ENISCO FORCAM
smart factory experts

FORCE MES FLEX

Functional Release Notes

Version 5.12.20

Release Information

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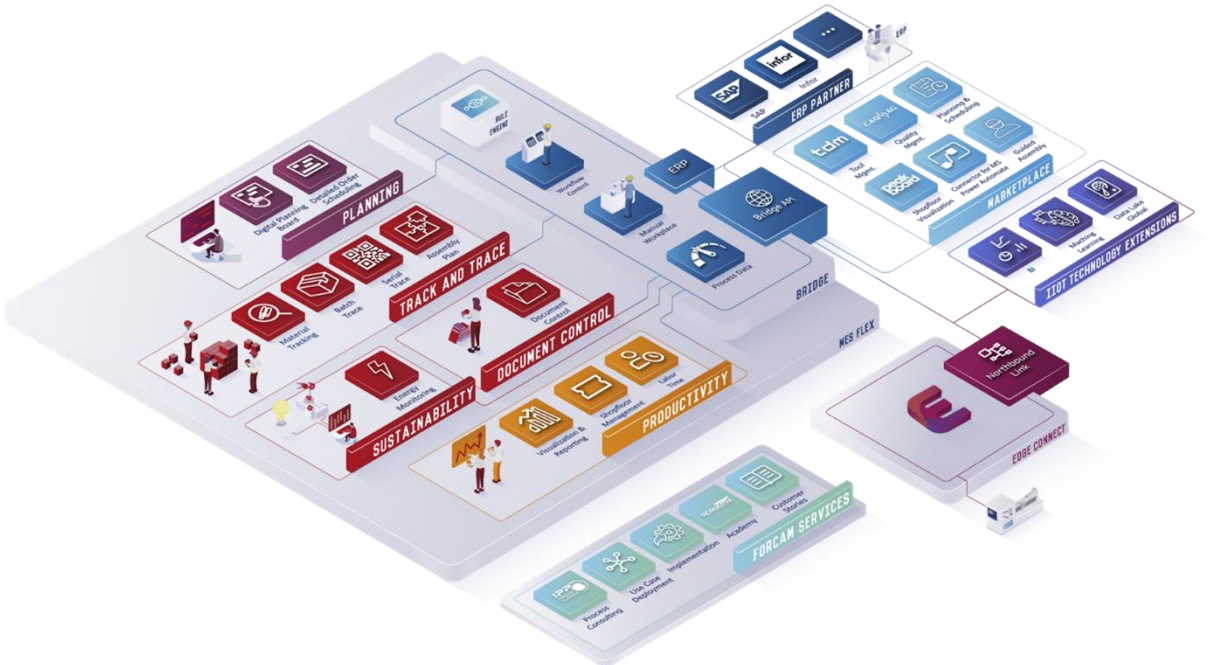
Overview

FORCAM provides companies with all the information they need to control and optimize their production. The modular IIoT solution FORCAM FORCE MES FLEX 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 MES FLEX further, to enrich it with functions, offering customers consistent growth and greatest possible use. For this purpose, several releases are published throughout the year.

This document lists functions that have been added or changed during the **5.12.20** release. It serves as an overview of the most important features to use FORCAM FORCE MES FLEX in the best possible way.

