November 2015

WATS Server 2015.3 Release Note

WATS Server 2015.3 Release

This release overview contains information about new features in WATS Server 2015.3
For more information about WATS, please visit www.virinco.com/wats

Major Feature Areas

- Gage R&R analysis
- Export Wizard
- Test Step yield & analysis: Step status chart
- Product yield: Test run tail chart - Passed in run (> 1)
- Dashboard: "My RCA tickets" widget
- RCA improvements
- Miscellaneous

WATS Reporting

Gage R&R analysis

The GR&R analysis is used to quantify the amount of variation in a measure that comes from the measurement system itself rather than from product or process variations. The analysis uses the ANOVA (analysis of variance) method for computing the repeatability and reproducibility.

The analysis requires multiple parts (units), appraisers (test-station, operator, socket, fixture) and trials. When conducting a study, the recommended procedure is to use 10 parts, 3 appraisers and 2 trials, for a total of 60 measurements

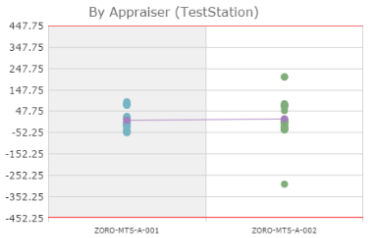
[Please read more on GR&R analysis in our Resource Center]

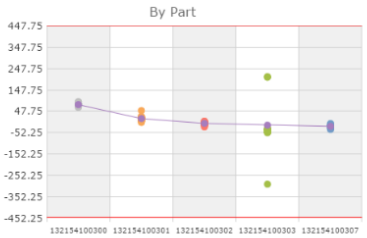
Step / Measure Name	Avg	Low limit	High limit	GR&R % StudyVar	GR&R % Tolerance	Repeatability % StudyVar	Repeatability % Tolerance	Reproducibility % StudyVar	Reproducibility % Tolerance
Read Phase 2 and compare / Phase 2 RAW dif	8.73	-450.00	450.00	79.92 %	34.64 %	77.41 %	33.55 %	0.00 %	0.00 %

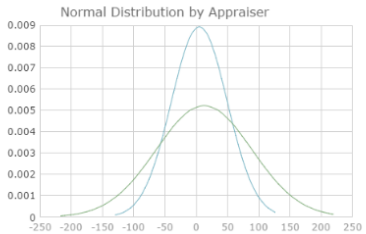
⚠ Parts * Appraisers (10) should be greater than 15.

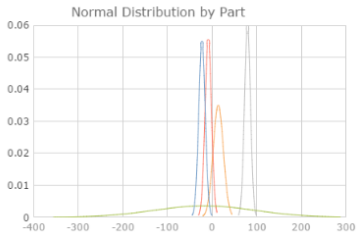
Source of variation	Variance	Stdev	Study Var (6*Stdev)	% Study Var	% Tolerance	% Contribution
Total Gage R&R	2 699.4268	51.9560	GRR = 311.7360	79.92 %	34.64 %	63.86 %
Repeatability (Equipment)	2 532.5789	50.3247	EV = 301.9484	77.41 %	33.55 %	59.92 %
Reproducibilty (Appraiser)	166.8479	12.9170	AV = 77.5018	19.87 %	8.61 %	3.95 %
Appraiser	0.0000	0.0000	AV = 0.0000	0.00 %	0.00 %	0.00 %
Appraiser by Part (Interaction)	166.8479	12.9170	INT = 77.5018	19.87 %	8.61 %	3.95 %
Part	1 527.3880	39.0818	PV = 234.4909	60.11 %	26.05 %	36.14 %
Total variation	4 226.8148	65.0140	TV = 390.0837	100.00 %	43.34 %	100.00 %
NDC:	1.06					

Min:	-293.8201	Low limit:	-450.0000
Max:	209.0343	High limit:	450.0000
Avg:	8.7301	Cp lower:	2.4514
Stdev:	62.3765	Cp upper:	2.3581
Count:	100	Cpk:	2.3581









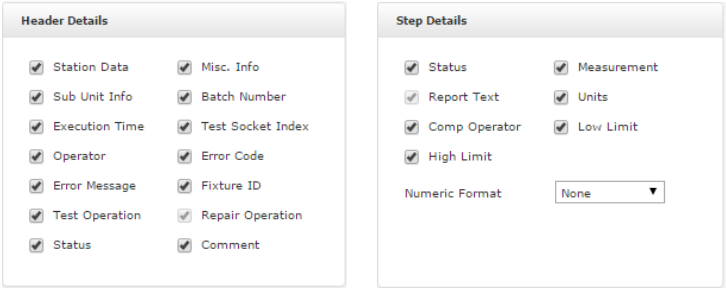
Export Wizard

The Export Wizard replaces the "UUT export wizard" with new functionality and performance improvements. It now contains support for exporting both UUT and UUR report data to various file formats, as well as the ability to export UUT reports as Certificates to PDF. All types of export options are saved when they are changed to persist user preferences between visits to this function, this also applies for selected sequences/steps and step grouping.

