



Functional Release Notes

Version 5.11.12

Release Information



Document: Force-5.11.12-Functional-Release-Notes.docx



Release date: 2021-05-04



Document version: 1



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1 General

FORCAM provides companies with all the information they need to control and optimize their production. The modular IIoT solution FORCAM FORCE™ is as flexible as the needs of customers. With a variety of production apps, FORCAM helps companies to make their processes more transparent and improve their workflows. In this way, companies create the basis for optimization measures and sustainable success, thereby ensuring their competitiveness.

FORCAM is always endeavored to optimize the solution FORCAM FORCE™ further, to enrich it with functions and to offer its customers the constantly growing, greatest possible use. For this purpose, several releases are published in the year.

This document lists functions that have been added or changed in the course of the **5.11.12** release. It serves to get an overview of the most important features in order to use FORCAM FORCE™ in the best possible way.

Detailed descriptions of the individual functions can be found in the respective product documentation.



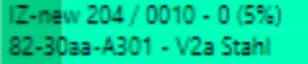
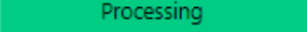
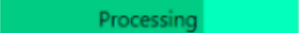
2 SFT Configuration

Title	Description	Affected module	Affected area	Status
Search & select an operation via barcode scan	The activity step “Operation block assignment” calls a dialog in which a user can select operations in order to group them in an operation block. This dialog now supports barcode scanning: After scanning an order form while in this dialog, the Shopfloor Terminal searches for the specific operation and selects it automatically.	Workbench	Shopfloor Terminal	New
Sort criteria for status details	Added the option to configure sort criteria to all SFT activities which display Status Details for selection. Each step which typically displays a list of Status Details (e.g. the recoding dialog) now has the configuration element “Sort criteria” added. This configuration lets the user define the sort order of the Status Details displayed, e.g. alphabetically ascending etc. List of steps with this functionality added: <ul style="list-style-type: none"> — Dialog for the recoding and sharing — Dialog to report Workplace malfunction — Select status detail — Select status detail for multilevel or single-level detail tree — Select split time for status detail 	Workbench	Shopfloor Terminal	New

3 FORCAM FORCE™ Common

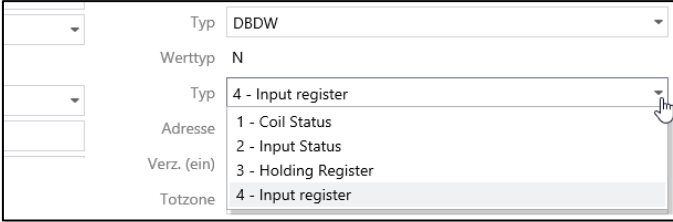
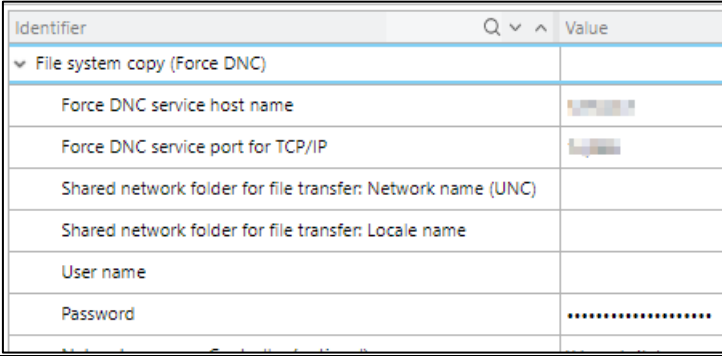
Title	Description	Affected module	Affected area	Status
Filter not translated literals for single language	<p>One of the options in the “More” drop-down in the Literal Manager is to “Show only not approved literals”. This option filters all literals that have been marked as “translation not approved” or where the translation was not provided to begin with (internal technical translated-flag set to 0). This filter affects all columns displayed.</p> <p>In order to search for not translated literals for <i>one</i> column/language only, this filter was added to the context menu after right-clicking in a cell. It then filters all not translated literals for that language only.</p>	Workbench	Literal Manager	New
Ukrainian as available language	<p>“Ukrainian” was added to the list of available languages, together with the national Ukrainian flag. Ukrainian can thus be configured as a visible language in FORCAM FORCE™.</p> <p>Ukrainian is nevertheless not an official language of FORCAM FORCE™ and all literals must be provided and maintained by the user.</p>	Workbench	Languages	New