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



Productivity

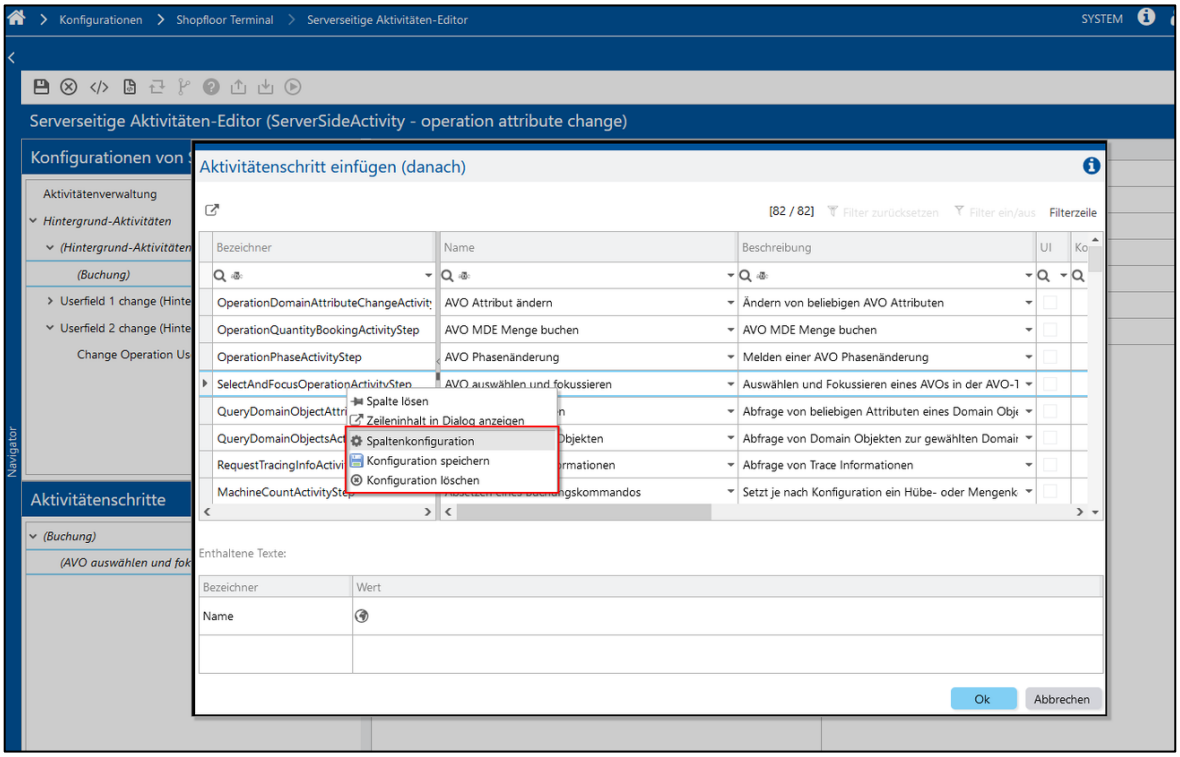
ActivityStepChooser Improvement

Affected module	Affected area	Status
Workbench	SFT	Changed

SFT - SFT Configuration ActivityStepChooser

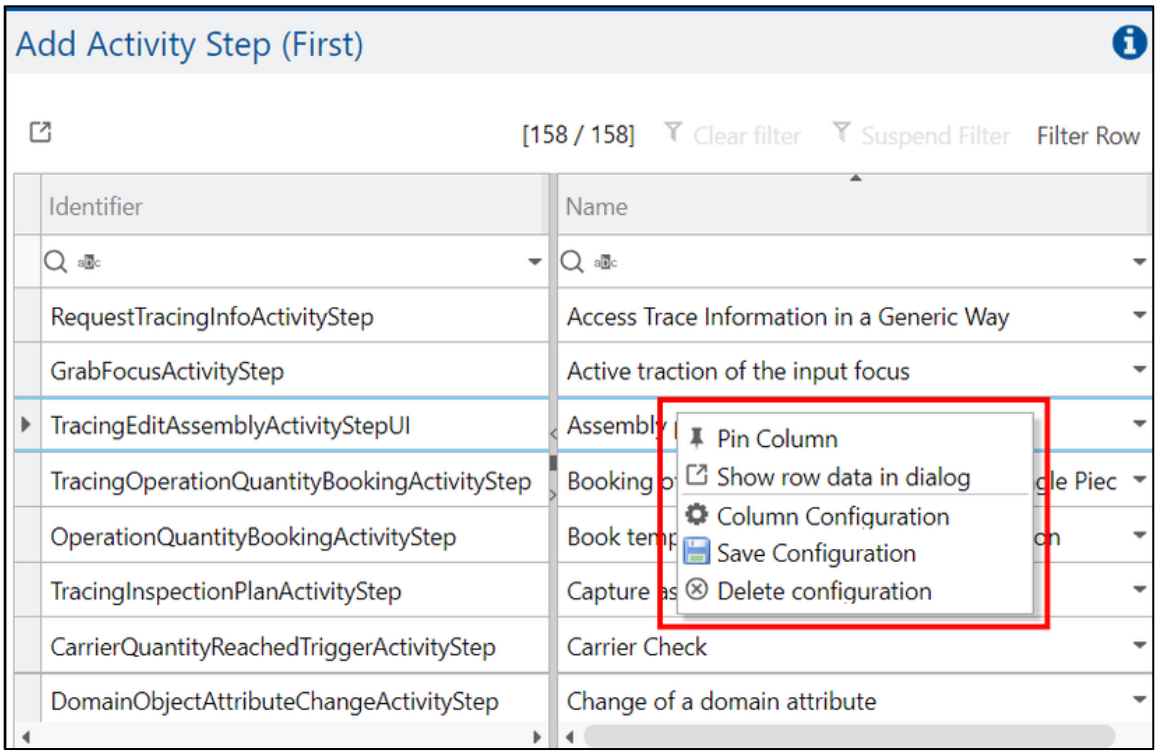
Increased sizing of first three columns with most relevant information.

ⓘ User individual configuration regarding columns, column size & sorting etc. used by ActivityStepChooser is available via context menu (see screenshot below).

