



FACTS  
User Guide

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# Sign in



Please sign in

Username

Password

To sign in, enter provided username and password and press the 'Sign in' button. When signed in the Dashboard page is presented.

## 1 Main menu

The FACTS main menu line is placed at the top of the page.



The above menu is taken from the reports / SPC page. This is indicated by 'gray' area. This area shows the actual page. You can click in the gray area to shortcut back in the menu.

To select a main menu item, simply click the text in in the green area.

### 1.1 Menu items

FACTS – Opens info page about FACTS, including build version etc.

Dashboard – Opens the Dashboard page

Reports – Opens the main report page

System – Opens the system main page

Question mark – Opens the user manual

#### Remark

Depending of the assigned user rights some menu items will not be available.

## 2 Dashboard

To enter Dashboard, click the 'Dashboard' text in menu line.



The Dashboard shows the performance of the test data by providing a top 15 of 'Most Tested' and 'Worst Yield' tests.

The dashboard displays two tables of test performance data. The 'Most Tested' table lists 15 items with their respective test names, test counts, and yield percentages. The 'Worst Yield' table lists 15 items with their respective test names, test counts, and yield percentages. Both tables include a refresh button (circular arrow icon) in the top right corner.

★ Most Tested				
Item	Test	Tests	Yield	
10000-042 - DEIF DEIF DEIF (den med bev)	Dolphin_HS_ALL_RevS	481	459 (95,4%)	
TT62-35xx Vacuum Transceiver test - SP 3510/15/20/60 Vacuumtest	SP35xx Transceiver Vacuum Test	364	304 (83,5%)	
59-123950 - Single charger module	58-123950 Charger Module	264	223 (84,5%)	
TT59-1235XX[SP3510/20] - SP35xx Module Test	SP35xx Module Test	248	140 (56,5%)	
TT59-120864 - E700 Mainboard	Explorer 700 Motherboard	245	106 (43,3%)	
VHF Battery Vacuum test - Vacuum test	SP35xx Battery Vacuum Test	225	198 (88,0%)	
TT59-123533 - gammel Инструменты CIM Производство	SP35xx Module Test	216	95 (44,0%)	
403504A - AteX Battery Secondary	403504A Final Test	209	112 (53,6%)	
TT60-1235XX - SP3500 Display Test	SP35xx Display Test	174	145 (83,3%)	
AteX Transceiver Vacuum test - Vacuum test	SP35xx ATEX Transceiver Vacuum Test	171	131 (76,6%)	
TT62-35XX[623520A SP3520 VHF, GMDSS] - SP3500 Audio Test	SP35xx Audio Test	169	122 (72,2%)	
TT-3672A - Thrane IP Handset, Wired	Maritime VoIP Handset Test	161	135 (83,9%)	
TT57-124510 - Bgan-X BDU Mainboard	BGAN X Generic Mainboard Function Test	148	71 (48,0%)	
406202 - Sailor 6202 Handmicro	Sailor 6202	139	123 (88,5%)	
60-125807 - Protection module for B3504, ATEX	TT60-125807 Secondary ATEX Battery	131	119 (90,8%)	

Dashboard information for the past 30 days created 2016-05-20 22:09:49. Items with less than 100 tests excluded.

★ Worst Yield				
Item	Test	Tests	Yield	
57-129748 - Mini-C 2G LNA/HPA	TT3027A HPA-LNA PCB test	126	52 (41,3%)	
TT59-120864 - E700 Mainboard	Explorer 700 Motherboard	245	106 (43,3%)	
57-129749 - Mini-C 2G MB	Mini-C Mainboard Function Test (-Noise)	128	56 (43,8%)	
TT59-123533 - gammel Инструменты CIM Производство	SP35xx Module Test	216	95 (44,0%)	
TT57-124510 - Bgan-X BDU Mainboard	BGAN X Generic Mainboard Function Test	148	71 (48,0%)	
403504A - AteX Battery Secondary	403504A Final Test	209	112 (53,6%)	
TT59-1235XX[SP3510/20] - SP35xx Module Test	SP35xx Module Test	248	140 (56,5%)	
62-130933 - VHF6000 Adv Main unit	VHF6000 Adv Main Unit	107	68 (63,6%)	
TT57-124671 - BGAN-X HPA	BGAN-X Generic HPA Test	121	78 (64,5%)	
406202 - Sailor 6202 Handmicro	Sailor 6202 Vacuum Test	116	75 (64,7%)	
57-127957[BGANX ACDC SUPPLY 406080A] - BGAN X ACDC SMPS	DC PSM	114	79 (69,3%)	
TT62-35XX[623520A SP3520 VHF, GMDSS] - SP3500 Audio Test	SP35xx Audio Test	169	122 (72,2%)	
TT57-124794 - Wired Thrane IP Handset Mainboard	VoIP Handset	129	94 (72,9%)	
AteX Battery Vacuum test - Vacuum test	SP35xx ATEX Battery Vacuum Test	124	94 (75,8%)	
AteX Transceiver Vacuum test - Vacuum test	SP35xx ATEX Transceiver Vacuum Test	171	131 (76,6%)	

Dashboard information for the past 30 days created 2016-05-20 22:09:49. Items with less than 100 tests excluded.

Data is loaded when page is shown. By clicking the button, the view is refreshed with the latest data available. The number of days and minimum number of tests to take into consideration in this view can be adjusted in the personal settings (see section 6.1).

### 3 Reports

To enter Report main page, click the 'Reports' text in menu line.



The page presents the available reports (depends on the current user rights).

	<b>SPC</b> Statistical analysis result for test steps, represented by mean value, standard deviation ( $\sigma$ ), Cp and Cpk index values as well as specification limits.		<b>Test Yield</b> Numeric details and bar-graph of the yield for a number of selected tests. Each bar in the graph shows the passed/failed relation of the performed tests.
	<b>Time Series</b> Time based XY-graph and the normal distribution graph of the measurements for a specific test step. Statistical analysis values are shown for the selected measurements.		<b>Test Step Yield</b> Numeric details and graphical presentation of the yield for each individual test step for a selected test. The combined bar-graph shows test steps and their yield.
	<b>Test Result</b> Provides an overview in list form of tests performed in the production.		<b>Test Step Error Pareto</b> Sorted list of most frequent failed test steps for a selected item.
	<b>Unit Overview</b> Test step result and measurements for all performed test runs for a specific item serial number.		<b>Test Duration</b> Time based stacked bar-graph showing the relation between the total test and handling time for selected tests. The number of tests performed is shown in a separate XY-line.
	<b>Unit</b> Detailed report for a specific unit that includes all the information known to the system.		<b>Test Step Duration</b> Detailed duration information for all test steps in a test.
	<b>Repair Pareto</b> Chart and sorted list of most frequent repairs entered via the Paperless Repair application.		<b>XY Graph</b> Visualize numeric array step results in XY chart.

To select a report, move the mouse over the appropriate report square and select.

#### 3.1 Navigating in Data grids

When report results are presented in a grid (table) as shown below, the following navigation can be used.

Showing 1 to 10 of 36 entries

Test	Test step	Cp	Cpk	Cpk USL	Cpk LSL	Mean	$\sigma$	Min USL	Max LSL	Measurements
WRT54x Final Test	Adjust 1.8v Supply	1,158	0,792	0,792	1,524	1,800 E+00	4,391 E-03	1,811 E+00	1,780 E+00	2.633
WRT54x Final Test	Adjust RF Clock	3,335	3,319	3,352	3,319	-29,982 E-03	599,657 E-03	6,000 E+00	-6,000 E+00	2.633
WRT54x Final Test	Adjust RF TX Modulation	4,562	3,079	3,079	6,046	37,976 E+00	219,183 E-03	40,000 E+00	34,000 E+00	2.633
WRT54x Final Test	Check 1.8v SUPA	3,345	2,026	2,026	4,665	1,909 E+00	14,946 E-03	2,000 E+00	1,700 E+00	2.633
WRT54x Final Test	Check 1.8v SUPB	2,977	1,800	1,800	4,154	1,909 E+00	16,796 E-03	2,000 E+00	1,700 E+00	47
WRT54x Final Test	Check 3.0v ESUPA	2,593	0,489	0,489	4,697	3,177 E+00	83,556 E-03	3,300 E+00	2,000 E+00	2.633
WRT54x Final Test	Check 3.0v ESUPA.1	1,954	0,422	0,422	3,486	892,098 E-03	65,296 E-03	1,000 E+00	0	47
WRT54x Final Test	Check 3.0v ESUPA.2	7,911	1,442	1,442	14,379	3,182 E+00	27,389 E-03	3,300 E+00	2,000 E+00	47
WRT54x Final Test	Check Supply Current A	0,599	0,450	0,450	0,749	67,469 E-03	16,683 E-03	90,000 E-03	30,000 E-03	2.632
WRT54x Final Test	Check Supply Current B	0,611	0,438	0,438	0,783	68,464 E-03	16,380 E-03	90,000 E-03	30,000 E-03	47

Text can be searched in columns containing text. In the above screenshot the Test and Test step columns can be searched. To search, simply enter a text in the search field. The text can be any part of the texts contained in the searched columns.

Example of search with "adj"

Test	Test step	Cp	Cpk	Cpk USL	Cpk LSL	Mean	$\sigma$	Min USL	Max LSL	Measurements
WRT54x Final Test	Adjust 1.8v Supply	1,158	0,792	0,792	1,524	1,800 E+00	4,391 E-03	1,811 E+00	1,780 E+00	2.633
WRT54x Final Test	Adjust RF Clock	3,335	3,319	3,352	3,319	-29,982 E-03	599,657 E-03	6,000 E+00	-6,000 E+00	2.633
WRT54x Final Test	Adjust RF TX Modulation	4,562	3,079	3,079	6,046	37,976 E+00	219,183 E-03	40,000 E+00	34,000 E+00	2.633

If a table contains more rows than defined by a user setting, the paging control is enabled. To navigate through the pages, click arrow icons or page number directly.

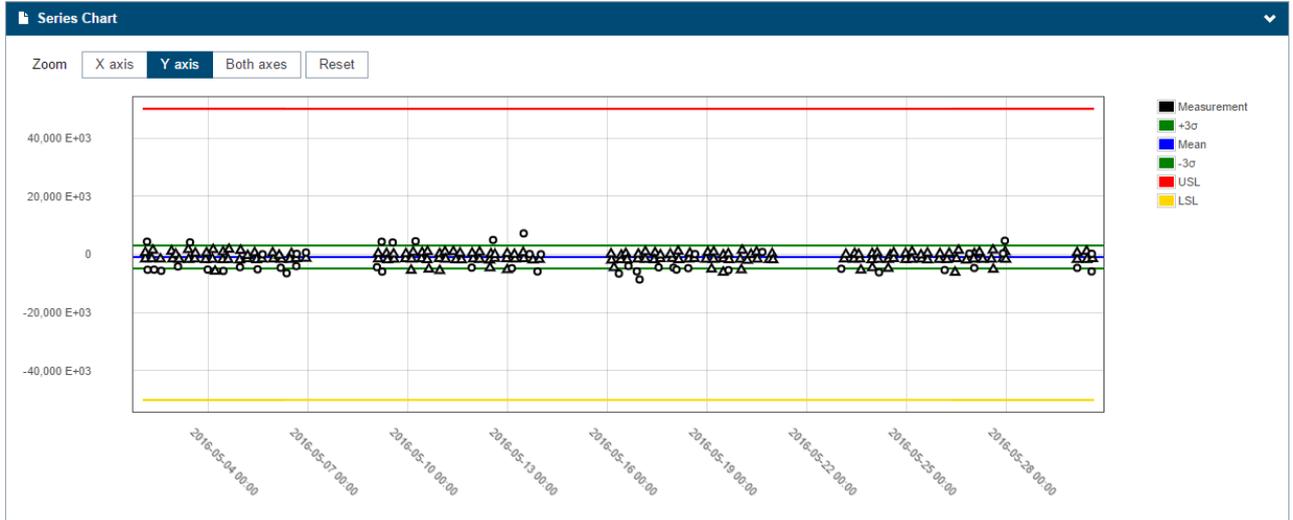


The sort order of the table can be set to order from high to low, or low to high. Further, the sort order can be controlled by selecting multiple columns headers (hold shift key while clicking the headers). When multi selecting, the sort order is determined by the order the columns is selected. Click a column header once to choose low to high sorting, and click twice to select high to low sorting.

### 3.2 Navigating in charts

In reports containing graphs, the following navigation can be used.

#### 3.2.1 XY - chart

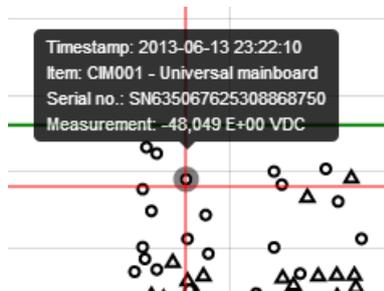


Meaning of circle and triangle:

Circles represent a single measurement, triangles represent a group of measurements.

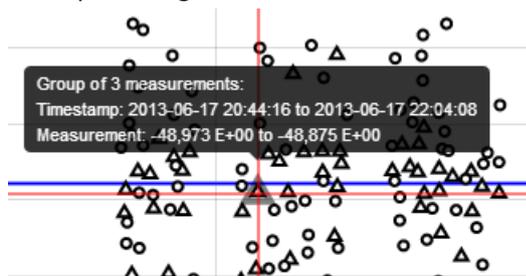
Tooltip: By moving the mouse cursor over either a circle or a triangle, detailed information appears.

Tooltip - circle

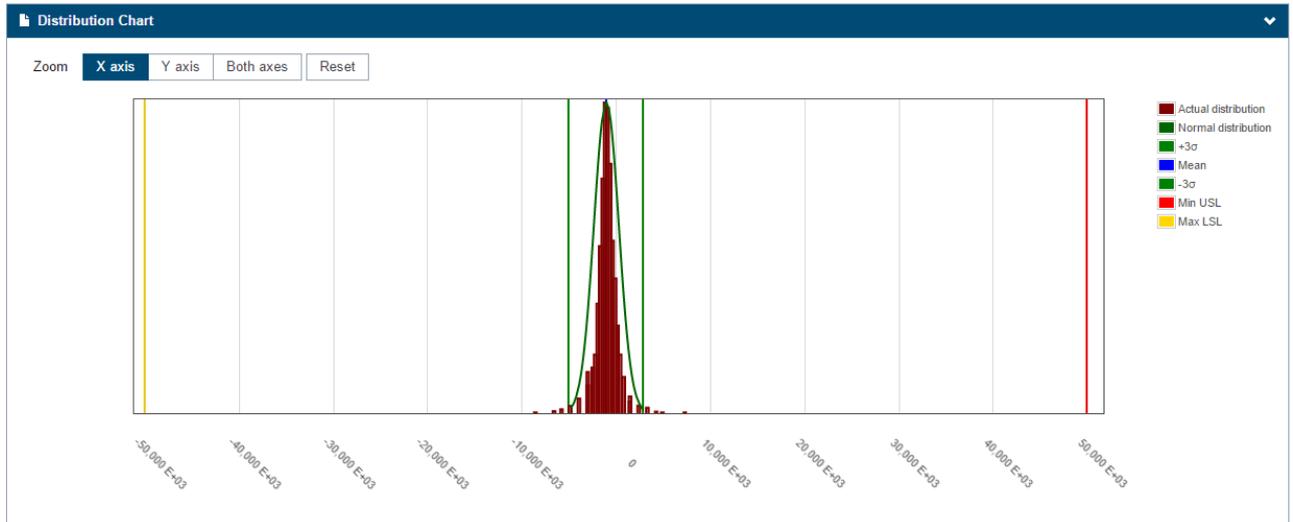


If the mouse is clicked on a circle, the report Unit Overview is shown, with filter options filled out corresponding to the selected unit.

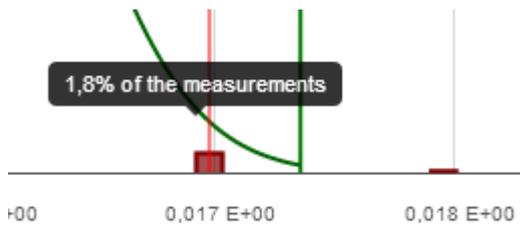
Tooltip – triangle



### 3.2.2 Normal distribution chart

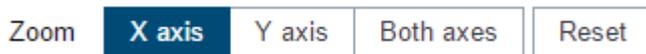


Each bars represent a percentage of measurements. Hold the mouse over a bar to see a tooltip with detailed information:



### 3.2.3 Zoom

The zoom mode is controlled by the buttons “X axis”, “Y axis” and “Both axes”.



“X axis” – Zoom in only on X axis

“Y axis” – Zoom in only on Y axis

“Both axes” – Zoom in by selection rectangle

To reset zoom level back to the initial level, press reset button, or double click the graph.

### 3.2.4 Scale

Some charts allow switching between linear and logarithmic scale. This functionality is controlled by the button “Linear” and “Logarithmic”.



“Linear” – Linear scale on X axis

“Logarithmic” – Logarithmic scale on X axis

### 3.3 Exporting reports

Most reports can be exported to Microsoft Excel and Adobe PDF.

#### 3.3.1 Export to PDF

This report type exports all the result data including graphs, filter settings etc.

To export to PDF, select menu item “Export” and then Report to PDF. The report is generated on the server and presented as a download file.

#### 3.3.2 Export to Excel

This report type exports all the result data for the report. Filter selection is presented on the first page, and the data on second page.

To export to Excel, select menu item “Export” and then Report to Excel. The report is generated on the server and presented as a download file.

### 3.4 Filtering reports

All reports are made based on test data selected with filter. Each report has a set of default filter options and some additional advanced filter options:



By clicking the Default button, all default filtering options are visible. Clicking the Advanced button makes further filter options available for the selected report.

Whenever possible, the selected filtering options are transferred when switching between different types of reports.

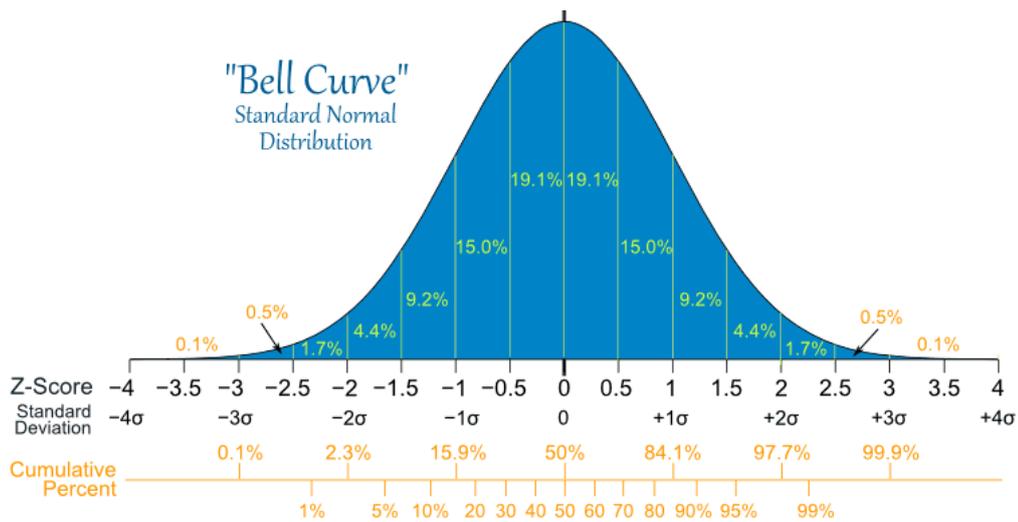
Clicking the Reset button causes all filtering options to be reset to their initial state and value.

### 3.5 SPC report

Statistical analysis result for test steps represented by mean value, standard deviation ( $\sigma$ ),  $C_p$  and  $C_{pk}$  index values as well as specification limits. For further information on the calculated statistical values, please refer to section 7.

**Typical use:**

The SPC report contains the results of the statistical analysis performed on the data selected by the filter criteria. Please notice, that the correct use of the SPC report presumes the filtered data is normal distributed and lies within the normal distribution “Bell Curve” (see further explanation in section 3.6).



The capability values  $C_p$  and  $C_{pk}$  are used to indicate the performance of the production processes involved in generating the selected data. Typically these values are used in Six Sigma process optimizations to give a direct indication of a process' sigma level and the defects PPM (Defect Parts Per Million) See estimated conversion table below:

$C_{pk}$ value	Sigma level	Defects (PPM)
0.333	1	691000
0.667	2	308500
1.000	3	66800
1.333	4	6200
1.667	5	230
2.000	6	3.4

Please note, at the above show conversion between sigma level and  $C_{pk}$  value is an estimate. Further, the conversion assumes a 1.5 sigma shift. For further details please refer to Six Sigma literature.

Notes on specification limits (Min USL and Max LSL):

In some cases, the upper and lower specification limits (USL and LSL) vary within the data selected by the filter. In those cases, all statistical values are calculated from a worst case perspective, using the minimum upper specification limit and the maximum lower specification limit found in the filtered data. When presented in the SPC report, these values are denoted Min USL and Max LSL, respectively. All calculated

statistical values in the SPC report are calculated using the formulas described in section 7, using the Min USL and Max LSL as specification limits in the formulas.

Notes on  $C_p$  and  $C_{pk}$  values:

By definition, the  $C_{pk}$  value is the adjustment of  $C_p$  for the effect of non-centered distribution (a centered distribution has its mean value right in the middle of LSL and USL).  $C_{pk}$  is calculated both against USL (denoted  $C_{pk}$  USL) and against LSL (denoted  $C_{pk}$  LSL). The final  $C_{pk}$  value is the lower of these two values. This means, that if the distribution is centered or close to centered,  $C_{pk}$  equals  $C_p$ . On the other hand, if  $C_{pk}$  is relatively much less than the  $C_p$  value, this indicates a mean value far off the center of USL and LSL. In these cases, something significant might have changed within the production process, or perhaps USL or LSL simply needs adjustment to cope with changed circumstances.  $C_{pk}$  values above 2, corresponding to less than 3.4 defects per million is a clear indication that USL and LSL are set at a level allowing almost everything to pass through the test.

To get the SPC report, fill out the appropriate filter options and click the Search button.

The screenshot shows the FACTS SPC report interface. At the top, there is a navigation bar with 'Dashboard', 'Reports', and 'System' tabs. The 'Reports' tab is active, and the breadcrumb is 'Reports / SPC'. On the right, there are 'Export' and 'Administrator' links. Below the navigation bar is a 'Filter' section with various input fields: 'Test period' (2012-04-22 - Today, 00:00:00 - 23:59:59), 'Item groups' (\*), 'Items' (CIM-100), 'Test' (\*), 'Test step' (\*), 'Test result' (Passed), 'Test run' (Last test run), 'Test step result' (Passed), and 'Test step cycle' (Last test step cycle). There are 'Range' and 'Window' buttons, and a 'Search' button at the bottom. On the right side of the filter section, there are 'Default', 'Advanced', and 'Reset' buttons, a dropdown for '(New filter template)', and 'Save' and 'Delete' buttons. Below the filter section is a 'Data' section with a search bar and navigation arrows. It shows 'Showing 1 to 2 of 2 entries'. The data table has the following columns: Test, Test step, Cp, Cpk, Cpk USL, Cpk LSL, Mean, σ, Min USL, Max LSL, and Measurements.