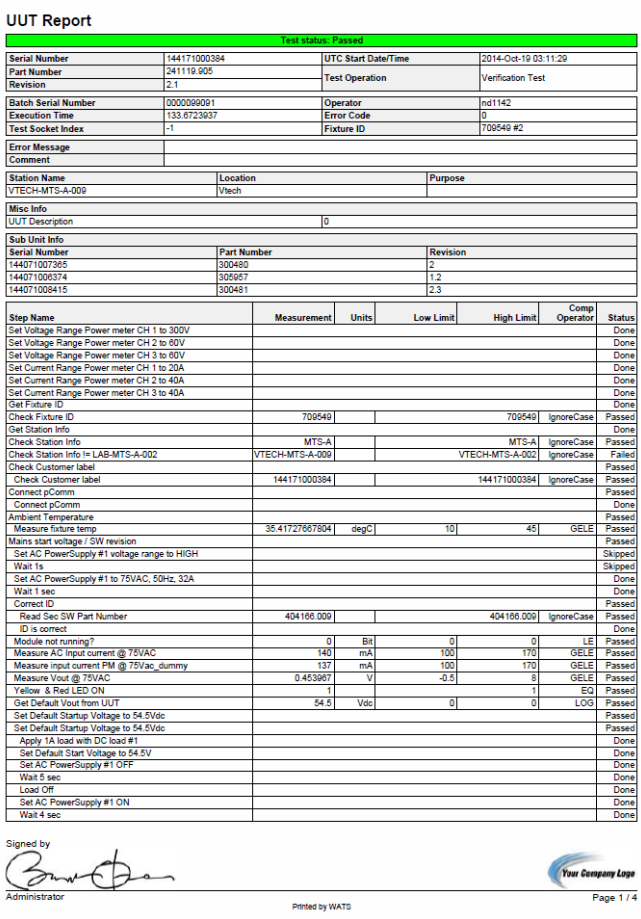
When a type, data source and format has been selected, the report filter is shown.

Type	Data source	Format
UUT reports	All, Header, Selected steps, Chart data	Excel, CSV
	All	HTML (ZIP), WSXF (ZIP), XML (ZIP) deprecated
	Header	WSXF (ZIP)
	Attachments (files)	ZIP
UUR reports	All, Header	Excel, CSV, WSXF (ZIP)
	Attachments (files)	ZIP
Certificates (UUT)	All, Header, Selected steps	PDF
		PDF (ZIP)

For most data sources and formats, you're now able to specify which details to include or to exclude.



Example of Certificate (UUT)



UUT Report

Test status: Passed

Serial Number	144171000384	**UTC Start Date/Time**	2014-Oct-19 03:11:29
Part Number	241119.905	**Test Operation**	Verification Test
Revision	2.1		
Batch Serial Number	0000099091	**Operator**	nd1142
Execution Time	133.6723937	**Error Code**	0
Test Socket Index	-1	**Fixture ID**	709549 #2
Error Message			
Comment			

Station Name	**Location**	**Purpose**
VTECH-MTS-A-009	Vtech	

Misc Info	
UUT Description	0

Sub Unit Info

Serial Number	**Part Number**	**Revision**
144071007365	300480	2
144071006374	305957	1.2
144071008415	300481	2.3

Step Name	Measurement	Units	Low Limit	High Limit	Comp Operator	Status
Set Voltage Range Power meter CH 1 to 300V						Done
Set Voltage Range Power meter CH 2 to 60V						Done
Set Voltage Range Power meter CH 3 to 60V						Done
Set Current Range Power meter CH 1 to 20A						Done
Set Current Range Power meter CH 2 to 40A						Done
Set Current Range Power meter CH 3 to 40A						Done
Get Fixture ID						Done
Check Fixture ID	709549			709549	IgnoreCase	Passed
Get Station Info						Done
Check Station Info	MTS-A			MTS-A	IgnoreCase	Passed
Check Station Info != LAB-MTS-A-002	VTECH-MTS-A-009			VTECH-MTS-A-002	IgnoreCase	Failed
Check Customer label						Passed
Check Customer label	144171000384			144171000384	IgnoreCase	Passed
Connect pComm						Passed
Connect pComm						Done
Ambient Temperature						Passed
Measure fixture temp	35.41727667804	degC	10	45	GELE	Passed
Mains start voltage / SW revision						Passed
Set AC PowerSupply #1 voltage range to HIGH						Skipped
Wait 1s						Skipped
Set AC PowerSupply #1 to 75VAC, 50Hz, 32A						Done
Wait 1 sec						Done
Correct ID						Passed
Read Sec SW Part Number	404166.009			404166.009	IgnoreCase	Passed
ID is correct						Done
Module not running?	0	Bit	0	0	LE	Passed
Measure AC Input current @ 75VAC	140	mA	100	170	GELE	Passed
Measure input current PM @ 75Vac_dummy	137	mA	100	170	GELE	Passed
Measure Vout @ 75VAC	0.453967	V	-0.5	8	GELE	Passed
Yellow & Red LED ON	1			1	EQ	Passed
Get Default Vout from UUT	54.5	Vdc	0	0	LOG	Passed
Set Default Startup Voltage to 54.5Vdc						Passed
Set Default Startup Voltage to 54.5Vdc						Passed
Apply 1A load with DC load #1						Done
Set Default Start Voltage to 54.5V						Done
Set AC PowerSupply #1 OFF						Done
Wait 5 sec						Done
Load Off						Done
Set AC PowerSupply #1 ON						Done
Wait 4 sec						Done