4 Planning

Title	Description	Affected module	Affected area	Status
<p>Color legend resembles color ratio</p>	<p>The user can select a color ratio in the Gantt chart (e.g. “Ratio of target/yield quantity”) which then displays the operation in two different colors with one color being a brighter variety of the other. Example:  In this example, 80 % of the operation bar is in one color for the target quantity and the remaining 20 % of the operation bar, depicting the yield quantity, are shown in a different color. The color legend at the bottom of the Gantt chart, however, used to display only the default (darker) color. Example:  The color legend now displays the entire color ratio with two different colors in order to resemble the selected ration. Example: </p>	Workbench	Digital Planning Board	Changed
<p>Actual data & Remaining production time</p>	<p>In addition to the previous mode for visualizing planning operations based on their planning data (or master data), the Digital Planning Board can also visualize and plan based on the real values (or variable data of operations) with the new “Actual Data Mode”. This means that the user receives precise information about the effective or “real” operating scenario. In contrast to the more or less “static” values of master data, actual and master data can differ, e.g. due to earlier or later start of an operation, interruptions and downtimes, etc. The actual dates, remaining times and quantities as well as the expected end of the operations based on the actual data provide valuable information about the current situation in production and enable more accurate and realistic planning. Interrupted operations are also represented by their actual behavior.</p>	Workbench	Digital Planning Board	New

5 Platform & Connectivity

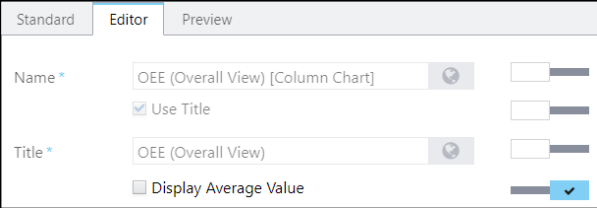
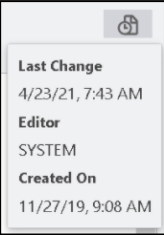
Title	Description	Affected module	Affected area	Status
“Set Active Program” for several plugins	<p>For some machine types, a program which was in the “clear program” range could not be deleted when the “clear memory” functionality was performed. The reason for this was that the program was set as the “active program” which prevented it from deletion.</p> <p>The functionality “set active program” was added to set a dummy program on the machine as an “active program” before clearing the memory so that the program to be removed will not be prevented from getting properly deleted anymore.</p> <p>List of plugins that were adjusted with this change:</p> <ul style="list-style-type: none"> — FANUC FOCAS — Heidenhain — Mazak — Siemens MCIS-RPC — FTP Filehandler — RWT — SMB — Makino 	Connectivity	Plugins general	Changed
Error Code Mapping for MT Connect	<p>The FORCE Bridge plugin for MT Connect now supports Error Code Mapping which is the mapping of error codes and corresponding texts to Status Details.</p>	Connectivity	MT Connect plugin	Changed

Title	Description	Affected module	Affected area	Status
<p>New data blocks for Open Modbus plugin</p>	<p>The Open Modbus plugin (MDC) has been adapted for the MOXA IOLogic E1210 PLC. The plugin now supports Coil Status, Input Status, Holding Register and Input Register. Previously, it only supported Holding Register. The different register types are configured as “data block” in signals. The user does not need to know each data block number but can select them in a drop-down instead:</p> 	Connectivity	Open Modbus plugin	New
<p>Credentials for FileHandlerServer</p>	<p>Added credentials (username and password fields) to the plugin configuration to allow the FileHandlerServer plugin to log in to CNC shared folder (UNC Path)</p> 	Connectivity	FileHandlerServer plugin	New
<p>New plugin: Omron</p>	<p>The Omron plugin, which was previously only released for V4, is now available for FORCAM FORCE™ and is officially supported.</p>	Connectivity	Omron plugin	New