Test	Test step	Cp	Cpk	Cpk USL	Cpk LSL	Mean	σ	Min USL	Max LSL	Measurements
Computer Motherboard Test Sequence Loop (MainSequence)	MainSequence:Keyboard Test					6,002 E+00	5,686 E-03		5,000 E+00	283
Computer Motherboard Test Sequence Loop (MainSequence)	MainSequence:Video Test	837,507	837,404	837,404	837,611	5,001 E+00	1,990 E-03	10,000 E+00	0	283

To see measurements in a “Time Series report”, simply click the magnifying glass in the first column of each row. This opens the Time Series report with prefilled filter options according to the selected test step.

### 3.6 Time Series report

Time based XY-graph and the normal distribution graph of the measurements for a specific test step. Statistical analysis values are shown for the selected measurements.

**Typical use:**

Based on the filter criteria including a specific test step, the Time Series report shows three pieces of information:

- **Calculated Values:** All calculated statistical values for the given filter criteria. These values correspond to the values visible on the SPC report. Also visible are additional values corresponding to the mean value minus/plus 3 times standard deviation. These values are denoted  $-3\sigma$  and  $+3\sigma$  and are normally called “control limits”.
- **Series Chart:** Time based XY chart showing all measurements for the given filter criteria. The chart also contains indications of the values USL, LSL as well as the above mentioned control limits, denoted  $-3\sigma$  and  $+3\sigma$ .
- **Distribution Chart:** Chart showing the distribution (population) of the measurements in the given filter criteria. Following the prerequisite that SPC can only be done on data, which has a normal distribution, the chart should show a clear “Bell Curve” of the distribution. The chart also contains indications of the values Min USL, Max LSL as well as the above mentioned control limits, denoted  $-3\sigma$  and  $+3\sigma$ .

The Time Series report can be used to check the normal distribution of the selected data. According to the empirical rule for normal distribution, only 0.3% of the measurements should lie outside the control limits. This means, that in case the distribution shows more than 0.3% outside the control limits, the distribution might not have a proper normal distribution, or the process producing the measurements are out of statistical control. Production outside statistical control is a good reason to check the selected data further.

To get the Time Series report, fill out the appropriate filter options and click the Search button.

FACTS Dashboard Reports System Export Administrator

Reports / Time Series

---

**Filter**

Test period: 2012-04-22 Today 00:00:00 - 23:59:59 Range Window

Item groups: \*

Items: CIM-100 x

Test: Computer Motherboard Test Sequence Loop (MainSequence) x

Test step: MainSequence.Keyboard Test x

Test result: Passed

Test run: Last test run

Test step result: Passed

Test step cycle: Last test step cycle

Default Advanced Reset  
(New filter template)  
Type name to save a filter template

---

**Calculated Values**

Cp	Cpk	Cpk USL	Cpk LSL	Mean	$\sigma$	+3 $\sigma$	-3 $\sigma$	Min USL	Max LSL	Measurements
				6.002 E+00	5.686 E-03	6.019 E+00	5.985 E+00		5.000 E+00	283

---

**Series Chart**

Zoom X axis Y axis Both axes Reset

Legend: Measurement (black square), +3 $\sigma$  (green line), Mean (blue line), -3 $\sigma$  (green line), Min LSL (yellow line)

---

**Distribution Chart**

Zoom X axis Y axis Both axes Reset

Legend: Actual distribution (red bars), Normal distribution (green curve), +3 $\sigma$  (green line), Mean (blue line), -3 $\sigma$  (green line), Max LSL (yellow line)

### 3.7 Test Result report

The report shows the most recent test data and test results imported by the system.

**Typical use:**

The Test Result report is typically used to get an overview of what has recently been tested in the production. It provides an overall overview of tests performed on test units, the number of re-tests performed, test station names and test operators.

By setting the appropriate filter options, the report can be used to see what has been tested on a given station. It also provides an efficient tool to check if re-testing is widely used for certain products or certain periods during the day. By entering a specific serial number for a unit in the filter options, test data for that specific unit can be found and displayed.

To get the Test Result report, fill out the appropriate filter options and click the Search button.

The screenshot displays the FACTS Test Result report interface. At the top, there is a navigation bar with 'Dashboard', 'Reports', and 'System' tabs, and an 'Export' button. Below this is a 'Filter' section with various input fields: 'Test period' (2012-04-22 to Today), 'Item groups', 'Items' (set to CIM-100), 'Tests', 'Test result' (set to Passed), 'Test run' (set to Last test run), and 'Test stations'. A search button is located at the bottom of the filter section. The main area shows a table of test results with columns: Test time, Serial no., Item, Test, Test result, Test run, Test station, Test operator, and Import time. The table lists 25 test results, all of which are 'Passed' for 'Computer Motherboard Test Sequence Loop (MainSequence)' tests. A footer note indicates 'The query is limited to 1 000 test results'.

Test time	Serial no.	Item	Test	Test result	Test run	Test station	Test operator	Import time
2016-05-16 21:31:17	SN635990310772683750	CIM-100	Computer Motherboard Test Sequence Loop (MainSequence)	Passed	1 of 1	OS-TEST	administrator	2016-05-16 21:31:30
2016-05-09 13:33:31	SN635983976119089766	CIM-100	Computer Motherboard Test Sequence Loop (MainSequence)	Passed	1 of 1	OS-TEST	administrator	2016-05-09 13:33:38
2016-05-05 22:05:05	SN635980827059358281	CIM-100	Computer Motherboard Test Sequence Loop (MainSequence)	Passed	1 of 1	OS-TEST	administrator	2016-05-05 22:05:12
2016-05-05 02:17:07	SN635980114279202031	CIM-100	Computer Motherboard Test Sequence Loop (MainSequence)	Passed	1 of 1	OS-TEST	administrator	2016-05-05 02:17:09
2016-05-03 03:28:16	SN635978428967463750	CIM-100	Computer Motherboard Test Sequence Loop (MainSequence)	Passed	1 of 1	OS-TEST	administrator	2016-05-03 03:28:22
2016-04-26 03:16:41	SN635972374011401250	CIM-100	Computer Motherboard Test Sequence Loop (MainSequence)	Passed	1 of 1	OS-TEST	administrator	2016-04-26 03:16:45
2016-04-25 03:51:02	SN635971530626557500	CIM-100	Computer Motherboard Test Sequence Loop (MainSequence)	Passed	1 of 1	OS-TEST	administrator	2016-04-25 03:51:29
2016-04-08 15:21:06	SN635957256660153750	CIM-100	Computer Motherboard Test Sequence Loop (MainSequence)	Passed	1 of 1	OS-TEST	administrator	2016-04-08 15:21:15
2016-04-06 05:03:42	SN63595158221091250	CIM-100	Computer Motherboard Test Sequence Loop (MainSequence)	Passed	1 of 1	OS-TEST	administrator	2016-04-06 05:03:52
2016-04-06 00:30:24	SN635954994247810000	CIM-100	Computer Motherboard Test Sequence Loop (MainSequence)	Passed	1 of 1	OS-TEST	administrator	2016-04-06 00:30:33
2016-04-05 21:14:54	SN635954876948903750	CIM-100	Computer Motherboard Test Sequence Loop (MainSequence)	Passed	1 of 1	OS-TEST	administrator	2016-04-05 21:14:55
2016-03-29 01:19:06	SN63594811465123750	CIM-100	Computer Motherboard Test Sequence Loop (MainSequence)	Passed	1 of 1	OS-TEST	administrator	2016-03-29 01:19:31
2016-03-28 08:23:55	SN635947502351530000	CIM-100	Computer Motherboard Test Sequence Loop (MainSequence)	Passed	1 of 1	OS-TEST	administrator	2016-03-28 08:24:06
2016-03-15 23:37:26	SN635936818461066250	CIM-100	Computer Motherboard Test Sequence Loop (MainSequence)	Passed	1 of 1	OS-TEST	administrator	2016-03-18 10:52:46
2016-02-25 22:56:19	SN63592037799363750	CIM-100	Computer Motherboard Test Sequence Loop (MainSequence)	Passed	1 of 1	OS-TEST	administrator	2016-02-25 22:56:21
2016-02-23 23:55:35	SN635918685356385000	CIM-100	Computer Motherboard Test Sequence Loop (MainSequence)	Passed	1 of 1	OS-TEST	administrator	2016-02-23 23:55:49
2016-02-17 08:48:52	SN635912957320845000	CIM-100	Computer Motherboard Test Sequence Loop (MainSequence)	Passed	1 of 1	WIN7-TEST	administrator	2016-02-17 08:49:05
2016-02-03 20:49:36	SN635901293769311250	CIM-100	Computer Motherboard Test Sequence Loop (MainSequence)	Passed	1 of 1	OS-TEST	administrator	2016-02-03 20:49:37
2016-02-03 10:27:37	SN635900920574936250	CIM-100	Computer Motherboard Test Sequence Loop (MainSequence)	Passed	1 of 1	OS-TEST	administrator	2016-02-03 10:27:46
2016-01-29 04:22:54	SN635896381741890000	CIM-100	Computer Motherboard Test Sequence Loop (MainSequence)	Passed	1 of 1	OS-TEST	administrator	2016-01-29 04:23:11
2016-01-28 10:22:52	SN63589573329077500	CIM-100	Computer Motherboard Test Sequence Loop (MainSequence)	Passed	1 of 1	OS-TEST	administrator	2016-01-28 10:23:14
2016-01-15 22:32:40	SN635884939603965000	CIM-100	Computer Motherboard Test Sequence Loop (MainSequence)	Passed	1 of 1	OS-TEST	administrator	2016-01-15 22:32:49
2015-12-25 21:42:58	SN635866765784268750	CIM-100	Computer Motherboard Test Sequence Loop (MainSequence)	Passed	1 of 1	OS-TEST	administrator	2015-12-25 21:43:10
2015-12-24 05:02:46	SN635865301663018750	CIM-100	Computer Motherboard Test Sequence Loop (MainSequence)	Passed	1 of 1	OS-TEST	administrator	2015-12-24 05:03:06
2015-12-23 21:44:54	SN635865038949581250	CIM-100	Computer Motherboard Test Sequence Loop (MainSequence)	Passed	1 of 1	OS-TEST	administrator	2015-12-23 21:44:56

### 3.8 Unit Overview report

Test step result and measurements for all performed test runs for a specific item serial number.

**Typical use:**

The Unit Overview report is typically used to get full test reports for specific units. The report includes a list of all related units. The relation of units is setup in the import of data. Via the Unit Relations table, it is possible to navigate to any of the related units.

In case a unit has been tested more than once, the performed tests can be selected and shown side-by-side. This way it is easy to get an overview and compare the results of each test step and any differences in test conditions and parameters.

The report can also be used as an easy way to get full product test documentation in case the product undergoes repair or the like.

To get the Unit Overview report, fill out the filter options and click the Search button.

The screenshot displays the 'Unit Overview' report in the FACTS application. At the top, there is a navigation bar with 'Dashboard', 'Reports', and 'System' tabs. Below this, the 'Unit Overview' section is active, showing a filter area with 'Item' set to '10000-042' and 'Serial no' set to 'SN635346146492790001 - 10000-042'. A 'Search' button is present. To the right, there are options for 'Available sharing groups', a '(New filter template)' dropdown, and a 'Type name to save a filter template' input field, with 'Save' and 'Delete' buttons below. The 'Unit Relations' section shows a table with 2 rows: '10000-042' (SN19440040) and '10000-041' (SN1). The 'Test Overview' section shows a green bar for 'Test status: Unit has passed test' and a table with 3 test results. The 'Test Step Results' section is currently empty, showing 'Select one or more Test Results.'

Item	Item Name	Serial Number
10000-042		SN19440040
10000-041		SN1

Show	Test time	Test	Test result	Test run	Test station	Test fixture	Test operator	Test version	Unit revision	Import time
<input type="checkbox"/>	2013-12-12 12:30:18	Gage RR	Passed	2 of 3	OS.TEST1		CataRR / TestC		0R26	2018-10-25 12:22:47
<input type="checkbox"/>	2013-12-12 12:20:18	Gage RR	Passed	2 of 3	OS.TEST1		CataRR / TestB		0R26	2018-10-25 12:22:47
<input type="checkbox"/>	2013-12-12 12:10:18	Gage RR	Passed	1 of 3	OS.TEST1		CataRR / TestA		0R26	2018-10-25 12:22:47

To see and compare specific test step measurements, select appropriate tests in the “Test Overview” section. The view is automatically updated during test selection.

FACTS Dashboard Reports System
Export Administrator

Reports / Unit Overview

**Filter**

Item: CIM-100

Serial no.: SMC35990310772683750

(New filter template)

**Test Overview**

Test status: Unit has passed test

Showing 1 test results

Show	Test time	Test	Test result	Test run	Test station	Test fixture	Test operator	Test version	Unit revision	Import time
<input checked="" type="checkbox"/>	2016-05-16 21:31:17	Computer Motherboard Test Sequence Loop (MainSequence)	Passed	1 of 1	OS-TEST		administrator		MK1	2016-05-16 21:31:30

**Test Step Results**

Showing 1 to 20 of 20 test step results

Test order	Test step	Test run 1 value	Test run 1 result
1	MainSequence.Simulation Dialog		Skipped
2	Random Falls.POWERFall		Passed
3	Random Falls.CPUFail		Passed
4	Random Falls.ROMFail		Passed
5	Random Falls.RAMFail		Passed
6	Random Falls.KeyboardValue		Passed
7	Random Falls.VideoValue		Passed
8	Random Falls.Error		Skipped
9	MainSequence.Turn Vacuum Table On		Passed
10	MainSequence.Powersup Test		Passed
11	MainSequence.String test	MyExpectedString	Passed
12	CPU Test Register Test		Passed
13	CPU Test Instruction Set Test		Passed
14	CPU Test Cache Test		Passed
15	CPU Test FPU Test		Passed
16	MainSequence.ROM Test		Passed
17	MainSequence.RAM Test		Passed
18	MainSequence.Video Test	5,000 E+00	Passed
19	MainSequence.Keyboard Test	6,000 E+00	Passed
20	MainSequence.Turn Vacuum Table Off		Passed

### 3.9 Test Yield report

Numeric details and bar-graph of the yield for a number of selected tests. Each bar in the graph shows the passed/failed relation of the performed tests.

#### **Typical use:**

The Test Yield report is typically used to get an overview of the actual yield and percentage yield for tests performed on a given product or product group. Normally all attention should be focused on maximizing first-pass yield, as any subsequent tests will add cost to the product and hence lower production efficiency. So, comparing first-pass yield with last-pass yield gives a tangible indication of production inefficiency and added costs. Of course, when looking at yield, the production volume is also a key element to determine where to focus any production optimizing efforts in order to get the best payback.

Another way to use this report is to compare the yield results of different time periods and thereby directly compare the production capability for time periods or different shifts, operators etc.

To get the Test Yield report, fill out the appropriate filter options and click the Search button.

FACTS
Dashboard
Reports
System
Export ▾ Administrator ▾

Reports / Test Yield

Filter

Test period:  -   -  Range Window

Item groups:

Items:

Tests:

Test run:

Group by:

Q Search

Default

Advanced

Reset

(New filter template) ▾

Type name to save a filter template

Save
  Delete

Chart

Zoom
X axis
Y axis
Both axes
Reset

Data

Showing 1 to 4 of 4 entries

Group	From time	To time	Total	Passed	Failed	Aborted	Error	Yield %
2016 W17	2016-04-25 00:00:00	2016-05-01 23:59:59	2	2	0	0	0	100,0
2016 W18	2016-05-02 00:00:00	2016-05-08 23:59:59	3	3	0	0	0	100,0
2016 W19	2016-05-09 00:00:00	2016-05-15 23:59:59	2	1	1	0	0	50,0
2016 W20	2016-05-16 00:00:00	2016-05-22 23:59:59	1	1	0	0	0	100,0

A tooltip with detailed information will appear when holding the mouse pointer on bars in the graph.

**Remark**

Selecting an item, leaving the filter option “Tests” at the default value (\*) “All tests”, will not give the net production yield for the selected item. In order to get the net production yield, the last test performed before shipping must be selected as a filter option along with the Item itself.

### 3.10 Test Step Yield report

Numeric details and graphical presentation of the yield for each individual test step for a selected test. The combined bar-graph shows test steps and their yield.

**Typical use:**

The Test Step Yield report can be used to determine which of the performed tests are the most likely to fail, and which steps are most likely to always succeed. A common picture on this report indicates that half of the test steps performed hardly ever fails. There can be several reasons behind this, but it could be a sign, that the specification limits (USL and LSL) for these test steps are too conservative, and as a result almost never catches any errors. Another reason could be that the step is not necessary at all. Whatever the reason, a test step that does not directly improve quality by catching errors, could be considered a waste of testing time and an undesired increase in production time and costs. Put together it might be a potential for increased yield.

To get the Test Step Yield report, fill out the appropriate filter options and click the Search button.

FACTS
Dashboard
Reports
System
Export
Administrator

Reports / Test Step Yield

Filter

Test period: 2016-04-22 - Today | 00:00:00 - 23:59:59 | Range | Window

Item groups: \*

Items: CIM-100 ✕

Tests: \*

Test run: Last test run

Test step cycle: Last test step cycle

Q Search

Default | Advanced | Reset

(New filter template)

Type name to save a filter template

Save | Delete

Chart

Zoom
X axis | Y axis | Both axes | Reset

Test / Test step

Data

Showing 1 to 20 of 20 test steps

Test	Test step	Total	Passed	Failed	Aborted	Error	Yield %
Computer Motherboard Test Sequence Loop (MainSequence)	MainSequence:Video Diagnostics	1	0	1	0	0	0,0
Computer Motherboard Test Sequence Loop (MainSequence)	MainSequence:Keyboard Diagnostics	1	0	1	0	0	0,0
Computer Motherboard Test Sequence Loop (MainSequence)	MainSequence:Video Test	8	7	1	0	0	87,5
Computer Motherboard Test Sequence Loop (MainSequence)	MainSequence:Keyboard Test	8	7	1	0	0	87,5
Computer Motherboard Test Sequence Loop (MainSequence)	MainSequence:Turn Vacuum Table On	8	8	0	0	0	100,0
Computer Motherboard Test Sequence Loop (MainSequence)	MainSequence:Powerup Test	8	8	0	0	0	100,0
Computer Motherboard Test Sequence Loop (MainSequence)	MainSequence:String test	8	8	0	0	0	100,0
Computer Motherboard Test Sequence Loop (MainSequence)	CPU Test:Register Test	8	8	0	0	0	100,0
Computer Motherboard Test Sequence Loop (MainSequence)	CPU Test:Instruction Set Test	8	8	0	0	0	100,0
Computer Motherboard Test Sequence Loop (MainSequence)	CPU Test:Cache Test	8	8	0	0	0	100,0
Computer Motherboard Test Sequence Loop (MainSequence)	CPU Test:FPU Test	8	8	0	0	0	100,0
Computer Motherboard Test Sequence Loop (MainSequence)	MainSequence:ROM Test	8	8	0	0	0	100,0
Computer Motherboard Test Sequence Loop (MainSequence)	MainSequence:RAM Test	8	8	0	0	0	100,0
Computer Motherboard Test Sequence Loop (MainSequence)	MainSequence:Turn Vacuum Table Off	8	8	0	0	0	100,0
Computer Motherboard Test Sequence Loop (MainSequence)	Random Fails:PowerFail	8	8	0	0	0	100,0
Computer Motherboard Test Sequence Loop (MainSequence)	Random Fails:CPUFail	8	8	0	0	0	100,0
Computer Motherboard Test Sequence Loop (MainSequence)	Random Fails:ROMFail	8	8	0	0	0	100,0
Computer Motherboard Test Sequence Loop (MainSequence)	Random Fails:RAMFail	8	8	0	0	0	100,0
Computer Motherboard Test Sequence Loop (MainSequence)	Random Fails:KeyboardValue	8	8	0	0	0	100,0
Computer Motherboard Test Sequence Loop (MainSequence)	Random Fails:VideoValue	8	8	0	0	0	100,0

A tooltip with detailed information will appear when holding the mouse pointer on bars in the graph.

### 3.11 Test Step Error Pareto report

Sorted list of most frequent failed test steps for a selected item.

**Typical use:**

The Test Step Error Pareto report is very similar to the Test Step Yield report and essentially shows the same data. The only difference is that it focuses on errors (failed tests), where the Test Step Yield report focuses on succeeded tests. The two reports can be used for the same purposes. Please refer to section 3.10 for further description on the use of these reports.

To get the Test Step Error Pareto report, fill out the appropriate filter options and click the Search button.

Test	Test step	Total	Passed	Failed	Aborted	Error	Failure %
Computer Motherboard Test Sequence Loop (MainSequence)	MainSequence:Video Diagnostics	1	0	1	0	0	100,0
Computer Motherboard Test Sequence Loop (MainSequence)	MainSequence:Keyboard Diagnostics	1	0	1	0	0	100,0
Computer Motherboard Test Sequence Loop (MainSequence)	MainSequence:Video Test	8	7	1	0	0	12,5
Computer Motherboard Test Sequence Loop (MainSequence)	MainSequence:Keyboard Test	8	7	1	0	0	12,5

### 3.12 Test Duration report

Time based stacked bar-graph showing the relation between the total test and handling time for selected tests. The number of tests performed is shown in a separate XY-line.

#### Typical use:

The Test Duration report can be used to map the time used to test a product. It shows the relation between testing time and handling time between two tests. Handling time is defined as the time from the end of one test until the beginning of the next test. In essence, handling time is waste and hence loss of production efficiency, so all efforts should be made to minimize handling time (provided there is a significant production volume to pay for the investment). Poor handling time can originate from a number of different sources – naming a few:

- Test fixtures and connectors are too difficult and time consuming to handle
- Products undergo transport between tests
- Manual handling is too slow

Whatever the reason is for the poor handling time, it should be properly investigated, perhaps as part of a LEAN project to optimize production logistics and maybe even reduce or simplify production steps. Like the Test Yield report, the Test Duration report can also be used to compare performance as a function of time periods, operators, test fixtures or shifts.

To get the Test Duration report, fill out the appropriate filter options and click the Search button.

The screenshot displays the FACTS Test Duration report interface. At the top, there is a navigation bar with 'Dashboard', 'Reports', and 'System' tabs. The 'Reports' tab is selected, and the page title is 'Test Duration'. Below the navigation bar, there is a 'Filter' section with various input fields: 'Test period' (2016-04-22 to Today, 00:00:00 to 23:59:59), 'Item groups' (\*), 'Items' (CIM-100), 'Tests' (\*), 'Test result' (Passed), 'Test run' (Last test run), and 'Group by' (Week). A 'Search' button is located at the bottom of the filter section. To the right of the filter section, there are buttons for 'Default', 'Advanced', and 'Reset', along with a 'New filter template' dropdown and 'Save' and 'Delete' buttons. Below the filter section is a 'Chart' section. The chart has a legend with four items: 'Average total time' (blue line), 'Test count' (black line), 'Test time' (cyan bars), and 'Handle time' (orange bars). The x-axis represents time intervals from 2016-04-21 00:00 to 2016-05-21 00:00. The y-axis represents 'Seconds' (0.00 to 0.50) and 'Count' (0.0 to 4.0). The chart shows four bars representing different time intervals, with a blue line indicating the average total time and a black line indicating the test count.

A tooltip with detailed information will appear when holding the mouse pointer on bars in the graph.

### 3.13 Test Step Duration report

Detailed duration information for all test steps in a test.