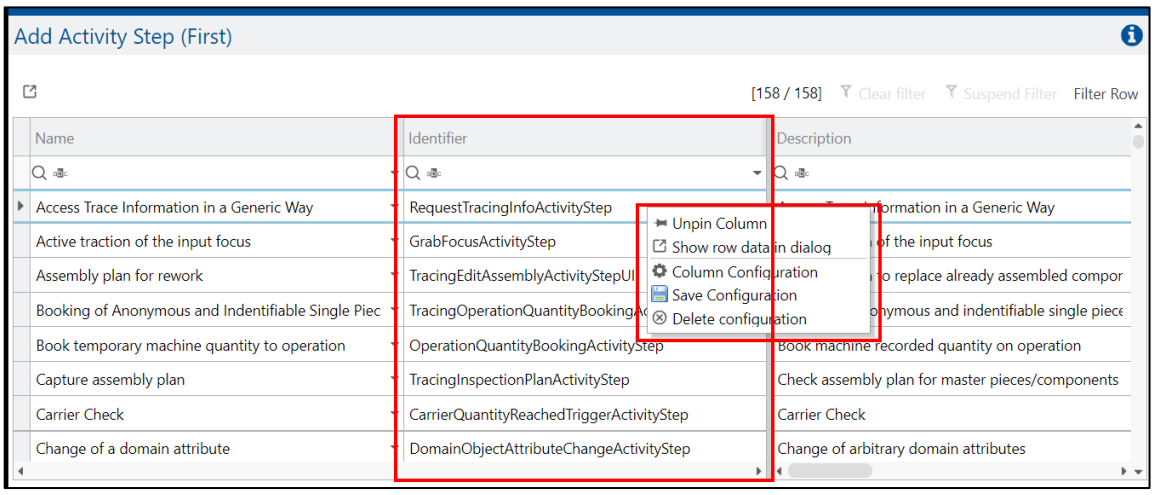


Additional Configuration

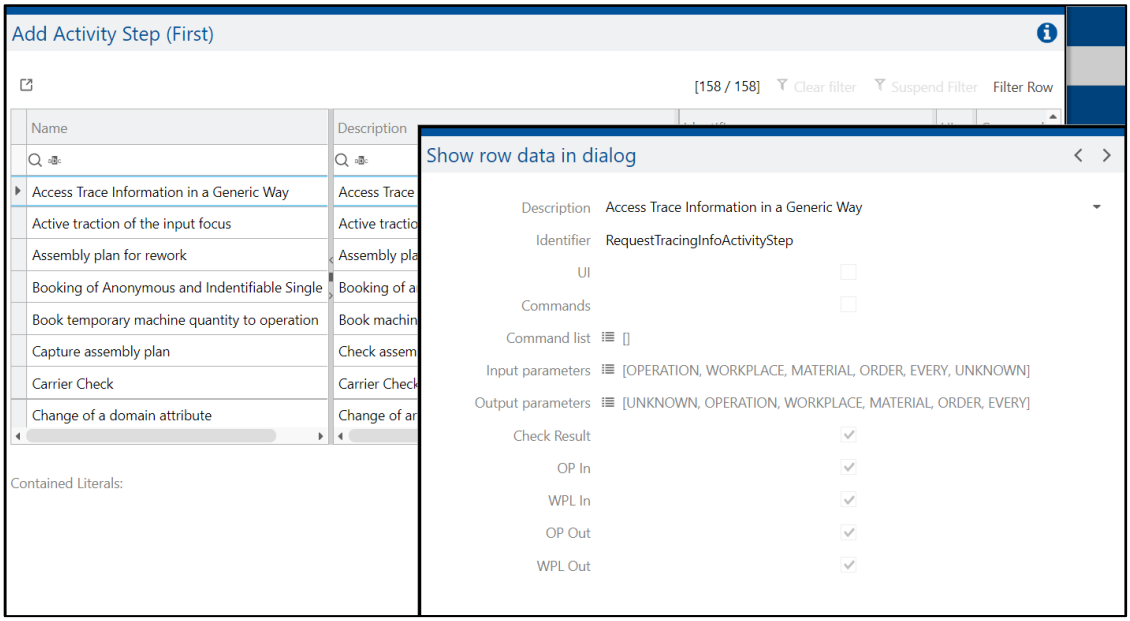
There are several other configurations for the activity step chooser which shows up on right click in the table.