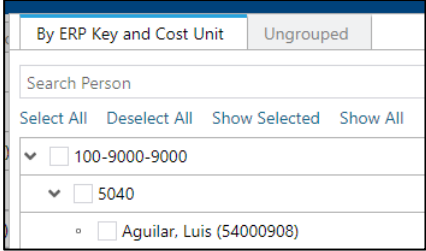
Title	Description	Affected module	Affected area	Status
Scalable BridgeAPI	<p>In order to cope with the future load on the BridgeAPI, especially from callbacks, the ffWebservice was enhanced. It is now possible to start multiple ffWebservice applications and distribute the callback load.</p> <p>Multiple ffWebservice applications are forming an Akka Cluster which communicates via TCP. Callback handlers are distributed in the cluster by EVENT_TYPE.</p>	Connectivity	BridgeAPI	New
BridgeAPI usability enhancements	<p>Enhanced the BridgeAPI usability:</p> <ul style="list-style-type: none"> — Updated role/authorization assignment: The configuration under FORCAM FORCE™ > Configurations > Modules > Webservices > API Clients now provides multi-selections for scopes and roles instead of free text. — Single URL configuration in Workbench: Consolidated URL configurations at one place by moving them from the Workbench to the common.properties. The following URL configurations have been removed from Workbench Configurations > System > Modules: <ul style="list-style-type: none"> — FFWorkbench - URL — NewOffice - URL — NewOffice-Background - URL — Webservices - URLs - FORCAM FORCE API 	Connectivity	BridgeAPI	Changed

6 Productivity

Title	Description	Affected module	Affected area	Status
<p>Optimized selection of Target Values</p>	<p>In the Reporting, the selectable Target Values are filtered by the workplace and the material filter. If a report has a workplace and/or material filter defined, the selection of those filters reduces the number of the Target Values as described below:</p> <ul style="list-style-type: none"> – If no workplace/material filter is defined or the selection of the workplace and the material filter is empty, all target values are displayed. <u>Note:</u> If a user is not a Super User, the workplaces of the user's organizational unit are used for filtering even though this user has nothing selected in the workplace filter. – Target Values of the type “company” are always displayed, independent of the workplace/material filter selection. – If one or multiple workplaces are selected in the workplace filter, only Target Values of the type “workplace” are displayed which have the workplace ID that matches the workplace filter selection. No Target Values of the type “material” are displayed if no material filter is defined or if the material filter selection is empty. – If one or multiple materials are selected in the material filter, only Target Values of the type “material” are displayed which have the material ID that matches the material filter selection. No Target Values of the type “workplace” are displayed if no workplace filter is defined or if the workplace filter selection is empty. – If one or multiple workplaces and materials are selected in the workplace/material filter, Target Values of the type “workplace” are displayed which have the workplace ID that matches the workplace filter selection and Target Values of the type “material” are displayed which have the material ID that matches the material filter selection. 	Office	Target Values	Changed
<p>Harmonized standard filters</p>	<p>The standard filters for standard reports have been harmonized by adding or removing filters from the respective reports. For example, all reports concerning only the workplace have the workplace filter added (if not already containing) while other irrelevant filters were removed (e.g. material filter, where not needed etc.).</p>	Office	Reporting	Changed

Title	Description	Affected module	Affected area	Status
<p>Display average value in reports</p>	<p>Added a functionality for custom reports to display average values (in %) in column charts and tables. In column charts such as Operating State History, where multiple columns are displayed, this feature adds another column displaying the average value of all previous columns. This feature can also be used for standard reports by activating it in the Editor tab.</p> 	Office	Reporting	New
<p>New button: Display change history</p>	<p>Added a new button with the functionality to display the date of last changes being made, creation date as well as the last editor.</p>  <p>The button was added to the following places:</p> <ul style="list-style-type: none"> — Visualization & Dashboard: Top right bar next to the export buttons — Report Editor: Top right corner 	Office	Visualization Dashboard Reporting	New