Signed by

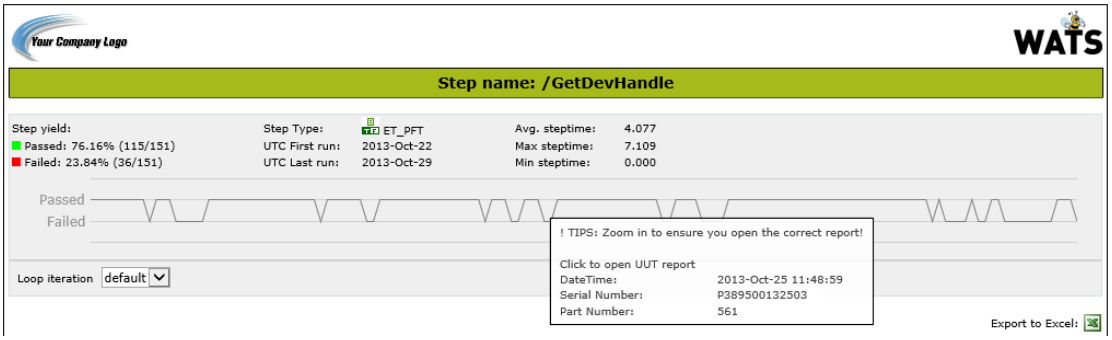
Administrator

Printed by WATS

Page 1 / 4

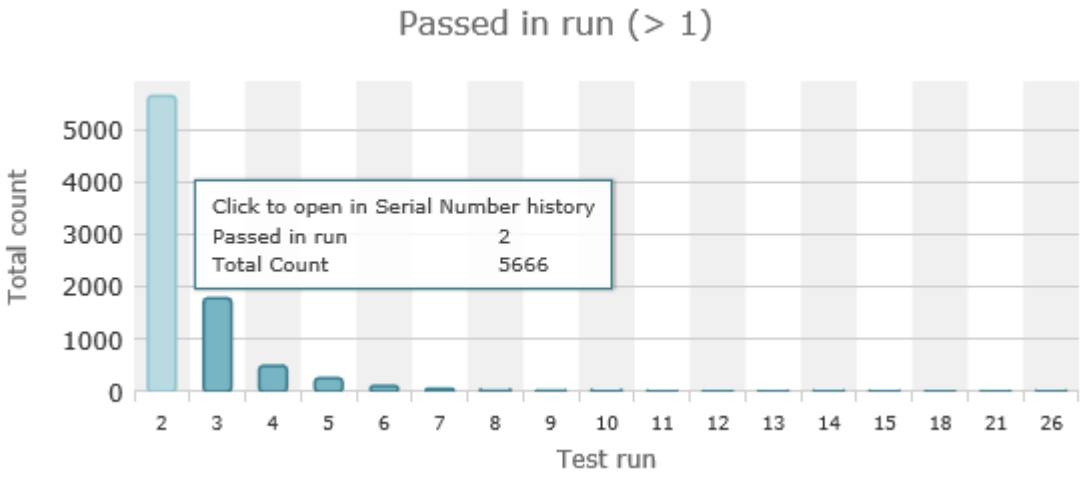
Test Step yield & analysis: Step status chart

In TSY&A step details, the measurement status chart has been replaced with the step status chart which displays the step status trend (such as Passed, Failed or Skipped) over time. The chart is visible for all types of steps, and when the mouse cursor is over the trend line, a popover appears with details of the UUT report (mouse click opens the report). The chart can be zoomed, making it easier to ensure that you open the correct report if there are many reports in a short period of time.