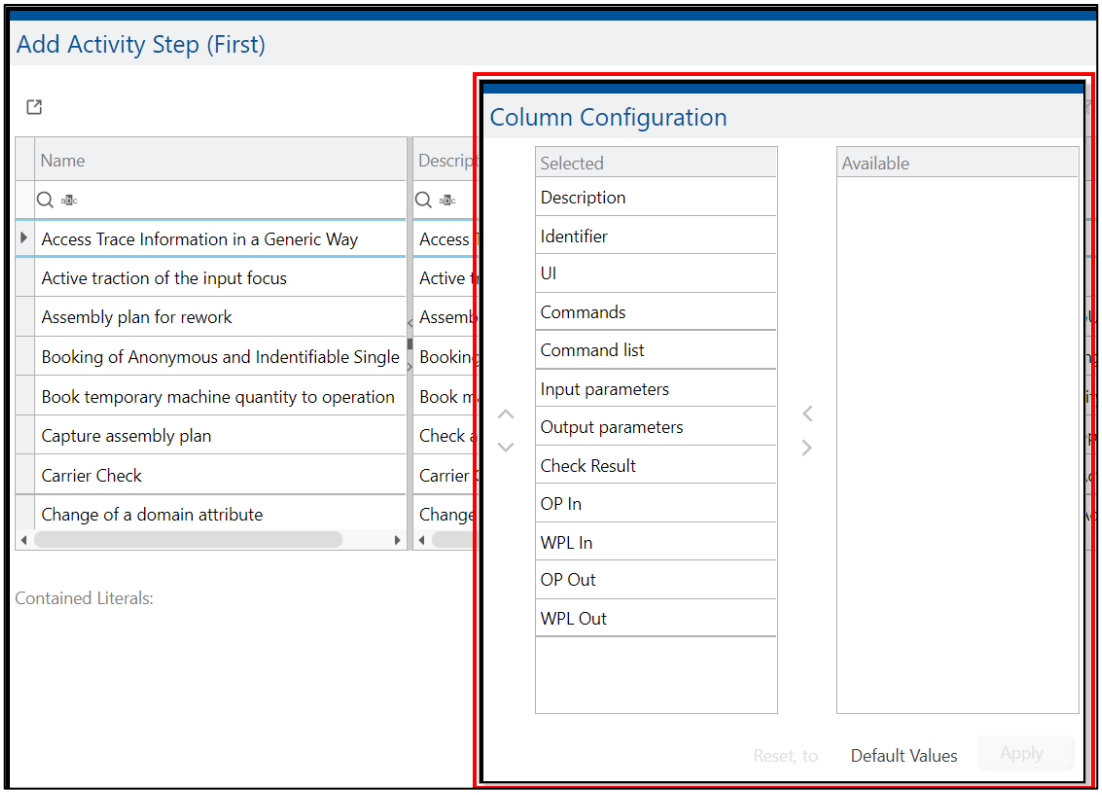
- **Pin Column** - the selected column will be pinned to left panel.
- **Unpin Column** - the column(s) will be unpinned from left panel.