Title	Description	Affected module	Affected area	Status
<p>Manual Workplace enhancements</p>	<p>The Manual Workplace topic in FORCAM FORCE™ has been enhanced in several places:</p> <p><u>Correction</u></p> <ul style="list-style-type: none"> - Correction - Operating State Machine/Manual Workplace: Added a new operating state filter in the search page that allows searching for specific operating states via multi-selection. The filter is also added to the recoding/splitting UI as a pop-up without allowing multi-selection. - Changed mandatory filters: <ul style="list-style-type: none"> - Time Range filter (always required) - At least one of the filters below is mandatory: <ul style="list-style-type: none"> - Workplace - Order - Operation - Material - Correction -Single Quantities: Added new order and operation filters in the search page that allows searching for a specific order and operation via multi-selection. The operations will be filtered according to the selection of orders. It is now possible to search quantities with workplace, order or operation as well. Coupling with workplace, order and operation is available. Corresponding validations are included, too. <p><u>Personnel Hierarchy Administration: Multiple Assignments</u></p> <p>Added new personnel and cost unit filters in the Personnel Master Data page that allows to search for a specific person (at the Personnel Hierarchy) and cost unit (at the Personnel Cost Unit Hierarchy). The filter is categorized into two structures (tabbed view):</p> <ul style="list-style-type: none"> - “By ERP Key and Cost Unit” tab (Personnel Hierarchy) and “By ERP Key” tab (Personnel Cost Unit Hierarchy) 	<p>Workbench Office</p>	<p>Manual Workplace</p>	<p>New Changed</p>

Title	Description	Affected module	Affected area	Status
	<ul style="list-style-type: none"> - “Ungrouped tab” for list structure (default)  <p><u>Reporting</u> The report “Message Log” is extended to display the following message types (events):</p> <ul style="list-style-type: none"> - Overhead Cost Control - Operation Clamping Status - Operation Production Status - Time and Attendance - Time and Attendance Break <p>A new column “Overhead Cost” is added to the report to show the overhead cost in case of “Overhead Cost Control” message type.</p>			
<p>New OLE reports</p>	<p>Added the following new time interval-based reports:</p> <ul style="list-style-type: none"> - OLE Development: Chronological development of the OLE for a specific hierarchy element from a personnel hierarchy - Personnel Development Comparing aggregated personnel times and person-related quantities per hierarchy element from a personnel hierarchy (uses archived data for metric calculations) - Personnel Report: Development of aggregated personnel times and person-related quantities over time for a specific hierarchy element from a personnel hierarchy 	<p>Office</p>	<p>Reporting</p>	<p>New</p>

Productivity

Title	Description	Affected module	Affected area	Status
	<ul style="list-style-type: none"> — Personnel Report (Online): Development of aggregated personnel times and person-related quantities over time for a specific hierarchy element from a personnel hierarchy (uses online, i.e. live data for metric calculations) — Personnel Development: Comparing aggregated personnel times and person-related quantities per hierarchy element from a personnel hierarchy — Personnel Development (Online): Comparing aggregated personnel times and person-related quantities per hierarchy element from a personnel hierarchy (uses online, i.e. live data for metric calculations) 			
Global Reporting	<p>Introduced Global Reporting. This feature is intended to give customers, who have FORCAM FORCE IIOT installed in several locations, an option to analyze their data coming from all these installations. This feature is optional and needs to be licensed explicitly by the customer. For more information regarding this feature, please consult the FORCAM Professional Service.</p>	Office	Reporting	New

7 Appendix

Abbreviation	Meaning
Akka Cluster	Cluster extension from Akka Technologies
CNC	Computerized Numerical Control
MDC	Machine Data Connection
OLE	Overall Labor Effectiveness
PLC	Programmable Logic Controller
SFT	Shopfloor Terminal
TCP	Transmission Control Protocol
UNC	Uniform Naming Convention