**Typical use:**

The Test Step Duration report can be used to get a deeper insight into time it takes for each test step to complete. The report provides simple statistics for the time spent for each test step, including average duration, standard deviation and worst duration. As test time is one of the limiting elements for production capacity, efforts should be made to investigate and optimize any test step taking up to majority of time.

When looking at time spent on test steps, it is also very interesting, if any of the “unnecessary test steps” found via the Test Step Yield report is also taking up lots of time when testing. In that case, much time is spent on completing test steps that hardly ever fail – perhaps a serious candidate for optimization.

To get the Test Step Duration report, fill out the appropriate filter options and click the Search button.

Test	Test step	Worst duration	Average duration	$\sigma$ duration	Count
Computer Motherboard Test Sequence Loop (MainSequence)	CPU Test:FPU Test	27ms	5ms	10ms	7
Computer Motherboard Test Sequence Loop (MainSequence)	MainSequence:Turn Vacuum Table On	23ms	6ms	8ms	7
Computer Motherboard Test Sequence Loop (MainSequence)	CPU Test:Instruction Set Test	18ms	4ms	6ms	7
Computer Motherboard Test Sequence Loop (MainSequence)	MainSequence:Turn Vacuum Table Off	18ms	4ms	6ms	7
Computer Motherboard Test Sequence Loop (MainSequence)	CPU Test:Register Test	16ms	6ms	6ms	7
Computer Motherboard Test Sequence Loop (MainSequence)	MainSequence:ROM Test	14ms	8ms	4ms	7
Computer Motherboard Test Sequence Loop (MainSequence)	CPU Test:Cache Test	12ms	3ms	4ms	7
Computer Motherboard Test Sequence Loop (MainSequence)	MainSequence:Video Test	7ms	3ms	2ms	7
Computer Motherboard Test Sequence Loop (MainSequence)	MainSequence:RAM Test	3ms	2ms	1ms	7
Computer Motherboard Test Sequence Loop (MainSequence)	MainSequence:Keyboard Test	3ms	2ms	1ms	7
Computer Motherboard Test Sequence Loop (MainSequence)	MainSequence:Powerup Test	2ms	1ms	1ms	7
Computer Motherboard Test Sequence Loop (MainSequence)	Random Fails:PowerFail	2ms	0ms	1ms	7
Computer Motherboard Test Sequence Loop (MainSequence)	MainSequence:Simulation Dialog	1ms	0ms	0ms	7
Computer Motherboard Test Sequence Loop (MainSequence)	MainSequence:String test	1ms	0ms	0ms	7
Computer Motherboard Test Sequence Loop (MainSequence)	Random Fails:CPUFail	1ms	0ms	0ms	7
Computer Motherboard Test Sequence Loop (MainSequence)	Random Fails:KeyboardValue	1ms	0ms	0ms	7
Computer Motherboard Test Sequence Loop (MainSequence)	Random Fails:VideoValue	1ms	0ms	0ms	7
Computer Motherboard Test Sequence Loop (MainSequence)	Random Fails:ROMFail	0ms	0ms	0ms	7
Computer Motherboard Test Sequence Loop (MainSequence)	Random Fails:RAMFail	0ms	0ms	0ms	7
Computer Motherboard Test Sequence Loop (MainSequence)	Random Fails:Error	0ms	0ms	0ms	7

### 3.14 XY Graph report

Numeric array based XY-graph and min/max XY-graph for a set of specified test steps and channels.

- **XY chart:** Shows the numeric measurements for selected channels.
- **Min/max chart:** shows the average, min and max values for the selected channels.

FACTS
Dashboard Reports System
Export Administrator

Reports / XY Graph

Filter

Test period	2016-04-22	Today	00:00:00	23:59:59	Range	Window	
Item groups	+						
Items	+						
Test	+						
Test step	+						
Test result	All						
Test run	All test runs						
Test step result	All						

Default
Advanced
Reset

(New filter template)

Type name to save a filter template

Save
Delete

Search

XY Test Step Results

Search:  Showing 10 test results

Show	Test time	Serial no.	Test step	Test step result	Test run
<input type="checkbox"/>	2016-04-30 00:00:00	Afd705de9-f9d8-4390-bdf9-e113e0679d82	TestStepResult#30-Apr-16 0:00:00 AM#5#20#20#200	Passed	1 of 1
<input type="checkbox"/>	2016-04-29 00:00:00	Ae3e0f179-42d9-4ce4-94ce-061519fd2780	TestStepResult#29-Apr-16 0:00:00 AM#5#20#20#200	Passed	1 of 1
<input type="checkbox"/>	2016-04-28 00:00:00	A966a6777-cae0-4aa1-90fe-c7695e0162f8	TestStepResult#28-Apr-16 0:00:00 AM#5#20#20#200	Passed	1 of 1
<input checked="" type="checkbox"/>	2016-04-27 14:32:15	10023442343	Default relay output values	Passed	1 of 2
<input type="checkbox"/>	2016-04-27 00:00:00	A99a9b700-6881-45b8-8a3c-a5ae282394b9	TestStepResult#27-Apr-16 0:00:00 AM#5#20#20#200	Failed	1 of 1
<input type="checkbox"/>	2016-04-26 00:00:00	Aa353ca78-cf52-48d7-b2c0-9b5a26fa2f65	TestStepResult#26-Apr-16 0:00:00 AM#5#20#20#200	Passed	1 of 1
<input type="checkbox"/>	2016-04-25 00:00:00	Ab0dc6bed-8c97-414f-98d5-2a9ebaa0bcd	TestStepResult#25-Apr-16 0:00:00 AM#5#20#20#200	Failed	1 of 1
<input type="checkbox"/>	2016-04-24 00:00:00	Abdee81e3-51f6-4817-9e33-758f7dcee478	TestStepResult#24-Apr-16 0:00:00 AM#5#20#20#200	Passed	1 of 2
<input type="checkbox"/>	2016-04-23 00:00:00	A1ca23e24-1cf7-43c3-a09e-1fc25907514f	TestStepResult#23-Apr-16 0:00:00 AM#5#20#20#200	Failed	1 of 1
<input type="checkbox"/>	2016-04-22 00:00:00	Ac7eb39ca-6127-405c-b1ec-10ff2f6c5fe	TestStepResult#22-Apr-16 0:00:00 AM#5#20#20#200	Passed	1 of 1

Select All Unselect All Invert Selection

The query is limited to 1,000 test results

Channels

Showing 3 test result channels

Show	Color	Serial no.	Test step	Channel
<input checked="" type="checkbox"/>		10023442343	Default relay output values	Channel1
<input type="checkbox"/>		10023442343	Default relay output values	Channel2
<input checked="" type="checkbox"/>		10023442343	Default relay output values	Channel3

Select All Unselect All Invert Selection

XY Chart

Zoom: X axis Y axis Both axes Reset Scale Linear Logarithmic

■ 10023442343 - Default relay output values - Channel1  
■ 10023442343 - Default relay output values - Channel2  
■ 10023442343 - Default relay output values - Channel3

Min/Max Chart

Zoom: X axis Y axis Both axes Reset Scale Linear Logarithmic

■ Maximum  
■ Average  
■ Minimum

Both the XY chart and the Min/Max chart allows switching between logarithmic and linear scale. This is done using the buttons, located next to the zoom functionality.



Both charts default to linear scale.

### 3.15 Audio Graph report

Audio based XY-graph for a specific test step.

#### Typical use:

Based on the filter criteria including a specific test step, the Audio Chart shows the actual measurements and potential upper- and lower- limits.

- **Audio Chart:** Shows measurements for the selected test steps and potential limits.
- **Min/Max chart:** Shows the average, higher and lower measurements of all the combined test steps.

Reports / Audio Graph

**Filter**

Test period: 2012-08-01 - 2012-08-31 00:00:00 - 23:59:55 **Range** Window

Item groups: \*

Items: Leo x

Test: \*

Test step: \*

Test result: All

Test run: All test runs

Test step result: All

**Search**

Default Advanced Reset

(New filter template)

Type name to save a filter template

Save Delete

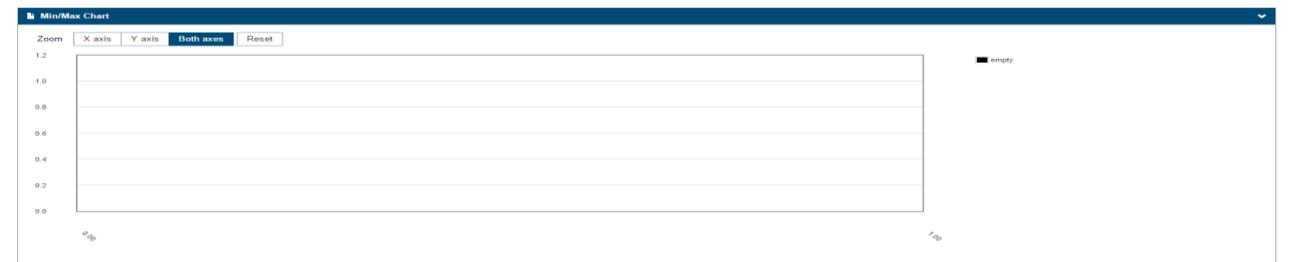
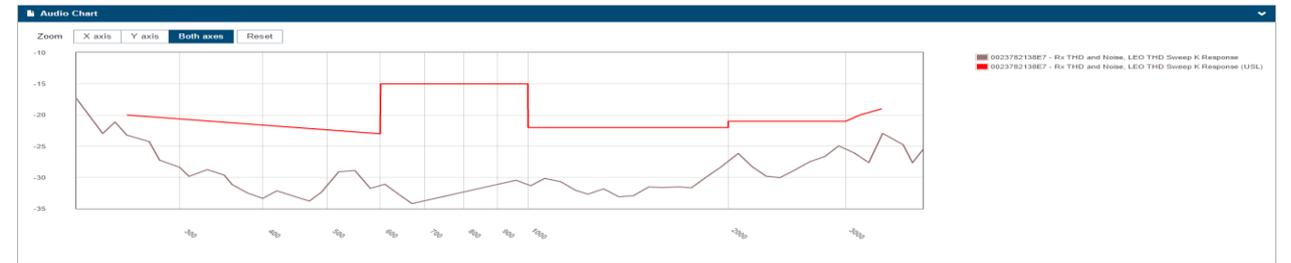
**Audio Test Step Results**

Showing 25 test results

Show	Test time	Serial no.	Test step	Test step result	Test run	Clearance	Sensitivity
<input type="checkbox"/>	2012-08-31 12:17:11	00237820DFE1	Transmit, LEO TX Response F Response	Passed	3 of 3	1,39301	-48,7302
<input type="checkbox"/>	2012-08-31 12:17:11	00237820DFE1	Receive, Leo RX Response I Response	Passed	3 of 3	2,05044	3,0293
<input type="checkbox"/>	2012-08-31 12:17:11	00237820DFE1	Feedback, LEO Feedback I Response	Passed	3 of 3	3,23903	14,6762
<input type="checkbox"/>	2012-08-31 12:17:11	00237820DFE1	Rx THD and Noise, LEO THD Sweep K Response	Passed	3 of 3	4,85510	0
<input type="checkbox"/>	2012-08-31 12:17:11	00237820DFE1	Receive Electrical, LEO Jack Loopback Short B Response	Passed	3 of 3	9523,14014	-36,3181
<input type="checkbox"/>	2012-08-31 12:17:11	00237820DFE1	Receive Electrical, LEO Jack Loopback Right B Response	Passed	3 of 3	9492,40039	25,1995
<input type="checkbox"/>	2012-08-31 12:17:11	00237820DFE1	Receive Electrical, LEO Jack Loopback Left B Response	Passed	3 of 3	9492,41016	25,1725
<input type="checkbox"/>	2012-08-31 12:16:14	002378213911	Transmit, LEO TX Response F Response	Passed	2 of 2	1,39741	-49,5519
<input type="checkbox"/>	2012-08-31 12:16:14	002378213911	Receive, Leo RX Response I Response	Passed	2 of 2	1,79306	2,1487
<input type="checkbox"/>	2012-08-31 12:16:14	002378213911	Feedback, LEO Feedback I Response	Passed	2 of 2	5,2369	16,3799
<input type="checkbox"/>	2012-08-31 12:16:14	002378213911	Rx THD and Noise, LEO THD Sweep K Response	Passed	2 of 2	2,18347	0
<input type="checkbox"/>	2012-08-31 12:16:14	002378213911	Receive Electrical, LEO Jack Loopback Short B Response	Passed	2 of 2	9523,12031	-37,6343
<input type="checkbox"/>	2012-08-31 12:16:14	002378213911	Receive Electrical, LEO Jack Loopback Right B Response	Passed	2 of 2	9492,37012	25,2523
<input type="checkbox"/>	2012-08-31 12:16:14	002378213911	Receive Electrical, LEO Jack Loopback Left B Response	Passed	2 of 2	9492,28027	25,4373
<input type="checkbox"/>	2012-08-31 12:15:21	0023782138D8	Transmit, LEO TX Response F Response	Passed	2 of 2	1,39367	-50,1021
<input type="checkbox"/>	2012-08-31 12:15:21	0023782138D8	Receive, Leo RX Response I Response	Passed	2 of 2	1,81814	2,7848
<input type="checkbox"/>	2012-08-31 12:15:21	0023782138D8	Feedback, LEO Feedback I Response	Passed	2 of 2	5,44592	16,7532
<input type="checkbox"/>	2012-08-31 12:15:21	0023782138D8	Rx THD and Noise, LEO THD Sweep K Response	Passed	2 of 2	4,11969	0
<input type="checkbox"/>	2012-08-31 12:15:21	0023782138D8	Receive Electrical, LEO Jack Loopback Short B Response	Passed	2 of 2	9522,7998	-35,5917
<input type="checkbox"/>	2012-08-31 12:15:21	0023782138D8	Receive Electrical, LEO Jack Loopback Right B Response	Passed	2 of 2	9492,40039	25,1909
<input type="checkbox"/>	2012-08-31 12:15:21	0023782138D8	Receive Electrical, LEO Jack Loopback Left B Response	Passed	2 of 2	9492,39485	25,2291
<input type="checkbox"/>	2012-08-31 12:14:21	0023782138E7	Transmit, LEO TX Response F Response	Passed	2 of 2	0,78877	-80,6066
<input type="checkbox"/>	2012-08-31 12:14:21	0023782138E7	Receive, Leo RX Response I Response	Passed	2 of 2	1,60451	3,3247
<input type="checkbox"/>	2012-08-31 12:14:21	0023782138E7	Feedback, LEO Feedback I Response	Passed	2 of 2	5,3248	16,2628
<input checked="" type="checkbox"/>	2012-08-31 12:14:21	0023782138E7	Rx THD and Noise, LEO THD Sweep K Response	Passed	2 of 2	3,22274	0

Select All Unselect All Invert Selection

The query is limited to 25 test results



### 3.16 Gauge R&R

The Gauge R&R analysis (Type 2 or Type 3) can be used to quantify the amount of variation in a measure that comes from the measurement system itself rather than from product or process variations. This analysis uses the Analysis Of Variance (ANOVA) method for computing the repeatability and reproducibility.

FACTS Dashboard Reports System Export Administrator

Reports Gauge R&R

**Filter**

Period: 2013 09 29 Today 00 00 00 23 59 59 Range Window Reset

Item: 10000 041

Test: Gage RR

Serial no. range: From serial no. - to serial no.

Test operator users: \*

Available sharing groups

(New filter template)

Type name to save a filter template

**Data**

Showing 1 to 1 of 1 test results

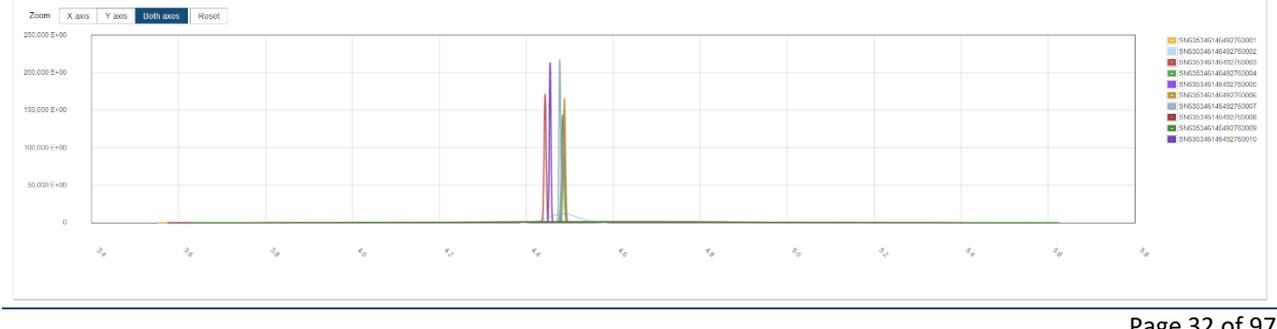
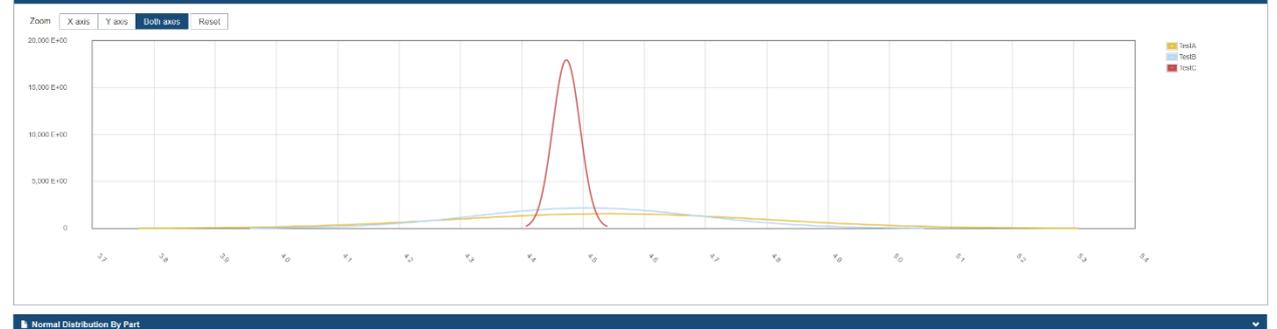
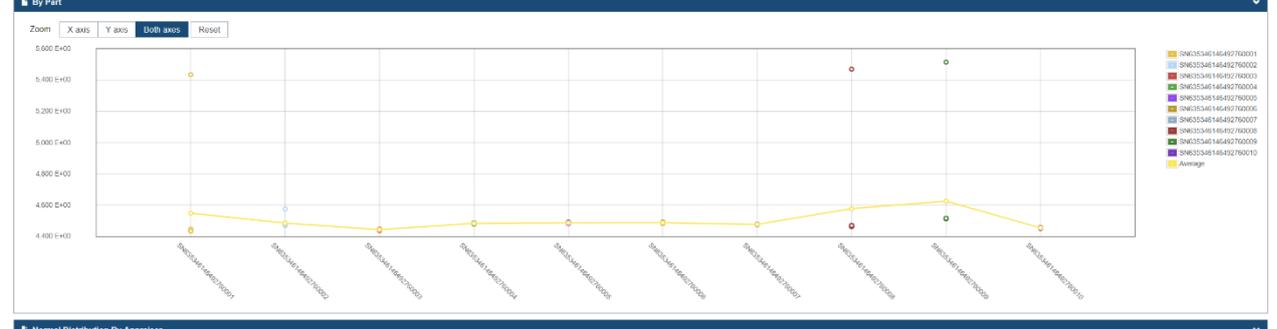
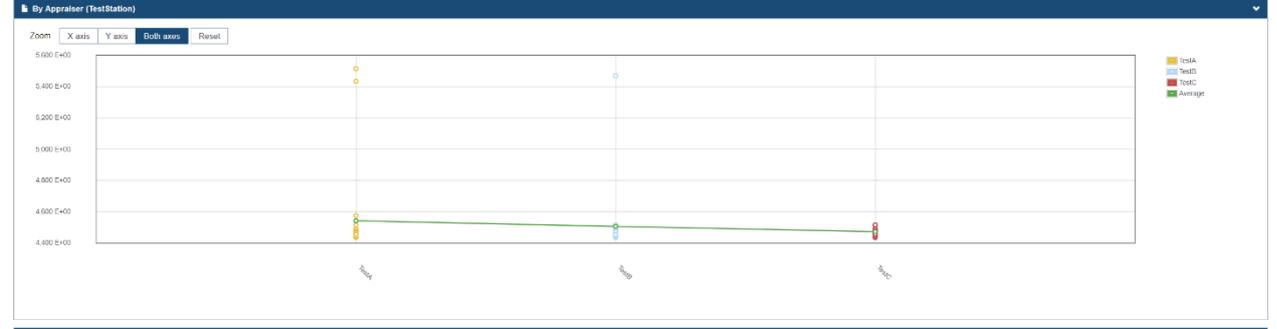
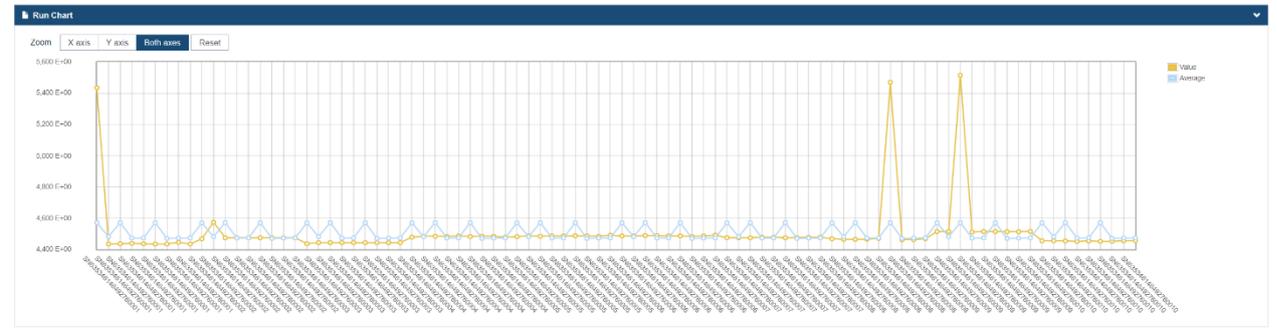
Test step name	Avg	Low limit	High limit	% Study VAR Total Gauge R&R	% Tolerance VAR Total Gauge R&R	% Study VAR Repeatability	% Tolerance Repeatability	% Study VAR Reproducibility	% Tolerance Reproducibility
test3	8592715,43	3500000	24000000	35,24	0,28	33,81	0,27	9,4	0,08

The query is limited to 10 000 test steps

### 3.16.1 Details

It is possible to see details on each Gauge R&R analysis. This is done via the icon .