- **Show row data in dialog** – This will display the details for the selected activity in dialog.



- **Column Configuration** - Users can configure the columns which they want to see in dialog.



- **Save Configuration** - If user want to resize the table column as per the requirement and save this configuration for future, the save configuration will save the configuration.
- **Delete Configuration** - User can restore the default configuration with delete configuration.

Duration Filter for Operating State Corrections

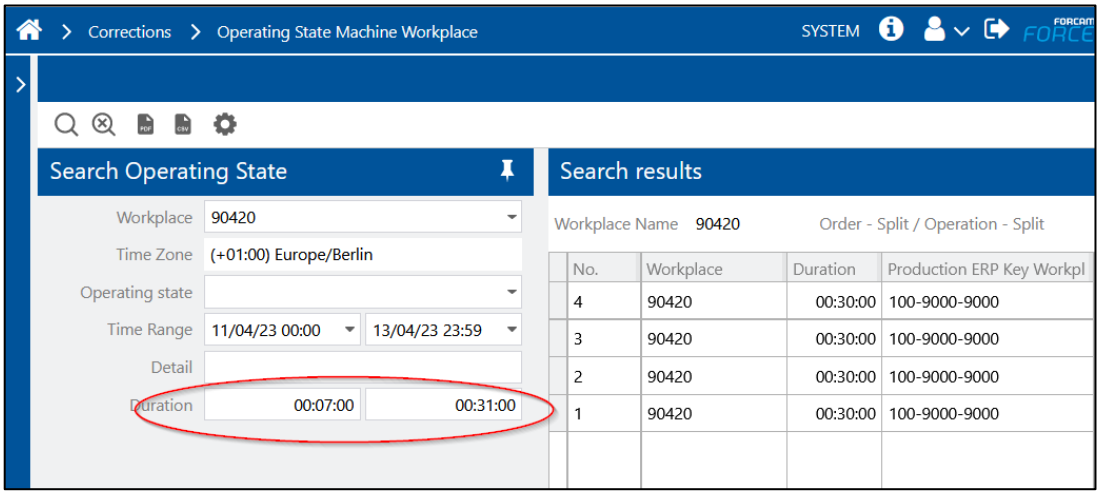
Affected module	Affected area	Status
Workbench	Corrections	New