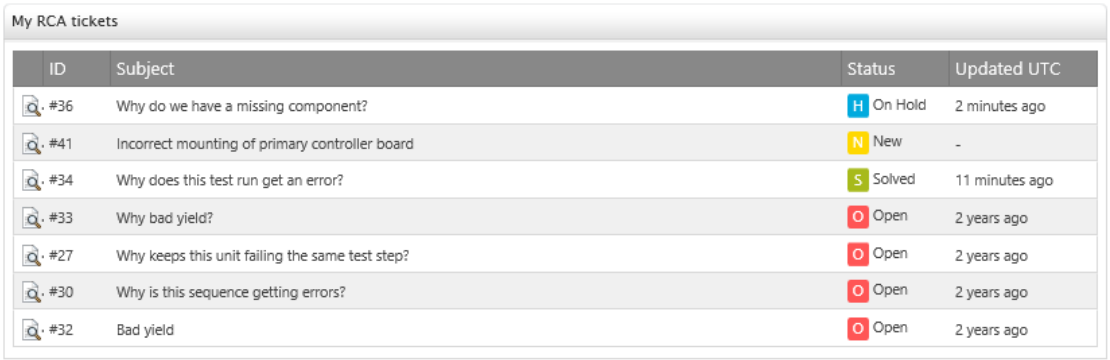
Product yield: Test run tail chart - Passed in run (> 1)

This chart shows the volume of units which didn't pass the 1st test run, but passed in a later test run, grouped by the test run in which they passed. The chart is visible after you expand a period in the grid, and if you click on a test run column, Serial Number history will open in a new window/tab and list all units which passed in the test run.



Dashboard: "My RCA tickets" widget

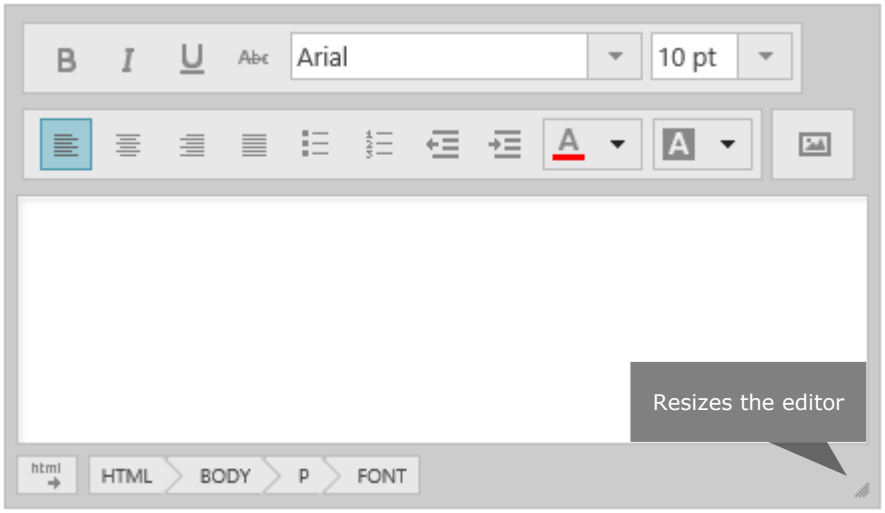
This widget lists all Root Cause Analysis tickets that you have created or is assigned to, sorted descending by Updated/Created UTC. You may also click on a ticket in the list to view or update it (opens in new window/tab). As with other dashboard widgets, you may resize it, or trigger a refresh manually or automatically at a specified interval to retrieve the most recent updates.


My RCA tickets

ID	Subject	Status	Updated UTC
#36	Why do we have a missing component?	H On Hold	2 minutes ago
#41	Incorrect mounting of primary controller board	N New	-
#34	Why does this test run get an error?	S Solved	11 minutes ago
#33	Why bad yield?	O Open	2 years ago
#27	Why keeps this unit failing the same test step?	O Open	2 years ago
#30	Why is this sequence getting errors?	O Open	2 years ago
#32	Bad yield	O Open	2 years ago

RCA improvements

The text box for updates in QA stages D2 – D8 has now been fully replaced by the HTML editor. It has also been improved by implementing new functionality and default settings. This includes a resizable editor surface and a default font family and size (Arial, 10pt).



Apart from these improvements, some UI issues has been fixed. Such as scrolling with all QA stages expanded, and the position of Delete ticket and E-mail ticket buttons have been aligned to fit relative elements.

Miscellaneous

- Reporting
  - Report filter applied automatically when a report is opened from the action menu.
- Reporting: UUT reports
  - Displays icon to highlight when measures in a report have been archived and deleted
- Reporting: Product yield
  - Added Misc Info in report filter to allow searches on miscellaneous information contained in UUT reports
- Reporting: Rolled Throughput yield
  - Support for grouping by product or by product and process
- Reporting: Process Capability analysis
  - Changed Cpk w/o Failed to use +/-3 sigma
- Rest API
  - Support for custom $top parameter value in UUT History
    E.g. <your-server-address>/wats/api/report/query?$top=100