Source of variation	Variance components	% Contributions	Standard deviations	% Study VAR	% Tolerance
Repeatability	0.03	99.77	0.18	99.88	78.4
Operator	0	0.23	0.01	4.84	3.8
Part operator	0	0	0	0	0
Part to part	0	0	0	0	0
Reproducibility	0	0.23	0.01	4.84	3.8
Total Gauge R&R	0.03	0	0.18	100	78.5
NDC:	1				



### 3.16.2 Import

When importing Gauge R&R data it is important to tell the importer that the data is part of an GAGE R&R analysis. This is done to make sure Gauge R&R measurement data is not include in other analysis, like Yield analysis. To mark data as Gauge R&R data, then set TestCategory to 'GaugeRR' in the import files. Also make sure to include metadata on each test result, which indicates which trial it is. A test result, including trial metadata, could look like this.

```
<TestResult TestName="Gage RR" Result="Passed" TestTime="2013-12-12T12:10:18+01:00" TestCategory="GaugeRR" TestStation="OS-test2"
TestOperatorUser="TestA" TestOperatorType="GataRR">
  <Unit SerialNo="SN635346146492760001" Revision="0B28" ItemNumber="10000-042" />
  <Metadata Name="trial" Value="1" />
  <TestSteps>
    <TestStepResult Name="test2" Result="Passed">
      <NumericValue Comparison="GELE" UpperLimit="5.5" LowerLimit="4.1" Value="5.435" Unit="DAC" />
    </TestStepResult>
  </TestSteps>
</TestResult>
<TestResult TestName="Gage RR" Result="Passed" TestTime="2013-12-12T12:11:18+01:00" TestCategory="GaugeRR" TestStation="OS-test2"
TestOperatorUser="TestA" TestOperatorType="GataRR">
  <Unit SerialNo="SN635346146492760001" Revision="0B28" ItemNumber="10000-042" />
  <Metadata Name="trial" Value="2" />
  <TestSteps>
    <TestStepResult Name="test2" Result="Passed">
      <NumericValue Comparison="GELE" UpperLimit="5.5" LowerLimit="4.1" Value="4.435" Unit="DAC" />
    </TestStepResult>
  </TestSteps>
</TestResult>
```

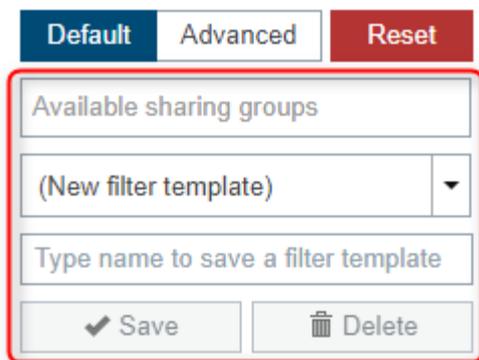
## 4 Report filters

This chapter provides detailed information on the different report filter elements:

Hint: When showing a report based on selected filter criteria, you can copy the page link (URL) and store or send to a colleague by e-mail. When opening the copied link (URL) in an internet browser, the same report content will reappear based on the original filter options.

### 4.1 Filter Templates

Filter templates is an easy way to save and load any filters on a report. Filter templates are available on all report types. The list of filter templates is filtered on each report to only contain the relevant templates.



#### 4.1.1 Using filter templates

To use a filter template to generate a report, simply open the wanted report type, then select the wanted filter in the list. The report filters will now be populated using the filter.

### 4.1.2 Adding filter templates

It is possible to added new filter templates before and after searching using the form.

When you have filled out the filters on form, type in a new name and click Save. Your filter will now appear in the list of filters, for the current report type and for your report widgets, so that you may add it to your dashboard.

### 4.1.3 Updating filter templates

To update an existing filter, simply select the filter in the list, then modify the filter options using the report filters and click Save. This will update an existing filter.

### 4.1.4 Deleting filter templates

To delete a filter template, select it in the list, then click Delete.

You cannot delete a filter template that is being used by a widget.

### 4.1.5 Filter templates and Test Period

Filter templates treat Test Period selections different than reports.

Test period  -

If Test Period contains a from-date but no to-date, filter templates will calculate how many days are between the selected date and the current and use this interval for any future reporting.

Test period  -

If Test period contains both dates, filter templates will save the selected dates and always use those when accessing the filter.

### 4.1.6 Sharing filter templates

Adding sharing groups to a filter template will allow other group-members to access the template. The shared filter template will appear in the template list, for all other members of the selected sharing groups. Note that only the creator of the template has the permission to edit or delete the template.

## 4.2 Filter option relations

Some filter options are inter-related. This means that for these inter-related filter options, only existing combinations can be selected as search criteria for a given report. For example: If a filter option for "Test" is filled out, all other filter options related to "Test" are pre-filtered so that they only contain values that relates to the selected value for "Test".

The following filter options are inter-related:

- Items
- Test
- Test step
- Test station
- Test fixture

## 4.3 Test period

Defines start and end time for data selection:

Test period  -   -   Range  Window

To select a date using a calendar window, select date field with a single click. Double click a date field, if the date is entered manually using the keyboard.

Date field is formatted as [yyyy-MM-dd] (year – month – day)

Time field is formatted as [hh:mm:ss] (hour – minutes – seconds)

### Time span - “Range” or “Window”

Defines how data is selected over a day.

- Range: Selects all data in the time range given in Test period filter
- Window: Selects only data between start time [hh:mm:ss] and end time [hh:mm:ss] each day between start date and end date. This feature can be used to filter work shifts etc.

### Example

Test period  -   -   Range  Window

Report time	Included in Range	Included in Window
2012-03-28 10:00:00		
2012-04-29 10:30:00	X	
2012-04-30 00:45:00	X	
2012-05-01 20:00:00	X	X
2012-06-01 23:00:01	X	
2012-06-02 19:00:00	X	X

**Available in the following report(s)**

Report	Default filter	Advanced filter
SPC	X	
Time Series	X	
Test Result	X	
Repair Pareto	X	
Test Yield	X	
Test Step Yield	X	
Test Step Error Pareto	X	
Test Duration	X	
Test Step Duration	X	

### 4.4 Items

Limits data so that it only includes data concerning the selected items.

By default (\*), all items are selected, however this is an inter-related field (see section 4.2), so a selection in one of the other related fields will influence the available contents of the Items field.

To select an item to include, set focus onto the Items field by clicking it with the mouse. A list of all available items is shown. Select an item to include by clicking it.

Items

1.0

10000232301 - WRT54B - Home Router

10000232302 - WRT54G - Business Router

12

12312123223 - WRT - Controller Board A

12321313223 - WRT - Controller Board B

1234

1234124

12341243

To select more items, simply select another item by clicking it.

Items

- 1.0
- 10000232301 - WRT54B - Home Router
- 10000232302 - WRT54G - Business Router
- 12
- 12312123223 - WRT - Controller Board A
- 12321313223 - WRT - Controller Board B
- 1234

To search for a specific item, simply type any part of the item number or description text.

Items

- 10000232301 - WRT54B - Home Router
- 10000232302 - WRT54G - Business Router
- 12312123223 - WRT - Controller Board A
- 12321313223 - WRT - Controller Board B
- 33446577654 - WRT - Controller Board B with USB
- 98286362712 - WRT22C - Low Cost Router

**Remark**

If specific Test(s) are selected, the available items are limited to items related to the selected test(s). Available items can also be limited by assigned user rights.

**Available in the following report(s)**

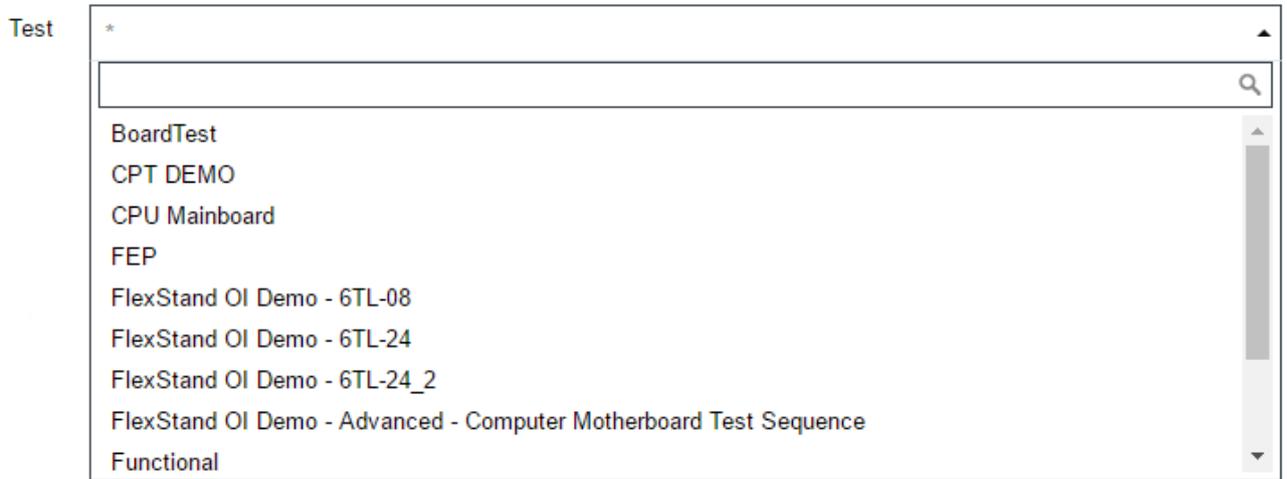
Report	Default filter	Advanced filter
SPC	X	
Time Series	X	
Test Result	X	
Repair Pareto	X	
Test Yield	X	
Test Step Yield	X	
Test Step Error Pareto	X	
Test Duration	X	
Test Step Duration	X	

**4.5 Test**

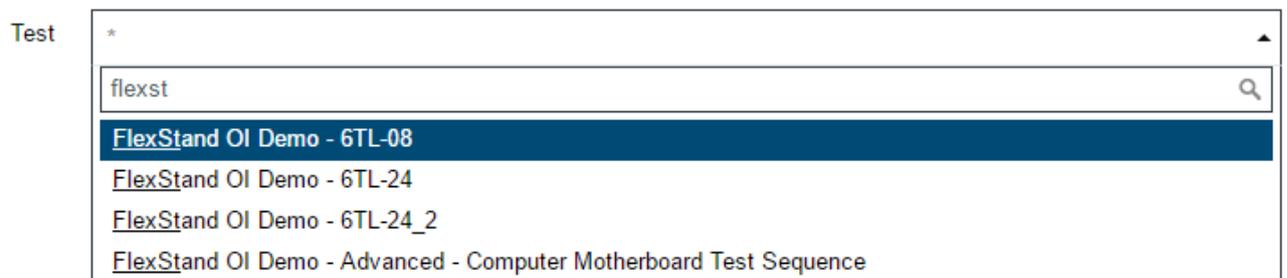
Limits data so that it only includes data concerning the selected tests.

By default (\*) all items are selected, however this is an inter-related field (see section 4.2), so a selection in one of the other related fields will influence the available contents of the Test field.

To select a test to include, set focus onto the Test field by clicking it with the mouse. A list of all available tests is shown. Select a test to include by clicking it.



To search for a specific test, simply type any part of the test name.



**Remark**

If specific Item(s) are selected, the available tests are limited to tests related to the selected item(s). Available tests can also be limited by assigned user rights.

**Available in the following report(s)**

Report	Default filter	Advanced filter
SPC	X	
Time Series	X	
Repair Pareto	X	

### 4.6 Tests

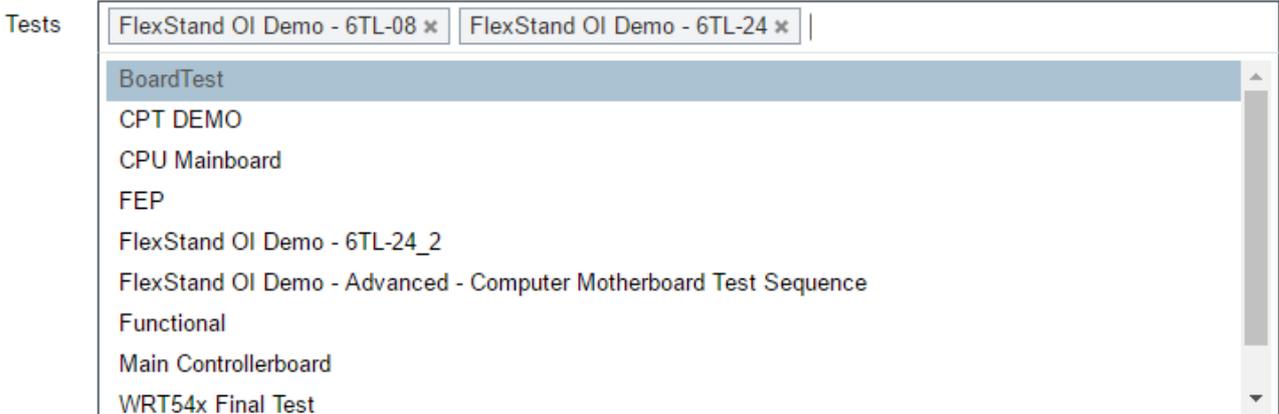
Limits data so that it only includes data concerning the selected tests.

By default (\*), all tests are selected.

To select a test to include, set focus onto the Test field by clicking it with the mouse. A list of all available tests is shown. Select a test to include by clicking it.



To select more tests, simply select another test by clicking it.



To search for a specific test, simply type any part of the test name.

Tests

FlexStand OI Demo - 6TL-08 ✕	FlexStand OI Demo - 6TL-24 ✕	flexst
<b>FlexStand OI Demo - 6TL-24_2</b>		
FlexStand OI Demo - Advanced - Computer Motherboard Test Sequence		

**Remark**

If specific Item(s) are selected, the available tests are limited to tests related to the selected item(s). Available tests can also be limited by assigned user rights.

**Available in the following report(s)**

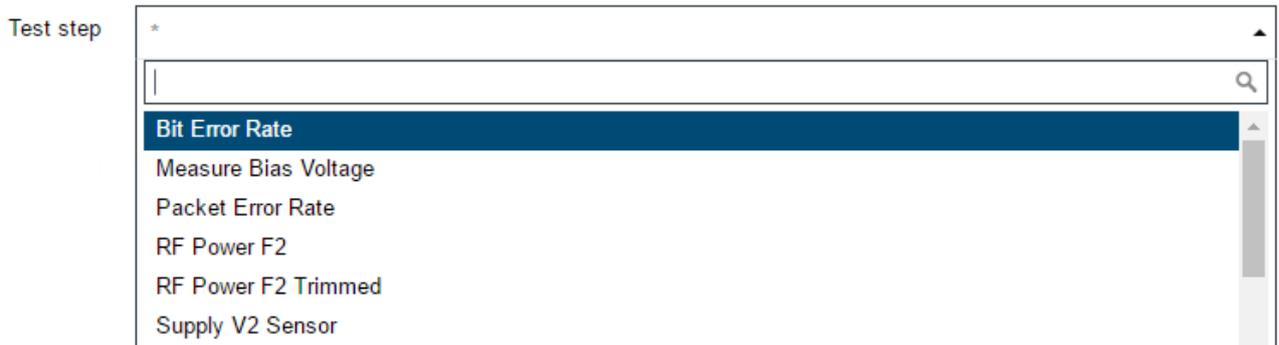
Report	Default filter	Advanced filter
Test Result	X	
Test Yield	X	
Test Step Yield	X	
Test Step Error Pareto	X	
Test Duration	X	
Test Step Duration	X	

### 4.7 Test step

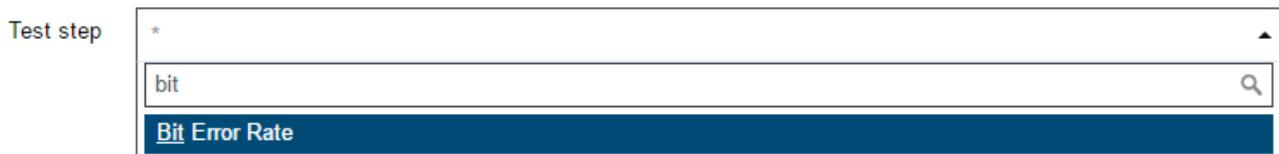
Limits data so that it only includes data concerning the selected test step.

By default (\*), all items are selected, however this is an inter-related field (see section 4.2), so a selection in one of the other related fields will influence the available contents of the Test Step field.

To select a test step to include, set focus onto the Test step field by clicking it with the mouse. A list of all available test steps is shown. Select a test step to include by clicking it.



To search for a specific test step, simply type any part of the test step name.



**Remark**

A least one item or test must be selected, before a specific test step name can be selected.

**Available in the following report(s)**

Report	Default filter	Advanced filter
SPC	X	
Time Series	X	
Repair Pareto	X	

### 4.8 Test result

Limits data so that it only includes data with the selected test result parameter.

To change the test result parameter, set focus onto the Test result field by clicking it with the mouse. A list of all available test results is shown. Select a test result to include by clicking it.

Test result

All
All
Passed
Failed
Aborted
Error
Terminated

**Parameters**

- All: includes all test reports regardless of test result
- Passed: includes only "passed" test reports
- Failed: includes only "failed" test reports
- Aborted: includes only "aborted" test reports
- Error: includes only "error" test reports
- Terminated: includes only "terminated" test reports

**Available in the following report(s)**

Report	Default filter	Advanced filter
SPC	X	
Time Series	X	
Test Result	X	
Test Duration	X	
Test Step Duration	X	

### 4.9 Test run

Limits data so that it only includes data with the selected test run parameter. Test run is defined by the number of times an individual unit has been tested in the same test.

Test run

- All test runs
- First test run
- Last test run
- Test run equals
- Test run less than
- Test run greater than

#### Parameters

- All test runs                      Include all test runs in selected data
- First test run                      Only the first test run is selected
- Last test run                      Only the last test run is selected
- Test run equals                      Only the test run number specified in the numeric field is selected
- Test run less than                      Only test runs less than test run number specified in the numeric field is selected
- Test run greater than                      Only test runs greater than test run number specified in the numeric field is selected

#### Available in the following report(s)

Report	Default filter	Advanced filter
SPC	X	
Time Series	X	
Test Result	X	
Test Yield	X	
Test Step Yield	X	
Test Step Error Pareto	X	
Test Duration	X	
Test Step Duration	X	

### 4.10 Test step cycle

Limits data so that it only includes data with the selected test step cycle parameter. Test step cycle is defined by how many times an individual test step has reported a result in the same test report

Test step cycle

Last test step cycle ▲

All test step cycles

First test step cycle

Last test step cycle

#### Parameters

- All test step cycles      Includes all test step cycles in selected data
- First test step cycle      Only the first test step cycle is selected
- Last test step cycle      Only the last test step cycle is selected

#### Available in the following report(s)

Report	Default filter	Advanced filter
SPC	X	
Time Series	X	
Test Step Yield	X	
Test Step Error Pareto	X	
Test Step Duration	X	

### 4.11 Test stations

Limits data so that it only includes data from the selected test station(s).

By default (\*), all items are selected, however this is an inter-related field (see section 4.2), so a selection in one of the other related fields will influence the available contents of the Test stations field.

To select a test station to include, set focus onto the Test stations field by clicking it with the mouse. A list of all available test stations is shown. Select a test station to include by clicking it.



To select more test stations, simply select another test station by clicking it.



To search for a specific test station, simply type any part of the test station name.

Test stations

DK-CIM-00001 x dk-cim|
 

DK-CIM-00002

DK-CIM-00003

DK-CIM-00004

DK-CIM-00005

DK-CIM-00006

DK-CIM-00007

DK-CIM-00008

DK-CIM-00009

DK-CIM-00010

**Remark**

Test stations are not related to specific tests. Therefore, all known test stations can be selected. Since test stations is not a mandatory field, there can be test results without any relation to test station.

**Available in the following report(s)**

Report	Default filter	Advanced filter
SPC		X
Time Series		X
Test Result		X
Test Yield		X
Test Step Yield		X
Test Step Error Pareto		X
Test Duration		X
Test Step Duration		X

### 4.12 Test fixtures

Limits data so that it only includes data from the selected test fixture(s).

By default (\*), all items are selected, however this is an inter-related field (see section 4.2), so a selection in one of the other related fields will influence the available contents of the Test fixtures field.

To select a test fixture to include, set focus onto the Test fixtures field by clicking it with the mouse. A list of all available test fixtures is shown. Select a test fixture to include by clicking it.

Test fixtures

<b>A</b>
B
Fixture123
FixtureA

To select more test fixtures, simply select another test fixture by clicking it.

Test fixtures

A x
<b>B</b>
Fixture123
FixtureA

To search for a specific test fixture, simply type any part of the test fixture name.

Test fixtures    
Fixture123

**Remark**

Test fixtures are not related to specific test stations, tests etc. Therefore, all known fixtures can be selected.

Since test fixture not is a mandatory field, there can be test results without any relation to test fixture.

**Available in the following report(s)**

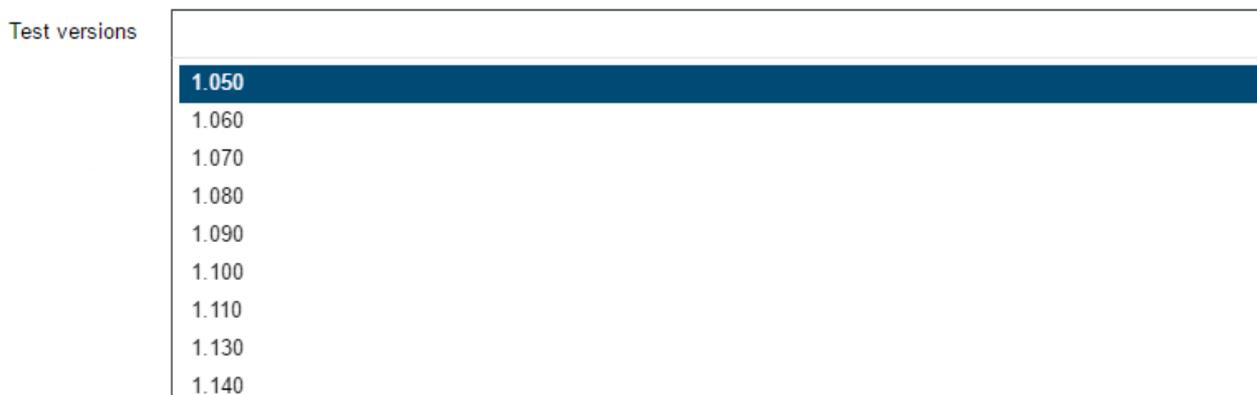
Report	Default filter	Advanced filter
SPC		X
Time Series		X
Test Result		X
Test Yield		X
Test Step Yield		X
Test Step Error Pareto		X
Test Duration		X
Test Step Duration		X

### 4.13 Test version

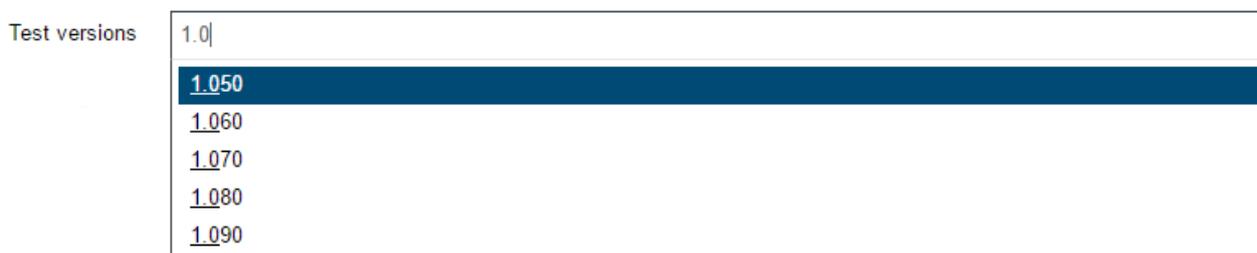
Filters on the version of the Test software used to test the units (Test sequence version).

By default (\*), all test versions are selected.

To select a test version to include, set focus onto the Test version field by clicking it with the mouse. A list of all available test versions is shown. Select a test version to include by clicking it.



To search for a specific test version, simply type any part of the test version name.



