2020/2021)

Project: *OPC UA Server Farm*

Customer: *Rentschler & Holder*
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Version	Date	Author	Comment
0.1	12.03.2021	Zichler	created
0.2	12.05.2021	Zichler	Basic structure established
0.3	20.05.2021	Zichler	Test Results have been added
1.0	20.05.2021	Zichler	Finalization

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SCOPE

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1. Scope

The TCS / TRP (Test Case Specification / Test Report) describes the environment, the preconditions and the actions of a test performed or to be performed. If the test was performed, the results are given. Test Case Specification / Test Reports are referenced by System Integration Plans/Reports (SIP/SIR), by System Test Plans/Reports (STP/STR) and by System Validation Plans/Reports (SVP/SVR).

2. Definitions

AML	Automation Markup Language
Test Client	for testing and developing the <i>OPC UA Client UA-Expert</i> was used
UI	User Interface
GUI	Graphical User Interface
CLI	Command Line Interface

3. Test Objects

Ref.-Id.	Test Object Name	product-number, serial-number, modification status
1	OPC-UA_SERVER_FARM Core Library	Build v1.0

4. Test Equipment

The following equipment must be available for testing:

- A computer with Linux
- OPC UA Demo Client ([Download Here](#))
- 10 different Automation ML files

5. Results Testcases

a. <TC-001-001> File validation of valid input file

Testcase ID:	TC-001-001		
Testcase Name:	File validation of valid input file		
Req.-ID:	LF10, LF20, LF30, LF60		
Description	The test case verifies that errors are detected during the validation of the input file. A corresponding log file will be created containing information of the error.		
Test Steps			
Step	Action	Expected Result	Actual Result
1	Install the OPC UA Server Farm and open the CLI.	The OPC UA Server Farm is installed on the system and the CLI is open.	The OPC UA Server Farm is installed on the system and the CLI is open.
2	Select a valid input file to configure the Server with.	The validation is executed successfully and the server will start configuring	The validation is executed successfully and the server starts configuring
3	Then open the logs which can be found under: <install-directory>/Serverfarm/LogFile.txt	The log file is open and contains information about the start up	The log file is open and contains information about the start up
4	Find the message that the server has been started correctly.	A Log message should be found within in the first few lines containing information about the start up	The Log file contains information about the start up and further shows on which port the server is running.
Tester:	Daniel Zichler		
Date:	20.05.2021		
Testcase Result:	PASS		

b. <TC-001-002> File validation of invalid input file

Testcase ID:	TC-001-002		
Testcase Name:	File validation of valid input file		
Req.-ID:	LF10, LF20, LF30, LF60		
Description	The test case verifies that errors are detected during the validation of the input file. A corresponding log file will be created containing information of the error.		
Test Steps			
Step	Action	Expected Result	Actual Result
1	Install the OPC UA Server Farm and open the CLI.	The OPC UA Server Farm is installed on the system and the CLI is open.	The OPC UA Server Farm is installed on the system and the CLI is open.
2	Select a valid input file to configure the Server with.	The validation is executed successfully and the server will start configured	The validation is executed successfully and the server starts configuring
3	Then open the logs which can be found under: <install-directory>/Serverfarm/LogFile.txt	The log file is open and contains information about the start up	The log file is open and contains information about the start up
4	Find the message that the server has been started correctly.	A Log message should be found within in the first few lines containing information about the start up	The log file shows that the file is not readable.
Tester:	Daniel Zichler		
Date:	20.05.2021		
Testcase Result:	PASS		

c. <TC-001-003> Server Start-up with valid input file

Testcase ID:	TC-002-001		
Testcase Name:	Server Start-up		
Req.-ID:	LF10, LF20, LF30, LF40		
Description	The test case verifies that input files are parsed correctly and can be read in the Test Client.		
Test Steps			
Step	Action	Expected Result	Actual Result
1	Open the CLI and select two valid input files.	The validation is executed successfully and the server will start configured.	The validation is executed successfully and the server starts configuring.
2	Open the Test Client and connect to the started Servers with the Test Client.	The started Servers are shown on the left side of the Test Client.	The Servers are shown on the left side and can be drag and dropped into the Data Access View
Tester:	Daniel Zichler		
Date:	20.05.2021		
Testcase Result:	PASS		

d. <TC-001-004> Server Shut-Down

Testcase ID:	TC-002-001		
Testcase Name:	Server Shut-Down		
Req.-ID:	LF10, LF20, LF30, LF50		
Description	The test case verifies that the server can be shut down using an external interrupt.		
Test Steps			
Step	Action	Expected Result	Actual Result
1	Open the CLI and select two valid input files.	The validation is executed successfully and the server will start configured.	The validation is executed successfully and the server will start configured.
2	Open the Test Client and connect to the started Servers with the Test Client.	The started Servers are shown on the left side of the Test Client.	The started Servers are shown on the left side of the Test Client.
3	Using the CLI command “Ctrl+C” in the CLI.	The Program Stops and the Servers should not be available anymore.	The Program Stops and the Servers should not be available anymore.
4	Try to reconnect to the now Shut Down Servers.	The Servers are not reachable.	The Servers are not reachable.
Tester:	Daniel Zichler		
Date:	20.05.2021		
Testcase Result:	PASS		

e. <TC-001-005> Server Start-up with ten different valid input files

Testcase ID:	TC-002-001		
Testcase Name:	Server Start-up with ten different valid input		
Req.-ID:	LF10, LF20, LF30, LF40		
Description	The test case verifies that input files are parsed correctly and can be read in the Test Client.		
Test Steps			
Step	Action	Expected Result	Actual Result
1	Open the CLI and select ten valid input files.	The validation is executed successfully and the server will start configured.	The validation is executed successfully and the server starts configuring.
2	Open the Test Client and connect to the started Servers with the Test Client.	The started Servers are shown on the left side of the Test Client.	All files except one invalid input file have been accepted and are shown on the left side of the Test Client.
Tester:	Daniel Zichler		
Date:	20.05.2021		
Testcase Result:	PASS		