#### Remark

Test version is not related to specific tests. Therefore all known test versions can be selected. Since test version isn't a mandatory field, there can be test results without any relation to test version.

Available in the following report(s)

Report	Default filter	Advanced filter
SPC		X
Time Series		X
Test Result		X
Test Yield		X
Test Step Yield		X
Test Step Error Pareto		X
Test Duration		X
Test Step Duration		X

### 4.14 Test category

Filter on one or more test categories. Test categories can for example be “Production” or “Commissioning”. If all real production data is marked with test category “Production”, the filter can be used to filter out all data that is not related to units being produced.

Test categories

- Administrator
- CST
- Debug
- Hopsa
- Migrated
- Production
- SeqZap

Note: The filter depends on the availability of test category in the data being imported.

Available in the following report(s)

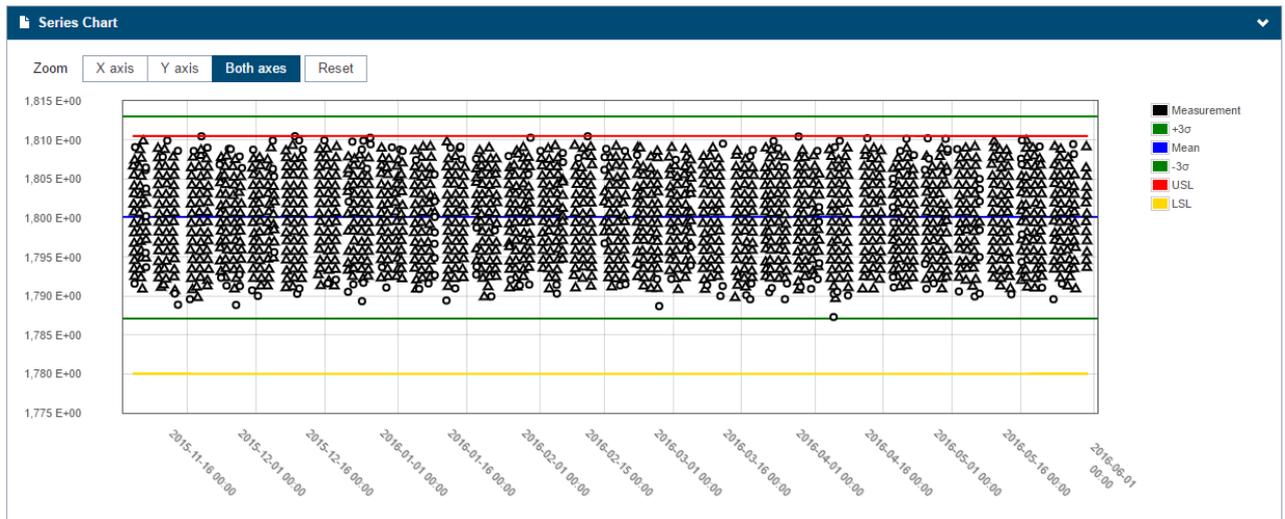
Report	Default filter	Advanced filter
SPC		X
Time Series		X
Test Result		X
Test Yield		X
Test Step Yield		X
Test Step Error Pareto		X
Test Duration		X
Test Step Duration		X

### 4.15 Measurement range

Measurement range is used to filter numeric measurements. The Min and Max value can be used together or individually.

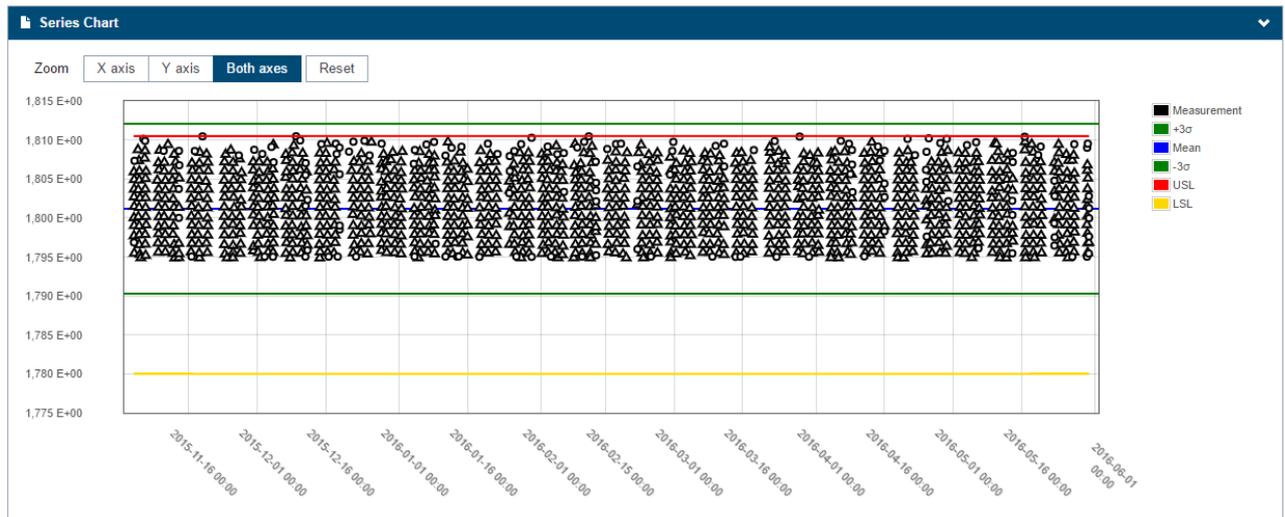
Measurement range

Example:  
Measurements without Min or Max set.



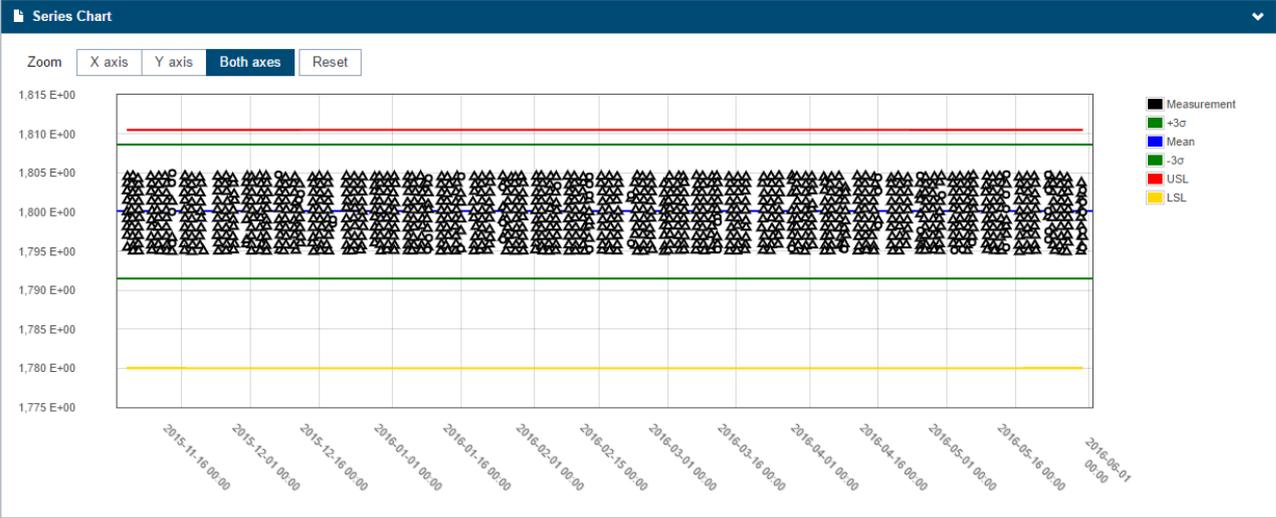
Measurements with Min set to 1.795 and no Max limit.

Measurement range



Measurements with Min set to 1.795 and Max set to 1.805

Measurement range



Available in the following report(s)

Report	Default filter	Advanced filter
Time Series		X

### 4.16 Sort by

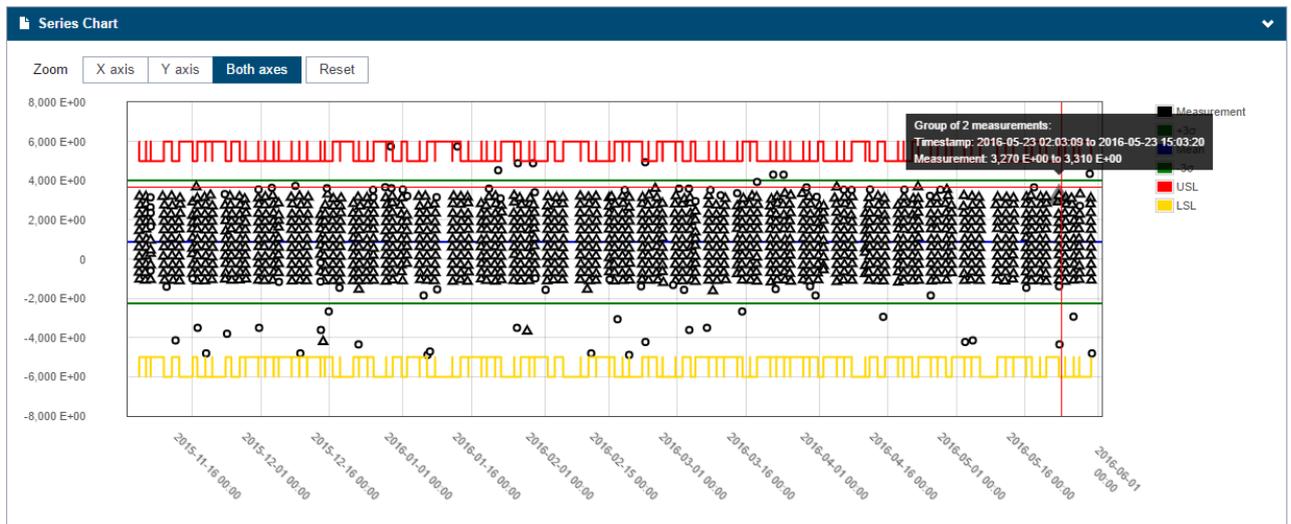
Used to present data in the Time Series graph, either by time stamp (date) or by serial number. The sorting of serial numbers is handled as texts.

Sort by Time Serial no.

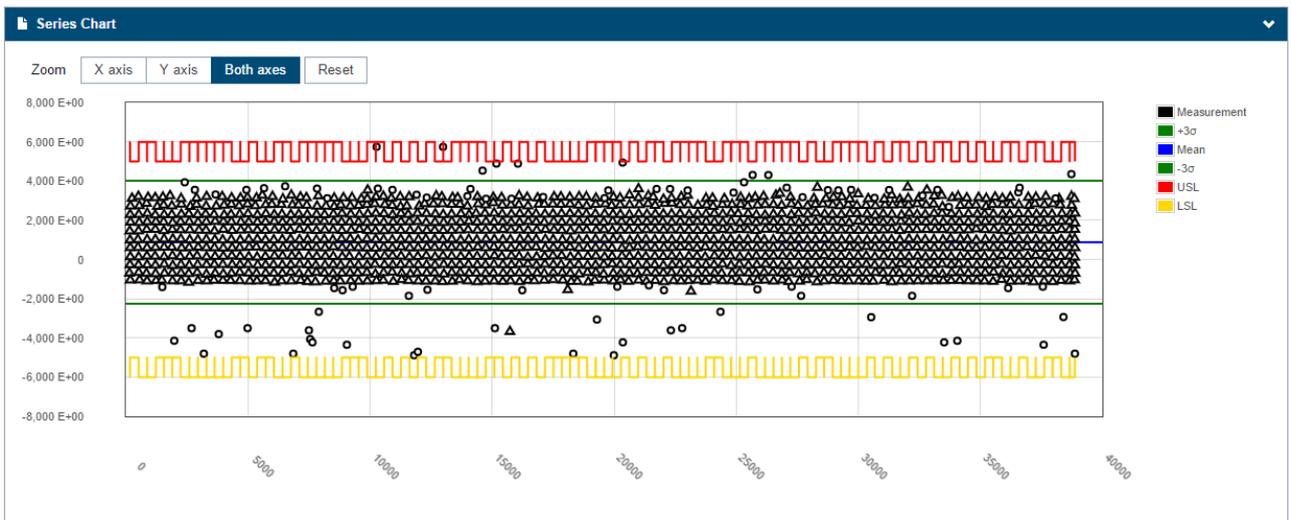
Example of text sort:

- SER1
- SER2
- SER20
- SER3

Example of data presented by time:



Same data presented by serial no.:



Available in the following report(s)

Report	Default filter	Advanced filter
Time Series		X

### 4.17 Serial no. range

Filters on specific serial numbers.

Serial no. range  -

There are two ways to search for serial numbers: Either by filling in only “From serial no.” or by filling in both “From serial no.” and “To serial no.”

From serial no. (only):

The “\*” character can be used as a wild card to create a search like this: AT8IN10\*HA09. The result of this search will be all the units ranging from AT8IN100000HA09 to AT8IN109999HA09 assuming that is the format of the given serial number.

The “\*” can be any character, not only numbers, and any number of characters.

From serial no. and To serial no.:

When using both “From serial no.” and “To serial no.”, the “\*” character cannot be used. Instead, type in two serial numbers like this: From AT8IN100000HA09 to AT8IN109999HA09. The result of this search will be the same as above – all units ranging from AT8IN100000HA09 to AT8IN109999HA09.

Also, the “From – To” search is based on characters, not numbers - so searching like this would also be valid: From AT8IN100000AA09 To AT8IN100000ZZ09.

**Available in the following report(s)**

Report	Default filter	Advanced filter
SPC		X
Time Series		X
Test Result		X
Repair Pareto		X
Test Yield		X
Test Step Yield		X
Test Step Error Pareto		X
Test Duration		X
Test Step Duration		X

### 4.18 Unit Revision

Limits data so that it only includes data from the selected unit revision(s).

By default (\*), all unit revisions are selected.

To select a unit revision to include, set focus onto the unit revisions field by clicking it with the mouse. A list of all available unit revisions is shown. Select a unit revision to include by clicking it.

Unit revisions

00\r
0A00
0A01
0A04
0A08
0A09
0A10
0A11
0A12

To select more unit revisions, simply select another unit revision by clicking it.

Unit revisions

0A00 x	0A04 x	
<b>00\r</b>		
0A01		
0A08		
0A09		
0A10		
0A11		
0A12		
0A13		
0A14		

To search for a specific unit revision, simply type any part of the unit revision name.

Unit revisions

0A00 x 0A04 x 0c|

0C.00

0C.03

0C00

0C01

0C02

0C03

0C04

0C05

0C06

**Remark**

Unit revisions are not related to specific test stations, tests etc. Therefore, all known unit revisions can be selected. Since unit revision not is a mandatory field, there can be test results without any relation to a unit revision.

**Available in the following report(s)**

Report	Default filter	Advanced filter
SPC		X
Time Series		X
Test Result		X
Test Yield		X
Test Step Yield		X
Test Step Error Pareto		X
Test Duration		X
Test Step Duration		X

### 4.19 Item

Limits data so that it only includes data from the selected item.

To select an item to include, set focus onto the Item field by clicking it with the mouse. A list of all available items is shown. Select an item to include by clicking it.

Items

CIM-100.1043938723 CIM-100.1521232819 CIM-100.1744307622 CIM-100.2744123899 CIM-100.3356852756 CIM-100.4172098942 CIM-100.613163989 CIM-101 CIM-101.1537114716
--

To search for a specific item, simply type any part of the item number or name.

Items

cim- <b>CIM-100</b> CIM-100.1043938723 CIM-100.1521232819 CIM-100.1744307622 CIM-100.2744123899 CIM-100.3356852756 CIM-100.4172098942 CIM-100.613163989 CIM-101
--

#### Available in the following report(s)

Report	Default filter	Advanced filter
Unit Overview	X	

### 4.20 Serial no.

Used to find a specific unit. Serial number must be identical to the unit’s serial number.

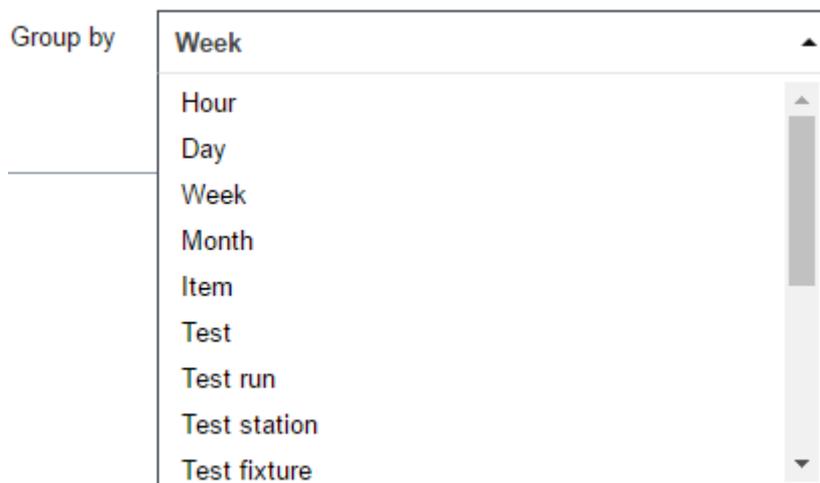
Serial no.

#### Available in the following report(s)

Report	Default filter	Advanced filter
Unit Overview	X	

### 4.21 Group by

Group by is used to group presented data.



#### Parameters

Hour	Group data selection in hours
Day	Group data selection in days
Week	Group data selection in weeks (Monday is the first day of the week)
Month	Group data selection in months
Item	Group data selection by item
Test	Group data selection by test
Test run	Group data selection by test run
Test station	Group data selection by test station
Test fixture	Group data selection by test fixture
Test socket	Group data selection by test socket
Test version	Group data selection by test version
Test category	Group data selection by test category
Test operator type	Group data selection by test operator type
Test operator user	Group data selection by test operator user
Order No.	Group data selection by order No.
Unit Revision	Group data selection by unit revision
None	Group data as one selection

**Note:** A group with no name indicates that the grouped value is missing on values. This is due to how certain properties on result sets are optional.

#### Available in the following report(s)

Report	Default filter	Advanced filter
Test Yield	X	
Test Duration	X	

### 4.22 Time element

Time element is used to filter by test and / or handling time.

Time element Both test and handling time ▲

Both test and handling time

Only test time

Only handling time

#### Parameters

- Both test and handling time      Shows test time and handling time in selection data result
- Only test time                      Shows only test time in selection data result
- Only handling time                Shows only handling time in selection data result

#### Available in the following report(s)

Report	Default filter	Advanced filter
Test Duration		X

### 4.23 Handling time cutoff

Defines the upper limit of the handling time between two tests. If the time between two tests exceeds handling time cutoff, the handling time is set to the cutoff value.

Handling time cut off 00:15:00

Time is entered as hh:mm:ss (hours : minutes : seconds)

#### Available in the following report(s)

Report	Default filter	Advanced filter
Test Duration		X

## 5 System

By selecting System from the menu, the follow page is shown.

### 5.1 User management

Gives access to maintain users and security groups.

#### 5.1.1 Users

Gives a list of all users in the system. Existing users cannot be deleted. If access needs to be restricted/blocked for a certain user, edit the user and uncheck the “Enabled” check box.

	Enabled	Username	Full name	Last sign in	Created
	Yes	admin	Administrator	2016-05-20 22:09:49	2013-03-13

5.1.1.1 Add new user

To add a new user, click the ‘New User’ button on the Users page. Fill out the fields on the page and click Save.

FACTS
Dashboard
Reports
System

System / Users / New User

---

ACCOUNT

Enabled  Yes  No

Username

Full name

Description

Email address

Validation type FACTS ▼

Password

Confirm password

---

MEMBERSHIP

Security groups

✔ Save

In order to get access to the system, the user must be enabled and be assigned one or more security groups.

Validation type can be set to one of the following:

Validation Type	Description
FACTS	Uses the local FACTS database to store credentials and only validates against this.
Local Machine	Stores username in FACTS database, but validates against the local Windows OS users.
Active Directory	Stores username in FACTS database, but validates against the domain that the current machine is part of. <b>Only available when server is part of a domain.</b>

### 5.1.1.2 Edit user

To edit an existing user, click the edit icon in the user list.

When finished editing user settings, click Save to store changes.

### 5.1.2 Security Groups

Security groups control which pages and items a user is allowed to access.

Name	Description
Access to Item group 1	
Administrators	Default administrative user group
ALT	Accelerated Life Time
Company AA	
ItemsAndDashboardOnly	Allows access to items and dashboard; nothing else
Kiosk Group	Access to Dashboard
No access to Unit / Unit Overview Report	
PLR All Items	PLR role + full item access
UnitReports	Has access to unit reports
Users	

If a user is a member of more security groups, it is the sum of all allowed items and pages that defines the final access rights for the user.

### 5.1.2.1 Add new security group

To add new security groups, click the “New Security Group” on “Security Group page”. Fill in the fields on the page and click Save.

The screenshot shows the 'New Security Group' page in the FACTS application. The breadcrumb trail is 'System / Security Groups / New Security Group'. The user is logged in as 'Administrator'. The form contains the following sections:

- Name:** A text input field.
- Description:** A text input field.
- Users:** A dropdown menu with the placeholder text 'Select some users'.
- Accessible item groups:** A dropdown menu with the placeholder text 'Select some item groups'.
- Allowed permissions:** A list of 20 permissions, each with an unchecked checkbox and a description:
  - Administrator - Provides full access to all features and all items
  - Access to all items - Provides access to all items in the system
  - Dashboard - Provides access to the Dashboard
  - SPC Report - Provides access to the SPC Report
  - Time Series Report - Provides access to the Time Series Report
  - Unit Overview Report - Provides access to the Unit Overview Report
  - Test Yield Report - Provides access to the Test Yield Report
  - Test Result Report - Provides access to the Test Result Report
  - Unit Report - Provides access to the Unit Report
  - Test Step Yield Report - Provides access to the Test Step Yield Report
  - Test Step Error Pareto Report - Provides access to the Test Step Error Pareto Report
  - Test Duration Report - Provides access to the Test Duration Report
  - Test Step Duration Report - Provides access to the Test Step Duration Report
  - XY Graph - Provides access to XY Graph Report
  - Repair Pareto Report - Provides access to the Repair Pareto Report
  - User Management - Provides access to User Management
  - Data Management - Provides access to management of item groups etc.
  - Alarm Configuration - Provides access to Alarm Configuration
  - Import Tasks - Provides access to configuration of Import Tasks
  - Import Task Monitor - Provides access to the Import Task Monitor
  - Paperless Repair - Provides read/write access to Paperless Repair

At the bottom of the form is a blue button with a checkmark icon and the text 'Save'.

### 5.1.2.2 Edit security group

To edit an existing security group, click the edit icon in the security group list.

System / Security Groups / Edit Security Group 'Users'

Name  
Users

Description

Users  
Select some users

Accessible item groups  
Select some item groups

Allowed permissions

- Administrator - Provides full access to all features and all items
- Access to all items - Provides access to all items in the system
- Dashboard - Provides access to the Dashboard
- SPC Report - Provides access to the SPC Report
- Time Series Report - Provides access to the Time Series Report
- Unit Overview Report - Provides access to the Unit Overview Report
- Test Yield Report - Provides access to the Test Yield Report
- Test Result Report - Provides access to the Test Result Report
- Unit Report - Provides access to the Unit Report
- Test Step Yield Report - Provides access to the Test Step Yield Report
- Test Step Error Pareto Report - Provides access to the Test Step Error Pareto Report
- Test Duration Report - Provides access to the Test Duration Report
- Test Step Duration Report - Provides access to the Test Step Duration Report
- XY Graph - Provides access to XY Graph Report
- Repair Pareto Report - Provides access to the Repair Pareto Report
- User Management - Provides access to User Management
- Data Management - Provides access to management of item groups etc.
- Alarm Configuration - Provides access to Alarm Configuration
- Import Tasks - Provides access to configuration of Import Tasks
- Import Task Monitor - Provides access to the Import Task Monitor
- Paperless Repair - Provides read/write access to Paperless Repair

Save stores changes to the security group

Delete removes the security group from all users and deletes the security group from the system. This action may affect the access rights of existing users.

### 5.1.3 Distribution Groups

Distribution groups control which users are notified in events where alarms are fired.

System / Distribution Groups

+ New Distribution Group

Showing 1 to 3 of 3 distribution groups

Name	Description
<input checked="" type="checkbox"/> Manufacturing	Manufacturing department
<input checked="" type="checkbox"/> Research	Research department
<input checked="" type="checkbox"/> Software	Software Development department

If a user is a member of more distribution groups, they will be notified of all alarms that are sent to any of the distribution groups.

Distribution groups allows external contacts to receive notifications.

**5.1.3.1 Add new distribution group**

To add new distribution groups, click the “New Distribution Group” on “Distribution Group page”. Fill in the fields on the page and click Save.

The screenshot shows the 'New Distribution Group' form. It has a dark blue header with the FACTS logo and navigation tabs for Dashboard, Reports, and System. The user is logged in as Administrator. The breadcrumb trail is System / Distribution Groups / New Distribution Group. The form contains the following fields:
 

- Name:** An empty text input field.
- Description:** An empty text input field.
- Users:** A button labeled 'Select some users'.
- Email addresses:** A large text area for entering email addresses.

 At the bottom of the form is a blue 'Save' button with a checkmark icon.

**5.1.3.2 Edit distribution group**

To edit an existing distribution group, click the edit icon  in the distribution group list.

The screenshot shows the 'Edit Distribution Group' form for a group named 'Manufacturing'. It has the same header and breadcrumb trail as the 'New Distribution Group' form. The form contains the following pre-filled fields:
 

- Name:** Manufacturing
- Description:** Manufacturing department
- Users:** kip x
- Email addresses:** cpt@link2it.dk

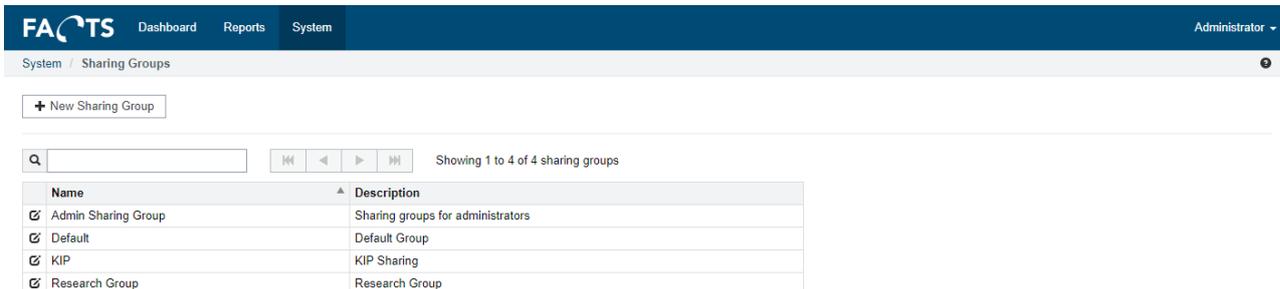
 At the bottom of the form are two buttons: a blue 'Save' button with a checkmark icon and a red 'Delete' button with a trash can icon.

Save stores changes to the distribution group

Delete removes the distribution group from all users and deletes the distribution group from the system. This may affect alarm configurations.

### 5.1.4 Sharing Groups

The Sharing group feature allows the user to create and manage internal groups and to share content such as filter templates, with other group members.



With this option, the user is able to create dashboard views by using the shared templates. The feature also allows to generate default dashboards for new users by sharing dashboard views, and subscribe the user to the shared group.

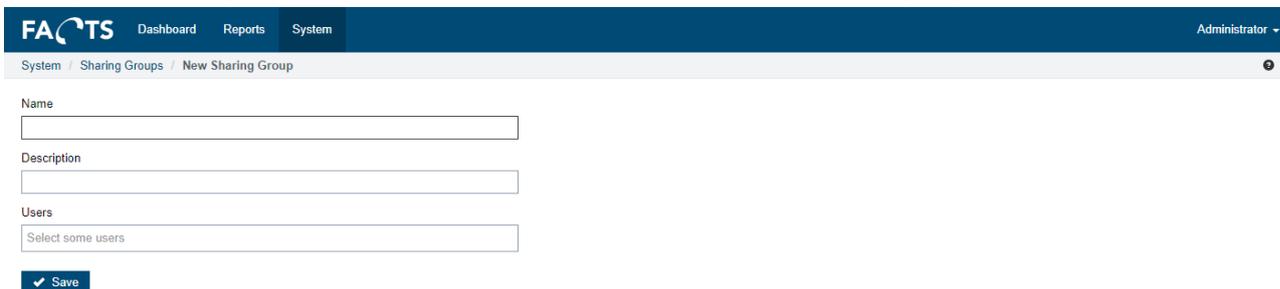
If you want to read more about these FACTS functionalities, go to:

*Sharing filter templates 4.1.6*

*Sharing dashboard view 5.2.2.3*

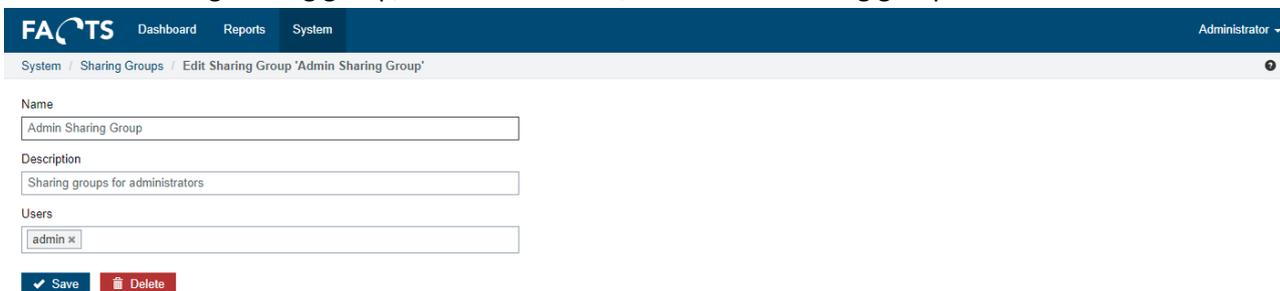
#### 5.1.4.1 Add new sharing group

To add new sharing group, click the “New Sharing Group”. Fill the form with a name, description and attach users you want to give access to the shared content. Click save to save the group.



#### 5.1.4.2 Edit sharing group

To edit an existing sharing group, click the -icon, in the list of sharing groups.



Click save to store the changes.

If you want to remove the sharing group from the system, click delete button.

### 5.1.5 Kiosk URLs

Kiosk URLs or Kiosk mode allows setting up auto sign-in using specific URLs.

Kiosk URLs can be disabled by disabling the user which is used for authorization.

Kiosk mode is a way of showing multiple dashboard views, that automatically change at a set interval.

To use kiosk mode, configure a dashboard with the wanted views and widgets, and set up a device to show the kiosk URL.

Kiosk name	Run as	Kiosk url	Modified	Modified by user
P	Kiosk User (Kiosk demo)	http://develop.cim.as/cpt/head/Dashboard/Kiosk/P	2016-05-19 10:57:00	Anders Meister (Meister)
ProductionScreen1	Kiosk User (Kiosk demo)	http://develop.cim.as/cpt/head/Dashboard/Kiosk/ProductionScreen1	2016-05-22 11:45:54	Administrator (admin)
ProductionScreen2	Kiosk User (Kiosk demo)	http://develop.cim.as/cpt/head/Dashboard/Kiosk/ProductionScreen2	2016-05-22 11:46:09	Administrator (admin)

#### 5.1.5.1 Add new Kiosk URL

To add a new kiosk URL, click the “New Kiosk URL” on “Kiosk URLs page”. Fill in the fields on the page and click save.

#### 5.1.5.2 Edit kiosk URL

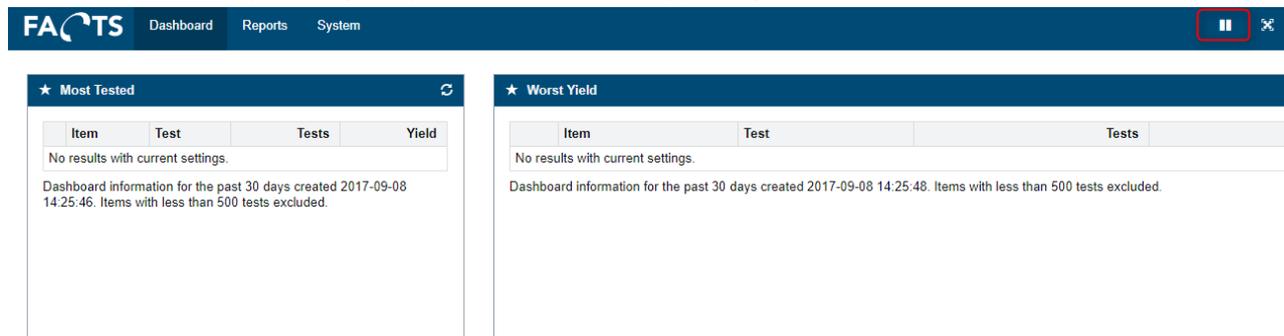
To edit an existing kiosk URL, click the edit icon in the kiosk url list.

Save stores changes to the kiosk URL.

Delete removes the kiosk URL from the system. This may affect any devices configured to automatically sign on, using a kiosk URL.

### 5.1.5.3 Play and pause in Kiosk

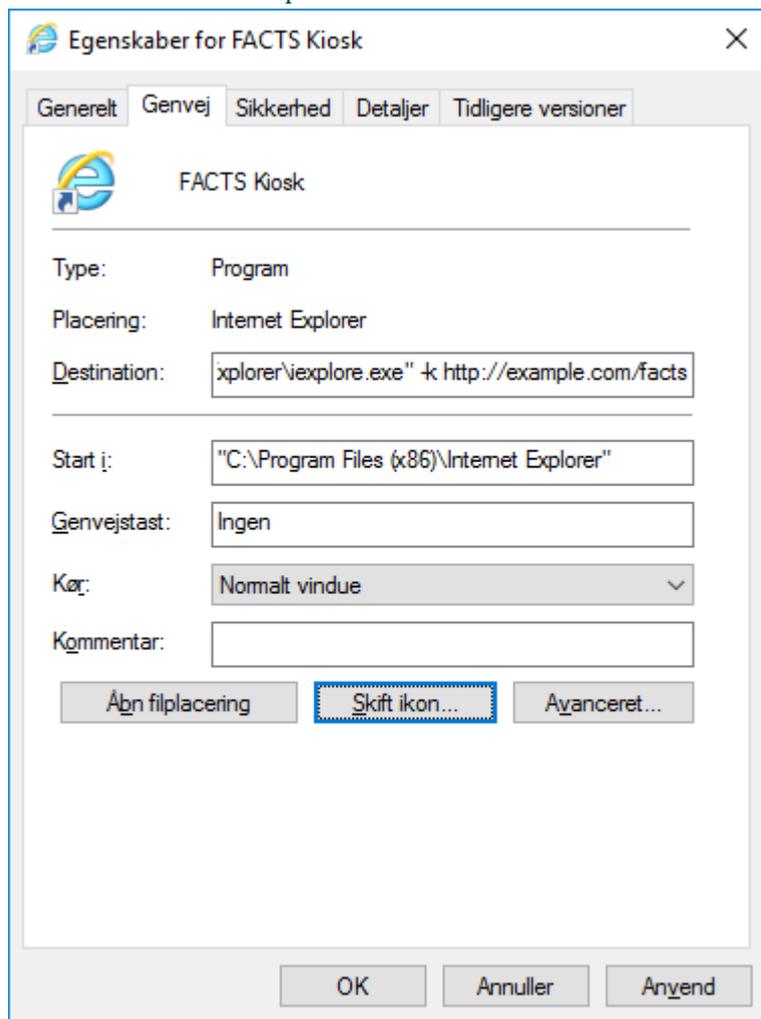
If you want to have a closer look on a specific view while the kiosk views are rolling, you can simply pause the carousel view, by clicking the pause button in the upper-right corner.



### 5.1.5.4 Automatically open kiosk URLs

It is possible to open a kiosk URL in full screen mode, using either Internet Explorer or Google Chrome. Microsoft Edge does not support full screen at the moment, but kiosk URLs will still work with it.

#### 5.1.5.4.1 Internet Explorer

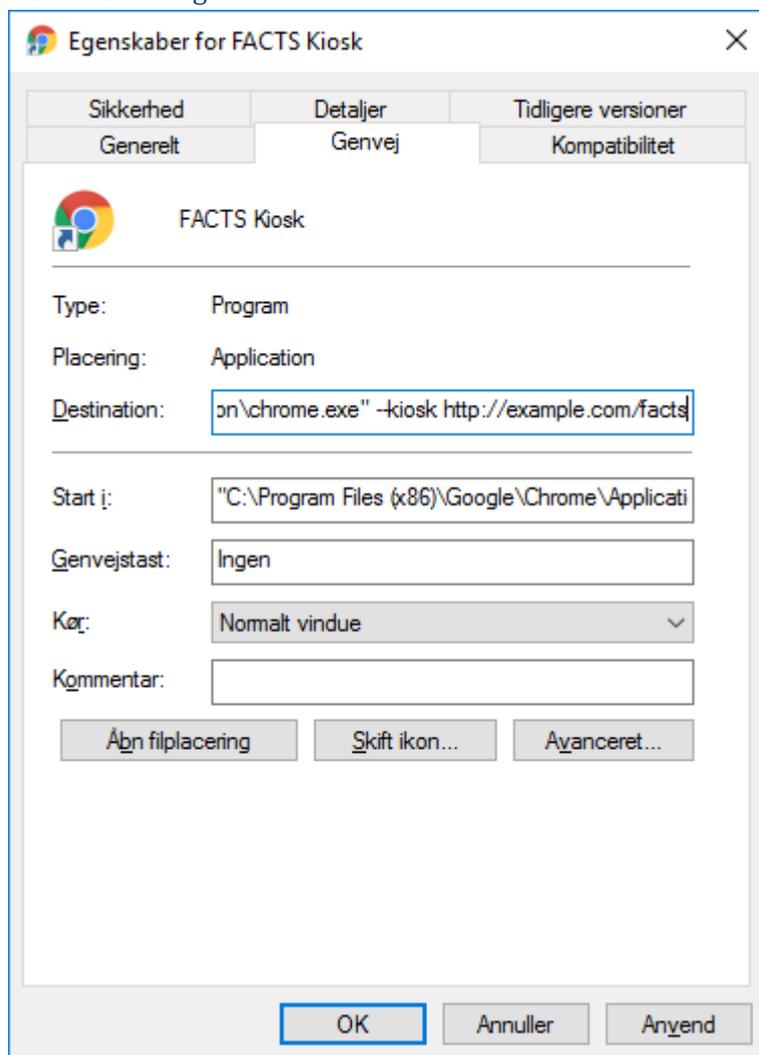


To automatically open a page in full screen, using internet explorer, create a shortcut with the following destination:

"C:\Program Files (x86)\Internet Explorer" -k <http://example.com/facts>

Be sure to keep quotes intact and modify the path to internet explorer in case you are using a pc with a 32-bit OS installed. Change <http://example.com/facts> to be the kiosk url you configured in the web interface.

#### 5.1.5.4.2 Google Chrome



To automatically open a page in full screen, using Google Chrome, create a shortcut with the following destination:

"C:\Program Files (x86)\Google\Chrome\Application\chrome.exe" --kiosk <http://example.com/facts>

Be sure to keep quotes intact and modify the path to Google Chrome in case you are using a pc with a 32-bit OS installed. Change <http://example.com/facts> to be the kiosk url you configured in the web interface.

## 5.2 Dashboard

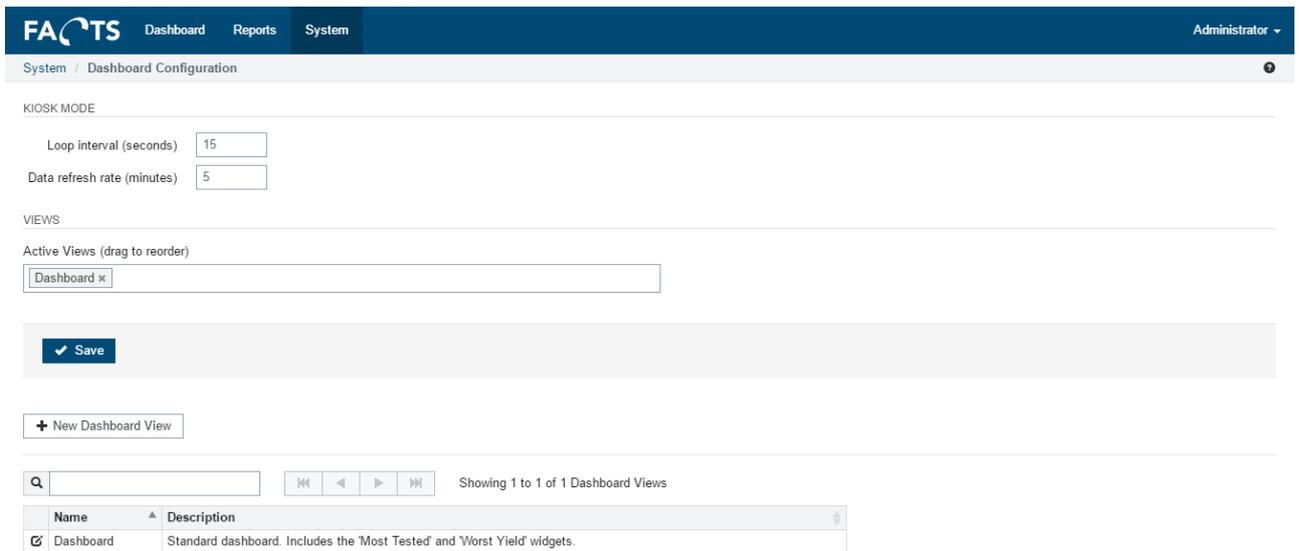
The personal dashboard requires some configuration by a user, but allows quick overview of what is going on in FACTS.

The personal dashboard is printable, but not exportable to excel. A small icon in the top-right corner, left of the users name, allows users to print their dashboard.



### 5.2.1 Settings

The settings page contains settings that are used for the dashboard and when in kiosk mode.



#### 5.2.1.1 Kiosk mode

Loop interval is the time (in seconds) between views, when logged into kiosk mode. This time is a minimum value, as the actual time is (time taken to load any data, if needed) + value.

Data refresh rate defines how long FACTS caches any results loaded in both the ordinary dashboard and in kiosk mode. While data is cached and within the refresh rate, the loop interval between views, will remain the value specified.

#### 5.2.1.2 Views

Views allows specifying which views are shown on the dashboard and in which order the kiosk will switch between them.

To remove a view from the list, click the "X".



To add a view to the list, click it and pick from the available views.



Items can be arranged by drag and drop to select the order in which they are shown.

### 5.2.2 Dashboard Views

Dashboard views specify a logical grouping of widgets. They allow users to create their own personal dashboards. By default, a user will have a single dashboard view, with 2 widgets, “Most Tested” and “Worst Yield”. This can be customized.

#### 5.2.2.1 Add new dashboard view

To add a new dashboard view, click the “New Dashboard View” button. Fill out the fields on the page and click Save.

#### 5.2.2.2 Edit dashboard view

To edit an existing dashboard view, click the edit icon  in the item list.

#### 5.2.2.3 Sharing dashboard view

To add the selected view in one or more sharing groups, click in the sharing group field to get a list of groups. Note that only the groups you are attached to will appear in the list. Select the groups you want to share with, and click save.

New users created, with the selected sharing groups, will get the shared views as their default views.

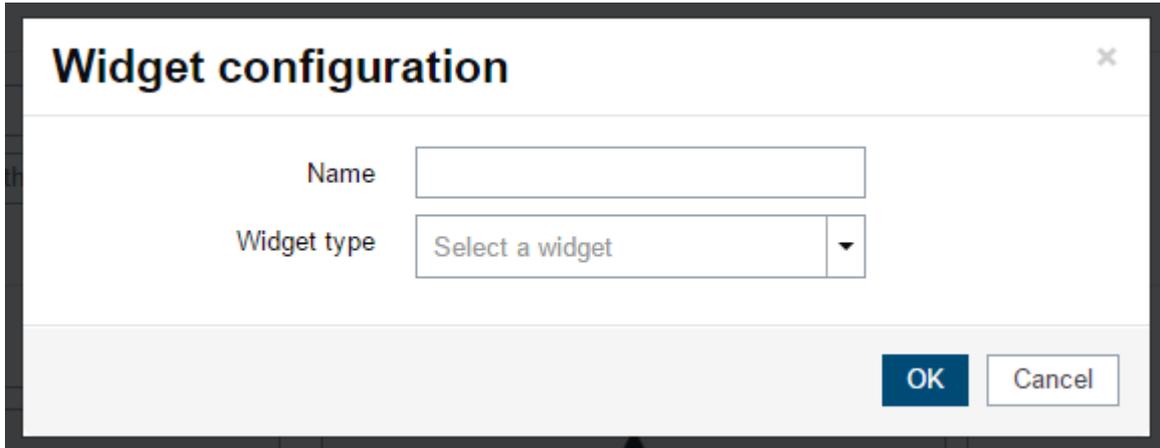
OBS. The shared views will not appear in the dashboard view list for the members of the groups. This functionality is only for pre-generating a set of views, for new users.

### 5.2.3 Widgets

Widgets display information and can be arranged in many different configurations. Each widget is its own little container of information.

#### 5.2.3.1 Add new widget

To add a new widget, edit an existing dashboard or create a new one, and click the “Add Widget” button.



Fill in the fields. The available fields, change depending on the selections done to “Widget type”.

#### 5.2.3.2 Edit existing widget

To edit an existing widget, hover over it and click the edit icon. This will open the configuration dialogue.



Changes to widgets are only saved, when the view is saved.

#### 5.2.3.3 Deleting an existing widget

To delete an existing widget, hover over it and click the delete icon. This will remove the widget from the view.



Widgets removed, are only saved when the view is saved.

### 5.2.3.4 Arranging widgets

Widgets are laid out in a grid with 6 columns. Widgets can be resized to take up between 1 and 6 columns. A single row can contain widgets that total up to 6 columns. This allows for multiple configuration options, such as 1 widget of 6 columns, 2 widgets of 3 columns each or 1 widget of 2 columns, 1 widget of 3 columns and a single widget of 1 column.

A row does not need to be filled. Rows cannot be skipped.

To resize a widget, click the handles in the bottom corners of it.



To move the widget to a new location, click the widget and drag and drop to the new location. Dragging downwards, outside the box, will add a new empty row to add the selected widget to.

### 5.2.3.5 Widget types

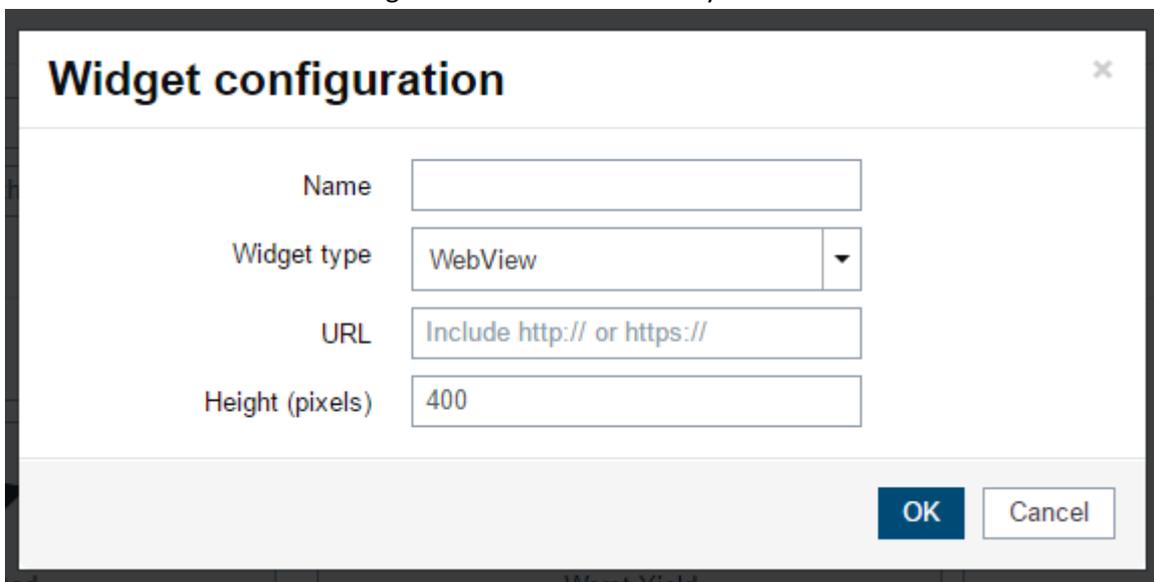
There are 10 widget types. Each serves a different purpose.

#### 5.2.3.5.1 WebView

The WebView type allows embedding an external web page into FACTS.

##### Typical use:

Embed external search or adding information from other systems.

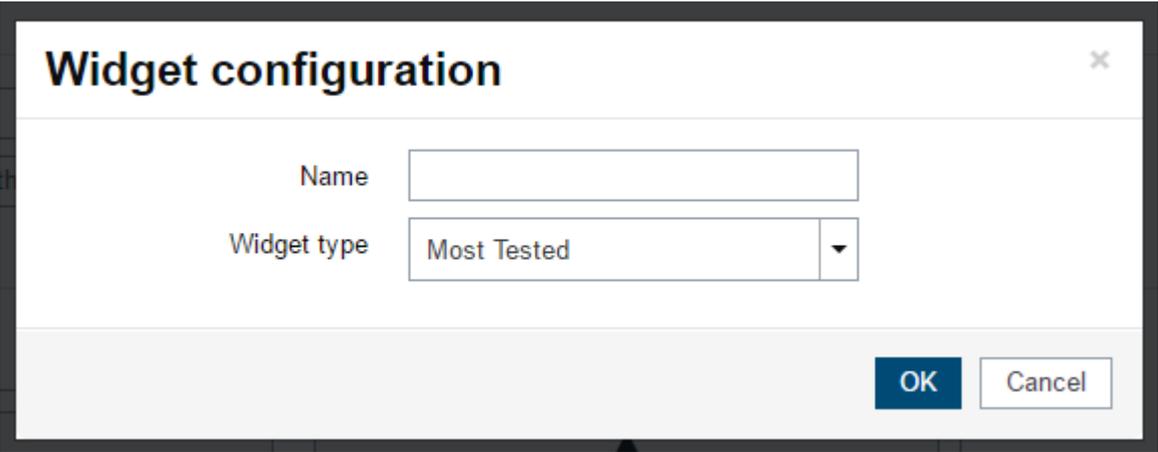


URL is the address of the page that is to be embedded

Height specifies the height on the dashboard. If the height of the widget is less than the webpage, a scrollbar will be visible. If it is larger than the webpage, blank space will be shown. This is the only widget that allows specifying a height.

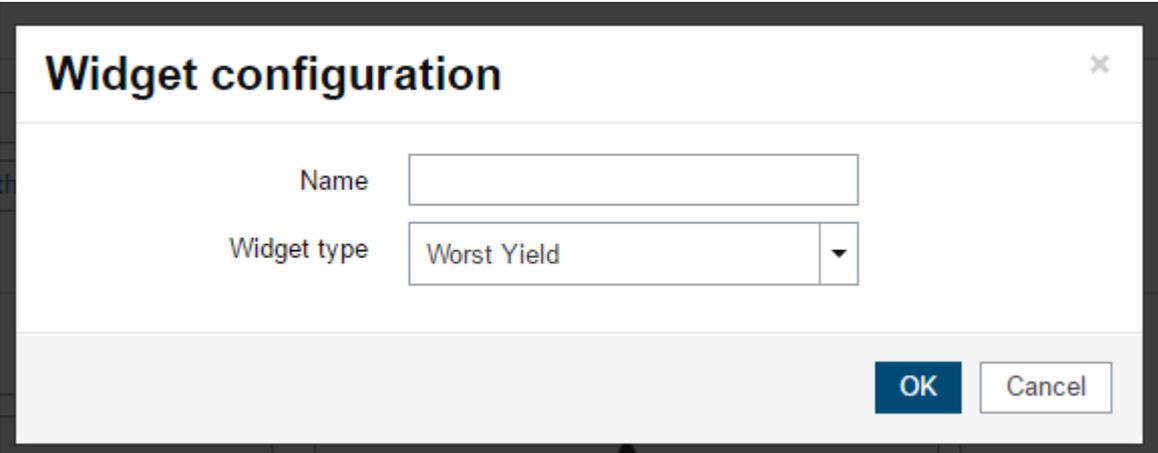
#### 5.2.3.5.2 Most Tested

Displays the most tested items. Users can specify the number of required tests and the time period in their user settings.



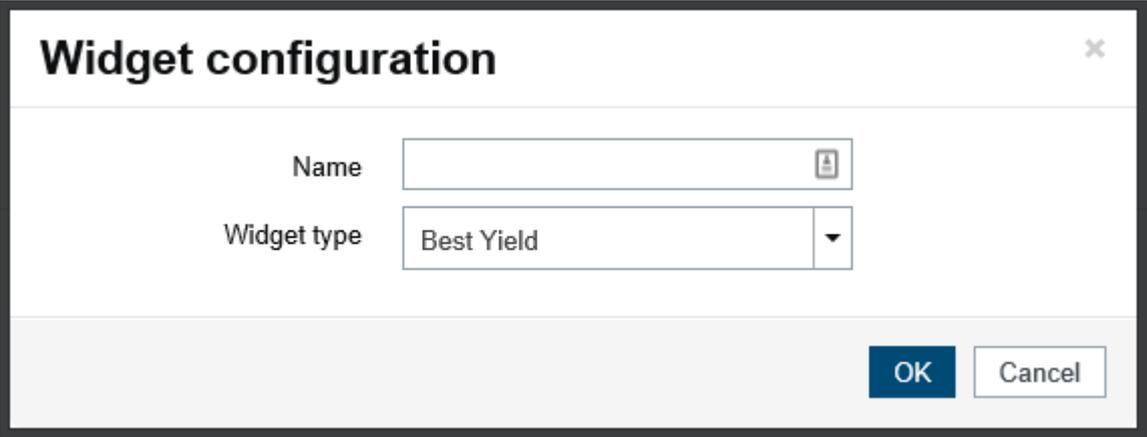
5.2.3.5.3 Worst Yield

Displays the worst yields. Users can specify the number of required tests and the time period in their user settings.



5.2.3.5.4 Best Yield

Displays the best yields. Users can specify the number of required tests and the time period in their user settings.



5.2.3.5.5 Image Widget

Allows for adding a custom image to a dashboard.

Images can be aligned to the left or to the right, or be set to fill the space available.

**Typical use:** insert company logo for printed reports/dashboards.

5.2.3.5.6 Youtube Widget

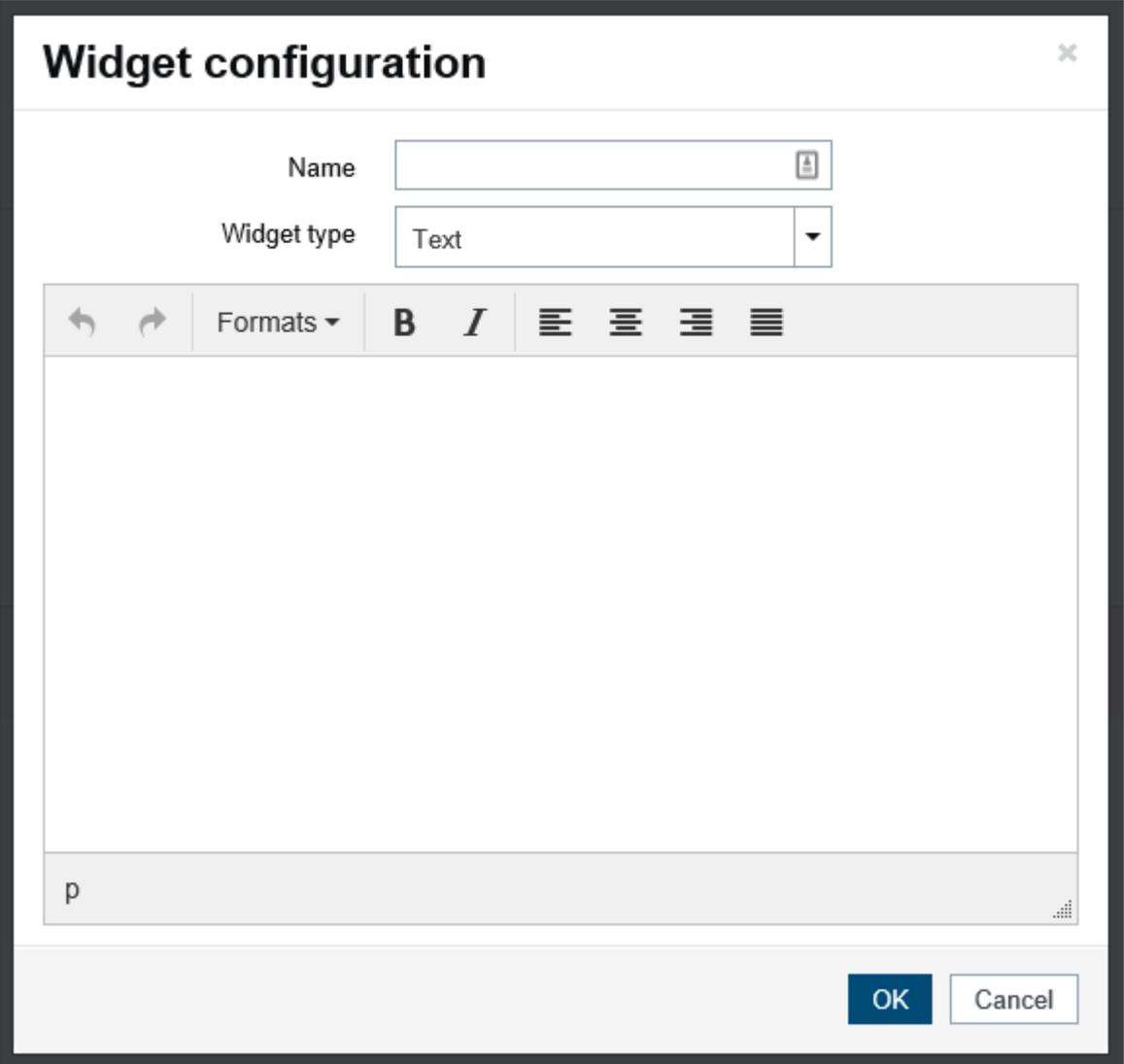
Displays a youtube video. Videos are automatically paused in kioskmode, while they are offscreen.

Simply copy the video ID from the youtube page and past it in the Video ID field, to add a video to the dashboard.

5.2.3.5.7 Text Widget

Allows for adding custom, formatted text to the dashboard.

**Typical use:** insert standard text for a printed report/dashboard.



5.2.3.5.8 Report Widget

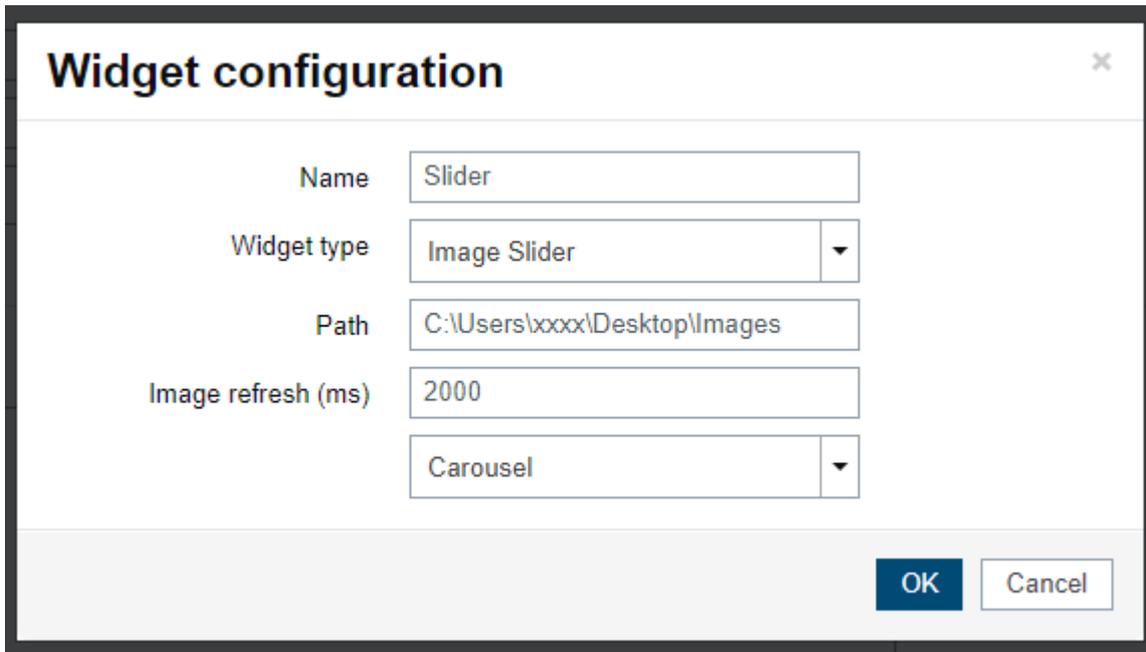
Report widgets are based on a user’s filter templates. They allow embedding reports on the dashboard.

Depending on the type of filter used, different Data type options will be available.

Report	Datatable	Chart	Distribution Chart	Series Chart	Test Overview	Test Step Results
SPC	X					
Time Series	X		X	X		
Test Result	X					
Repair Pareto	X	X				
Test Yield	X	X				
Test Step Yield	X	X				
Test Step Error Pareto	X					
Test Duration		X				
Test Step Duration	X					
Unit Overview					X	X

### 5.2.3.5.9 Image Slider Widget

The Image slider widget are made to read and display images from a folder.



The widget has two display types (*Latest*, *Carousel*), and a refresh interval that defines how often you want the widget to read and update from the defined path.

The *Latest* mode, always shows the latest created image in the folder.

The *Carousel* mode will automatically show the images in a loop, when the last image is shown.

### 5.2.3.5.10 Service Status Widget

The service status gives you a status overview of the FACTS services.

Service Status			
Service	Name	Status	Message
Alarm Service	CPT.AlarmService.TestResults	Idle	
Importer Task	CPT.TestResultSimulator	Stopped	Importer stopped!
Importer Task	CPT.TestStand.Logger	Stopped	Importer stopped!
Importer Task	CPT.TestStation.Client	Stopped	Importer stopped!
Importer Task	DIV.TestData	Stopped	Importer stopped!
Importer Task	Grundfoss Test Importer	Stopped	Importer stopped!
Importer Task	TestStand XML	Stopped	Importer stopped!

The widget will simply list the different services with a message and status. The service requires no configuration but a widget-name.

### 5.3 Data management

Provides functions to control and manage items.

#### 5.3.1 Items

Define the relations between item numbers/identifiers and their item names. Item names are used as an alias for item numbers to make items easier to recognize and filter out.

Number	Name	Created
10002-043	Name with "special" characters <> αεοά/ΕΟΑ - Инструменты CIM Производство	2013-10-20 13:17:14
CIM-100		2013-12-13 16:18:35
CIM-100.1043938723		2013-12-13 15:54:12

##### 5.3.1.1 Edit items

To edit an existing item number / name relation, click the edit icon in the Item list.

Save stores the changes to the item name.

#### 5.3.2 Item Groups

Defines the grouping of items. Item groups can be used to control item access rights for user groups.

Name	Description
Atex items	Items that belongs to Atex
Customer A	
Customer B	
External Consultants	<p>
Special Customers	10005-043

##### 5.3.2.1 Add item groups

To add a new item group, click the “New Item Group” on the “Item Groups page”. Fill in the fields on the page and click Save.

FACTS Dashboard Reports System Administrator

System / Item Groups / New Item Group

Name

Description

Items

### 5.3.2.2 Edit item groups

To edit an existing item group, click the edit icon in the Item Group list.

FACTS Dashboard Reports System Administrator

System / Item Groups / Edit Item Group 'Atex items'

Name

Description

Items

Save stores the changes to the item group.

### 5.3.3 Panel configuration

Used to configure the layout of panels. Panels are used to group several DUTs under one barcode in PLR (Paper less repair).

FACTS Dashboard Reports System Administrator

System / Panel Configuration

Showing 1 to 7 of 7 panels

Name	Modified	Modified by user
<input checked="" type="checkbox"/> Standard2x2	2016-05-22 09:39:14	Administrator (admin)
<input checked="" type="checkbox"/> Ints2x2	2016-05-22 09:39:12	Administrator (admin)
<input checked="" type="checkbox"/> Adminitest	2016-05-22 09:38:35	Administrator (admin)
<input checked="" type="checkbox"/> at2x2	2016-05-22 09:38:29	Administrator (admin)
<input checked="" type="checkbox"/> New	2016-05-22 09:38:25	Administrator (admin)
<input checked="" type="checkbox"/> AddedPanel	2016-05-22 09:38:05	Administrator (admin)
<input checked="" type="checkbox"/> panel flip	2016-03-18 19:30:25	Administrator (admin)

#### 5.3.3.1 Add panel configuration

To add a new panel configuration, click the “New Panel configuration” on the “Panel configuration page”. Fill in the fields on the page and click Save.

Changes to the “Columns” and “Rows” fields will redraw the panel layout and default the value of the layout fields.

FACTS Dashboard Reports System Administrator

System / Panel Configuration / New Panel configuration

CONFIGURATION

Name:

Columns:

Rows:

PANEL LAYOUT [COL-ROW]

A
B
C

### 5.3.3.2 Edit panel configuration

To edit an existing item group, click the edit icon in the Item Group list.

FACTS Dashboard Reports System Administrator

System / Panel Configuration / Edit Panel 'UserGuidePanel'

CONFIGURATION

Name:

Columns:

Rows:

PANEL LAYOUT [COL-ROW]

A
B
C

Save stores the changes to the item group.

Delete is only enabled if no DUTs has been connected to the panel configuration.

## 5.4 Importer

### 5.4.1 Import Tasks

By default, the SPC system supports TestStand XML format. Additional import readers can be implemented to support the specific customer needs and business models. In general, test data imports originate either from files like TestStand XML, CSV files etc., or from some different kinds of databases, like MySQL, MS Access, MS-SQL etc. Additional import read can be implemented for both new file formats and data stored in databases.

FACTS Dashboard Reports System Administrator

System / Import Tasks

Showing 1 to 4 of 4 import tasks

Enabled	Name	Description	Reader	Plugin	Modified	Modified by
<input checked="" type="checkbox"/>	Yes	CPT.TestResultSimulator	CPT Test Data XML File		2016-04-21 18:18:12	Per Clausen (pcl)
<input checked="" type="checkbox"/>	Yes	CPT.TestStand.Logger	CPT Test Data XML File		2016-04-26 12:39:23	Per Clausen (pcl)
<input checked="" type="checkbox"/>	Yes	CPT.TestStation.Client	CPT Test Data XML File		2016-02-25 09:20:05	Rasmus Toftdahl Olesen (rto)
<input checked="" type="checkbox"/>	Yes	TestStand XML	CPT TestStand XML File		2015-07-03 09:03:39	Administrator (admin)

#### 5.4.1.1 Edit an existing import task

To edit an existing data importer task, click the edit icon in the importer task list.

FACTS
Dashboard
Reports
System
Administrator ▾

System / Import Tasks / Edit File Import Task

---

**GENERAL**

Enabled  Yes  No

Name

Description

Max. test results per unit  ⓘ

---

**DEFAULTS**

Item number  ⓘ

Test name  ⓘ

Test station  ⓘ

Test fixture  ⓘ

---

**TEST RESULT FILES**

Reader  ⓘ

Plugin  ⓘ

Pickup files from  ⓘ

---

**FILE HANDLING OPTIONS**

Delete imported files

Zip imported files to save space

Move imported files to  ⓘ

Delete files with error

Zip files with error to save space

Move files with error to  ⓘ

“Save” stores the changes to the importer task.

“Delete” deletes and disables the importer task permanently (all parameters will be lost)

### 5.4.1.2 Creating a new file import task

To setup the necessary parameters for importing test data from a file, the button “New File Import Task” should be clicked.

FACTS Dashboard Reports System Administrator

System / Import Tasks / New File Import Task

GENERAL

Enabled  Yes  No

Name

Description

Max. test results per unit

DEFAULTS

Item number

Test name

Test station

Test fixture

TEST RESULT FILES

Reader

Plugin

Pickup files from

FILE HANDLING OPTIONS

Delete imported files

Zip imported files to save space

Move imported files to

Delete files with error

Zip files with error to save space

Move files with error to

All necessary parameters should be filled out before saving and enabling the new file importer task.

Additional help for each parameter is displayed when moving the mouse pointer over the question mark to the right of each parameter field.

5.4.1.3 *Creating a new database import task*

To setup the necessary parameters for importing test data from a database, the button “New Database Import Task” should be clicked.

The screenshot shows the 'New Database Import Task' configuration page. At the top, there is a navigation bar with 'FACTS', 'Dashboard', 'Reports', and 'System' tabs, and a user profile 'Administrator'. Below the navigation bar, the breadcrumb trail reads 'System / Import Tasks / New Database Import Task'. The main content area is divided into three sections: 'GENERAL', 'DEFAULTS', and 'DATABASE SETTINGS'. In the 'GENERAL' section, there is an 'Enabled' toggle with 'Yes' and 'No' options, a 'Name' text box with a placeholder 'Enter a name', a 'Description' text box, and a 'Max. test results per unit' spinner set to '25'. The 'DEFAULTS' section contains four text boxes: 'Item number', 'Test name', 'Test station', and 'Test fixture', each with a help icon to its right. The 'DATABASE SETTINGS' section contains a 'Reader' dropdown, a 'Plugin' dropdown with 'None' selected, and text boxes for 'Server', 'User', 'Password', and 'Catalog', each with a help icon. At the bottom of the form is a 'Save' button with a checkmark icon.

All necessary parameters should be filled out before saving and enabling the new database importer task.

Additional help for each parameter is displayed when moving the mouse pointer over the question mark to the right of each parameter field.

### 5.4.1.4 Creating a new MS Access import task

To setup the necessary parameters for importing test data from a Microsoft Access database, the button “New MS Access Import Task” should be clicked.

The screenshot shows the configuration interface for a new MS Access import task. It is organized into three main sections:

- GENERAL:** Contains an 'Enabled' toggle (currently set to 'No'), a 'Name' text box with a placeholder 'Enter a name', a 'Description' text box, and a 'Max. test results per unit' spinner box set to '25'.
- DEFAULTS:** Contains four text boxes for 'Item number', 'Test name', 'Test station', and 'Test fixture', each with a help icon to its right.
- MICROSOFT ACCESS:** Contains a 'Reader' dropdown menu, a 'Plugin' dropdown menu (set to 'None'), a checked checkbox for 'Open the database in exclusive mode', and a 'Database file path' text box.

A 'Save' button is located at the bottom of the configuration area.

All necessary parameters should be filled out before saving and enabling the new MS Access importer task.

Additional help for each parameter is displayed when moving the mouse pointer over the question mark to the right of each parameter field.

### 5.4.2 Import Task Monitor

This screen is used to investigate the status and error log of the enabled data importers. It contains relevant information and performance indicators to provide an overview to the health of the data import into the system. The information in the screen is automatically updated every 10 seconds.

FACTS
Administrator ▾

System / Import Task Monitor

☰ Status

Showing 4 import tasks

Timestamp	Name	State	Message	Last import	Last import error	Avg. import time	Total imports	Total import errors	Details
2016-05-20 14:38:53	CPT.TestResultSimulator	Idle	No data pending	2016-05-20 14:37:22	2016-03-24 01:32:33	118 ms	540,288	278	
2016-05-20 14:38:53	CPT.TestStand.Logger	Idle	No data pending	2014-05-14 10:29:11	2014-05-14 10:21:55	103 ms	114,120	147	
2016-05-20 14:38:53	CPT.TestStation.Client	Idle	No data pending	2016-05-20 07:31:53	2016-05-19 23:42:07	114 ms	8,294	3,528	
2016-05-20 14:38:53	TestStand XML	Idle	No data pending	2016-04-29 12:53:22	2016-02-25 15:39:06	746,856 ms	95	14	

Automatically updated every 10 seconds

☰ Error Log

Showing 1 to 25 of 1,000 import task errors

Timestamp	Name	Error type	Error message	Details
2016-05-19 23:42:07	CPT.TestStation.Client	TestResultValidationFailed	Test.Name cannot be null or an empty string. Unit.SerialNo cannot be null or an empty string.	{ "fileName": "20160519-234203_0d06091b-418b-4493-9be7-f9866b08393b.CPT.xml" }
2016-05-19 23:42:07	CPT.TestStation.Client	TestResultValidationFailed	Test.Name cannot be null or an empty string. Unit.SerialNo cannot be null or an empty string.	{ "fileName": "20160519-234152_267f5f33-1de3-4dd2-83bf-92391e255422.CPT.xml" }
2016-05-19 23:41:37	CPT.TestStation.Client	TestResultValidationFailed	Test.Name cannot be null or an empty string. Unit.SerialNo cannot be null or an empty string.	{ "fileName": "20160519-234125_d07b2bd5-2ae8-4b51-8ff4-452884634444.CPT.xml" }

### 5.5 Scheduled Reports

Scheduled reports are used to send out predefined reports at a specified time and with a specified frequency. Reports are sent out by e-mail to predefined receivers. The layout of the scheduled reports is chosen among the existing reports (Test Yield report and Test Step Error Pareto report).

FACTS
Administrator ▾

System / Scheduled Reports

+ New Scheduled Report

Showing 1 to 25 of 511 scheduled reports

Enabled	Name	Description	Run as	Modified	Modified by	
<input checked="" type="checkbox"/>	Yes	Daily Test Step Error Pareto	90 days back. Sent out on weekdays	Administrator (admin)	2016-05-20 14:33:55	Administrator (admin)
<input checked="" type="checkbox"/>	No	Test Step Error Pareto Report	Test Step Error Pareto	Per Clausen (pcl)	2016-04-28 14:48:48	Per Clausen (pcl)
<input checked="" type="checkbox"/>	No	Test Step Error Pareto Report	Test Step Error Pareto	Per Clausen (pcl)	2013-10-30 00:44:00	Per Clausen (pcl)

#### 5.5.1 Adding and Editing scheduled reports

To edit an existing scheduled report, click the edit icon in the scheduled report list. To add a new scheduled report, click “New Scheduled Report”

“Save” stores the changes to the importer task.

“Delete” deletes and disables the scheduled report permanently (all parameters will be lost). “Delete” is only available when editing an existing scheduled report.

5.5.1.1 Settings, Recipients and Recurrence

The screenshot shows the 'Edit Scheduled Report' interface. The 'Settings, Recipients and Recurrence' tab is selected and circled in red. The form contains the following fields:

- Enabled:** Radio buttons for 'Yes' and 'No'.
- Time of day:** A dropdown menu showing '08:00'.
- Name:** A text input field containing 'Daily Test Step Error Pareto'.
- Description:** A text area containing '90 days back. Sent out on weekdays'.
- RECIPIENTS:**
  - Users:** A dropdown menu showing 'kip'.
  - Email addresses:** A text area containing 'jba@cim.as'.
- RECURRENCE:**
  - Start date:** A date input field showing '2016-05-20'.
  - Pattern:** A dropdown menu with 'Daily' selected, and options for 'Weekly' and 'Monthly'.

At the bottom of the form are two buttons: 'Save' (with a checkmark icon) and 'Delete' (with a trash can icon).

General Settings:

- Enabled:** Used to enable or disable the scheduled report generation
- Time of day:** The time of day to send out the report
- Name:** Descriptive name of the report
- Description:** Further detailed description for the report

Recipients:

- Users:** List of system users to receive the report
- E-mail addresses:** Additional recipients of the report (unknown to the system)

Recipients:

- Start date:** The begin date for the scheduled reports
- Pattern:** See further descriptions below

This close-up shows the 'Pattern' dropdown menu. The 'Daily' option is circled in red. The dropdown is currently set to 'Every weekday'. Other visible options are 'Weekly' and 'Monthly'.

The "Daily" pattern is used if the report should be sent out on a daily basis (every day or every weekday)

Pattern **Daily**  **Weekly**  **Monthly**

Every  week(s) on

Monday  Tuesday  Wednesday  Thursday  Friday

Saturday  Sunday

The “Weekly” pattern is used if the report should be sent out on certain days of the week.

Pattern **Daily**  **Weekly**  **Monthly**

Every  month(s) on the **first weekday** of the month

first weekday ▲

first day

**first weekday**

last weekday

last day

The “Monthly” pattern is used if the report should be sent out on certain days of the month.

### 5.5.1.2 Report and Filter

FACTS Dashboard Reports System Administrator ▼

System / Scheduled Reports / Edit Scheduled Report

Settings, Recipients and Recurrence **Report and Filter**

Type:

Run as user:

Document type:  PDF  Excel  PDF and Excel

**FILTER**

Time period:

Items:

Tests:

Test run:

Test step cycle:

Test stations:

General Settings:

Type: The layout of the report to send out (Test Yield or Test Step Error Pareto)

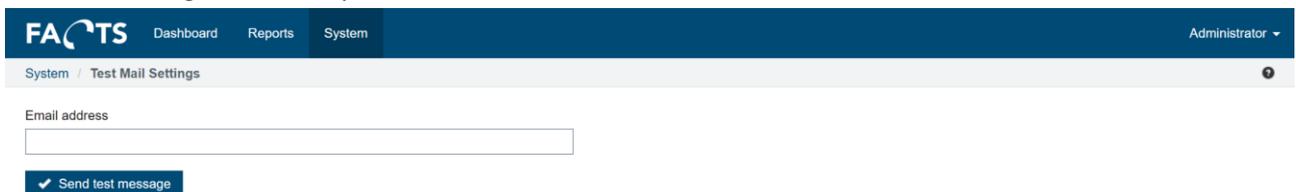
Run as user: The user profile to be used when generating the scheduled reports  
 Document type: Send out the report as PDF, Excel or both

**Filter:**

Set all parameters for the selected report type to obtain the required data in the scheduled reports. Please refer to the sections describing the reports (section 3.9 or section 3.11)

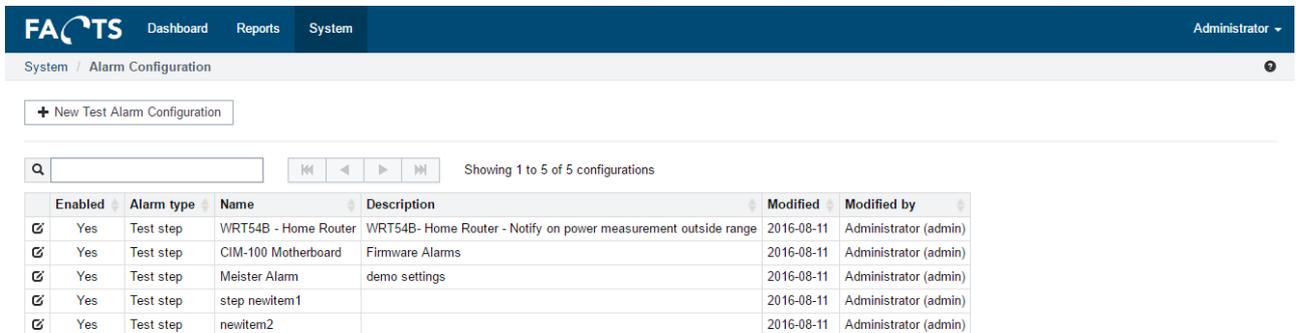
### 5.6 Test Mail Settings

Test Mail Settings can be used to verify the mail settings are correct in the config file. The mail settings are used by the scheduler service.



### 5.7 Alarm Configuration

Alarm configuration is used to setup notifications when events that are generally considered bad, occurs. These events can be based on different criteria, such as following the WECO rulesets or custom limits for test results. Notifications are sent to distribution groups according to the configured frequency.



#### 5.7.1 Adding and Editing alarm configurations

To edit an existing alarm configuration, click the edit icon in the alarm configuration list. To add a new alarm configuration, click “New Test Alarm Configuration”. “Save” stores the changes to the alarm configuration task. “Delete” deletes and disables the configuration permanently (all parameters will be lost). “Delete” is only available when editing an existing alarm configuration.

#### 5.7.2 Test Alarm Configuration

Test Alarm Configuration is a type of alarms configured on a test level. They require an item and a test to be specified, before allowing you to added specific criteria on each test step.

FACTS
Dashboard
Reports
System
Administrator ▾

System / Alarm Configuration / Edit Test Alarm Configuration 'CIM-100 Motherboard'

SETTINGS

Enabled Yes No

Name

Description

Item  x ▾

Test  x ▾

Notification interval

Test result

CONFIGURATION

+ Add Test Step

Step	Type	Weco 1	Weco 2	Weco 3	Weco 4	Weco 5	Weco 6	Cp < X	Cpk < X	X < limit	X > limit		
CPU Diagnostics	Enable	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	x
	Value							<input type="text" value="1"/>	<input type="text" value="1"/>	<input type="text" value="0"/>	<input type="text" value="10"/>		
CPU Test	Enable	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	x
	Value							<input type="text" value="1"/>	<input type="text" value="1"/>	<input type="text" value="0"/>	<input type="text" value="10"/>		
MainSequence:Video Test	Enable	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	x
	Value							<input type="text" value="1"/>	<input type="text" value="1"/>	<input type="text" value="50"/>	<input type="text" value="5"/>		

RECIPIENTS

Distribution groups

✓ Save
🗑 Delete

After an item and a test has been selected, individual test steps can be added to the list of checks. Each test step can then have their own set of rules.

- **WECO 1:** An alarm will be generated if value is outside  $3\sigma$
- **WECO 2:** 2 out of 3 consecutive points fall beyond the  $2\sigma$  limit
- **WECO 3:** 4 out of 5 consecutive points fall beyond the  $\sigma$  limit
- **WECO 4:** 9 consecutive points fall on the same side of the center
- **WECO 5:** 9 consecutive points are increasing or decreasing
- **WECO 6:** An alarm will be generated if 9 consecutive points shift between increasing and decreasing
- **Cp < X:** An alarm will be generated if the calculated Cp is less than the specified value
- **Cpk < X:** An alarm will be generated if the calculated Cpk is less than the specified value
- **X < Limit:** An alarm will be generated if the tested value is less than the specified limit
- **X > Limit:** An alarm will be generated if the tested value is greater than the specified limit

### 5.8 Alarm Monitor

The Alarm monitor is used to track the status of the Alarm service and shows a log of up to 1000 alarms.

FACTS Dashboard Reports System Administrator

System / Alarm Monitor

**Status**

Showing 1 alarm tasks

Timestamp	Name	State	Message	Latest test result id
2016-08-11 15:21:50	CPT.AlarmService_TestResults	Idle		1155661

Automatically updated every 10 seconds

**Alarms**

Showing 1 to 25 of 157 alarms

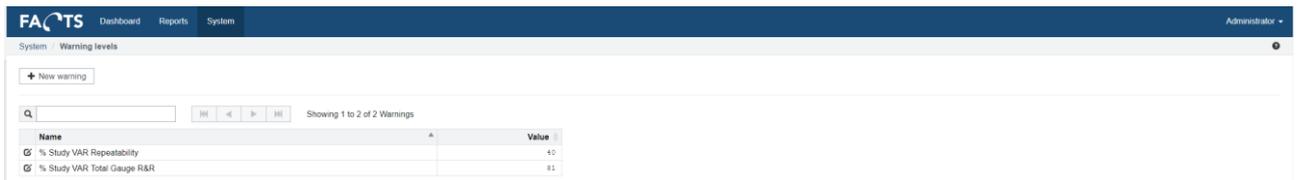
Timestamp	Configuration name	Description
2016-08-11 13:51:42	CIM-100 Motherboard	LimitRule: numeric value 5.000 E+00 is below 50.000 E+00
2016-08-09 21:51:45	CIM-100 Motherboard	LimitRule: numeric value 5.007 E+00 is above 5.000 E+00
2016-08-09 21:51:45	CIM-100 Motherboard	LimitRule: numeric value 5.007 E+00 is below 50.000 E+00
2016-08-09 08:25:34	newitem2	WECO 5: 9 consecutive points are increasing or decreasing
2016-08-09 08:25:34	newitem2	WECO 4: 9 consecutive points falls on the same side of the center
2016-08-09 08:25:34	newitem2	WECO 5: 9 consecutive points are increasing or decreasing
2016-08-09 08:25:34	newitem2	WECO 4: 9 consecutive points falls on the same side of the center
2016-08-09 08:25:34	newitem2	WECO 5: 9 consecutive points are increasing or decreasing
2016-08-09 08:25:34	newitem2	WECO 4: 9 consecutive points falls on the same side of the center
2016-08-09 08:25:33	newitem2	WECO 5: 9 consecutive points are increasing or decreasing
2016-08-09 08:25:33	newitem2	WECO 5: 9 consecutive points are increasing or decreasing
2016-08-09 08:25:33	newitem2	WECO 5: 9 consecutive points are increasing or decreasing

## 5.9 GAUGE R&R

GAUGE R&R configuration is used to setup color warnings on the Gauge R&R main page. Color warnings are set up per column.

### 5.9.1 Warning levels

It is possible to set color warnings on each column ('% Study VAR Total Gauge R&R', '% Study VAR Repeatability' and '% Study VAR Reproducibility'). These warnings are triggered if the value exceeds the value set up in the Warning levels settings. If there is no warning value set on a column ('% Study VAR Total Gauge R&R', '% Study VAR Repeatability' or '% Study VAR Reproducibility'), then warning for the column is disabled.



Each color warning can be edit or deleted via this icon .

Name

Value

## 6 Personal settings

### 6.1 Settings

To edit personal settings, select 'User name' to the right in the menu bar and click Settings. (In the example below, the user name is "Administrator")

FACTS
Dashboard Reports System
Administrator ▾

---

Edit Personal Settings ⓘ

---

**DASHBOARD SYSTEM WIDGETS**

Days back in time

Minimum number of tests

---

**REPORT FILTER DEFAULTS**

Test categories

Test operator types

---

**PRESENTATION**

Table page size  ▾

Number format  ▾

---

**ACCOUNT**

New password

Confirm password

✔ Save

**Dashboard Settings:**

- Days back in time: Number of days to look back in Dashboard reports
- Minimum number of tests: The number of tests required to qualify for appearance on the dashboard

**Presentation Settings:**

- Table page size: Specifies the number of rows per page in reports presenting data in grids (tables).
- Number format: Specifies how numeric measurements are presented

**Account Settings:**

- New password: Used to set a new user password
- Confirm password: Used to set a new user password. Must be identical to “New password”

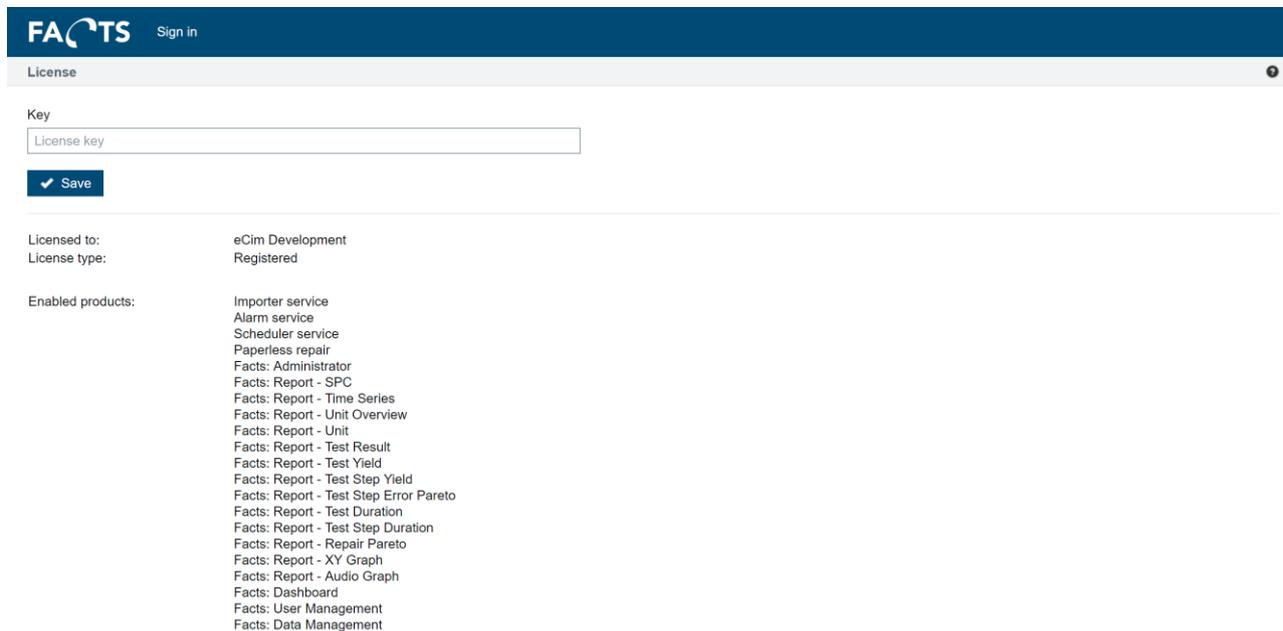
Save button stores changes.

## 6.2 Sign out

Sign out, and present the sign in page.

## 7 License

FACTS requires a license to run. This license is used to determine which products are enabled for the installation. To edit the license select the FACTS logo in the upper left and click “License Management”. The window shows an input field to type in the license key, and information about the current license.



The screenshot shows the FACTS License Management interface. At the top, there is a 'License' window title bar with the FACTS logo and a 'Sign in' link. Below the title bar, there is a 'Key' section with an input field labeled 'License key' and a 'Save' button. The main content area displays the following information:

Licensed to:	eCim Development
License type:	Registered
Enabled products:	<ul style="list-style-type: none"> <li>Importer service</li> <li>Alarm service</li> <li>Scheduler service</li> <li>Paperless repair</li> <li>Facts: Administrator</li> <li>Facts: Report - SPC</li> <li>Facts: Report - Time Series</li> <li>Facts: Report - Unit Overview</li> <li>Facts: Report - Unit</li> <li>Facts: Report - Test Result</li> <li>Facts: Report - Test Yield</li> <li>Facts: Report - Test Step Yield</li> <li>Facts: Report - Test Step Error Pareto</li> <li>Facts: Report - Test Duration</li> <li>Facts: Report - Test Step Duration</li> <li>Facts: Report - Repair Pareto</li> <li>Facts: Report - XY Graph</li> <li>Facts: Report - Audio Graph</li> <li>Facts: Dashboard</li> <li>Facts: User Management</li> <li>Facts: Data Management</li> </ul>

## 8 Statistical calculations

In the SPC report, a number of statistical values are calculated and used for presentation. This section shows the formulas used to calculate these values. The formulas are shown for reference only. Please refer to special articles and literature regarding the practical use and limitations of the calculated values.

In the formulas below, USL and LSL denotes the upper specification limit and the lower specification limit.

### 8.1 Formulas

#### 8.1.1 Mean value ( $\bar{X}$ )

$$Mean = \bar{X} = \frac{1}{n} \sum_{i=1}^{i=n} X_i$$

#### 8.1.2 Standard deviation ( $\sigma$ )

$$\sigma = \sqrt{\frac{1}{n-1} \sum_{i=1}^{i=n} (X_i - \bar{X})^2}$$

### 8.1.3 Capability (Cp)

$$C_p = \frac{USL - LSL}{6\sigma}$$

### 8.1.4 Capability Index (Cpk)

$$C_{pkUSL} = \frac{USL - \bar{X}}{3\sigma}$$

$$C_{pkLSL} = \frac{\bar{X} - LSL}{3\sigma}$$

$$C_{pk} = \frac{\text{Min}[(USL - \bar{X}), (\bar{X} - LSL)]}{3\sigma} = \text{Min}[C_{pkUSL}, C_{pkLSL}]$$

## 8.2 Special value handling

In order to avoid misleading values for any of the capability values (Cp, Cpk, Cpk USL and Cpk LSL) in case of special circumstances in the test data, a special “error value” is used. In case any of the mentioned capability values are less than -999.999 or greater than 999.999, the resulting value will be set to -999.999 or 999.999 respectively.

## 9 Revision History

Revision	Date	Initials	Description
0.1	2013-04-29	LDI	First version
1.0	2013-05-01	LDI, RD	Review
1.1	2013-05-23	PCL	Dashboard minimum number of tests
1.2	2013-12-17	RD	Updated screen shots and filter options availability (most pages)
1.3	2014-05-11	PCL	Removed obsolete Test completion filter and added Test categories filter.
1.4	2016-05-20	KIP	Added information on Alarm Service, distribution groups, panel config and dashboard configurations.
1.4.1	2016-06-02	KIP	Updated images; renamed CPT to FACTS
1.4.2	2017-08-03	KIP	Added new Widgets
1.4.3	2018-08-12	RBN	Added Gauge R&R