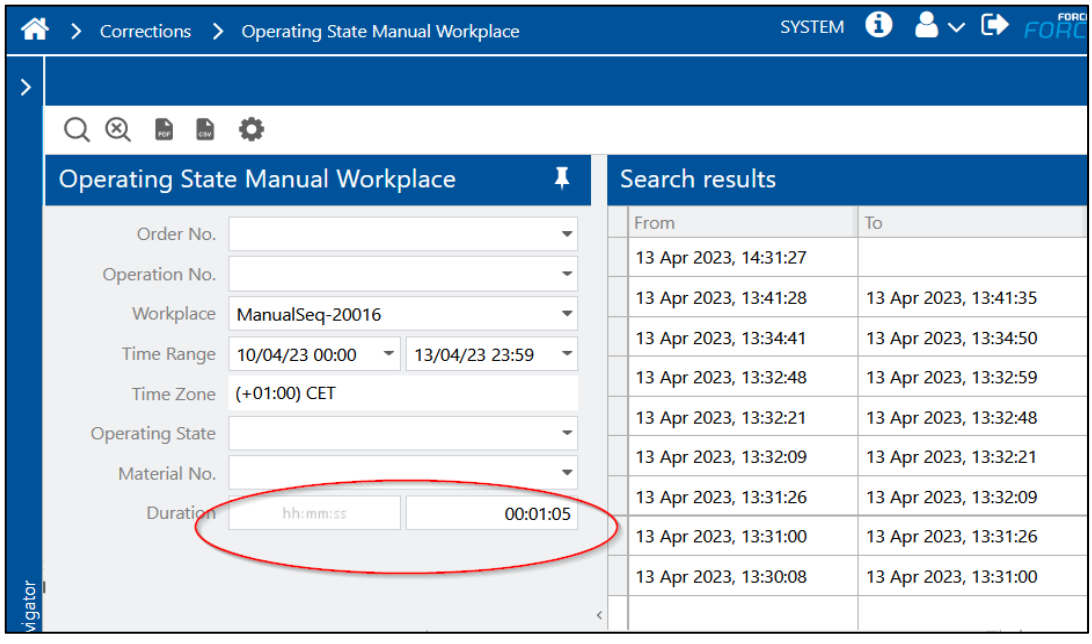
Operation State Machine Workplace & Operating-State-Manual-Workplace

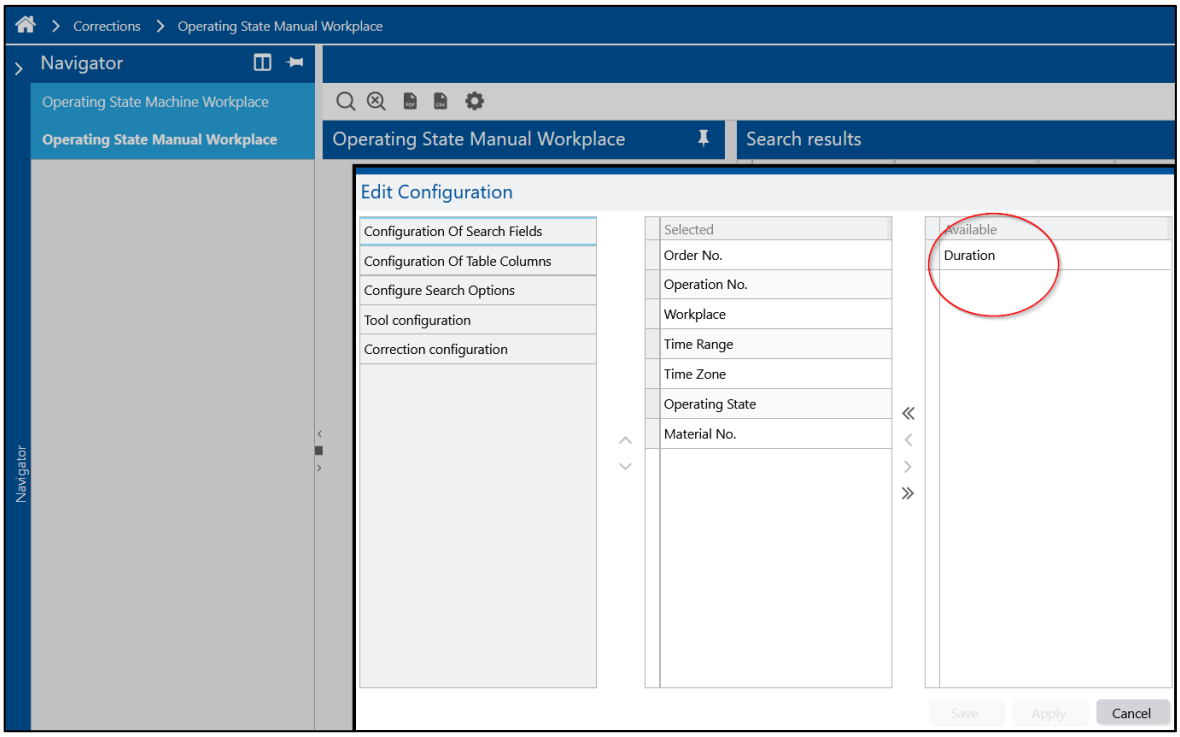
New **Duration** search filter available. Works as follow:

- only left value given => greater or equal to
- only right value given => lesser than
- both given => between
- none or equal values => no filter

Invalid input is marked as erroneous. The duration filter can be additionally chosen in the Search-Filter-Configuration.







Enhanced Ticket Creation: Flexible Selection and Data Validation

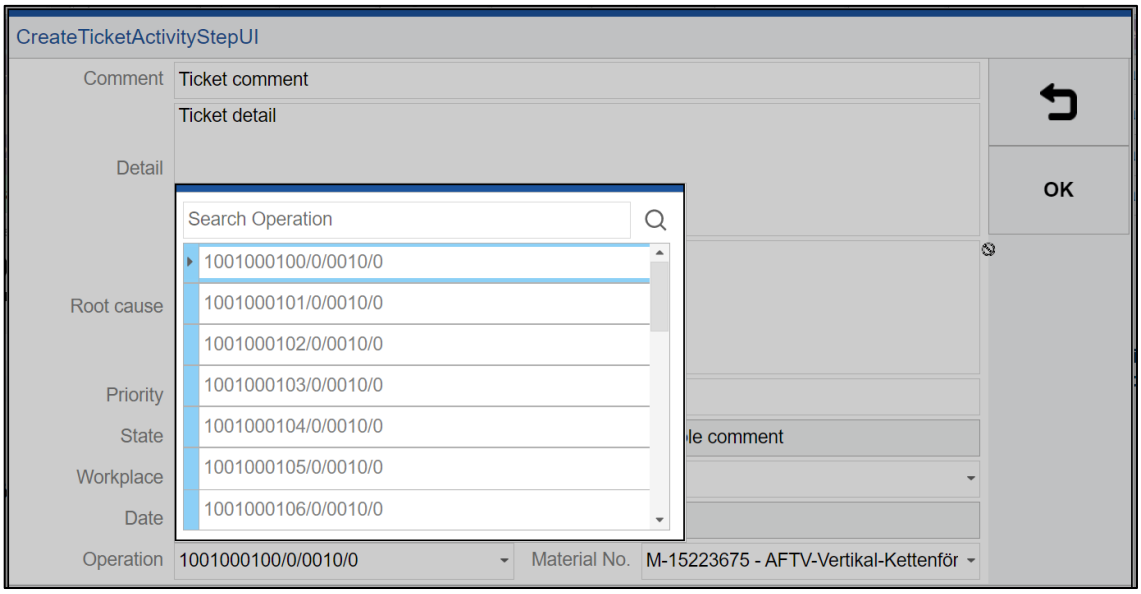
Affected module	Affected area	Status
FFWorker	SFT	Changed

SFT activity step: Dialog for the submission of a ticket (CreateTicketActivityStepUI)

In the step UI, several values are displayed to the user, both for workplace and operation. After this extension, the user can now select workplace, operation and/or material along with a title, a description, a root cause and the priority for the ticket to be created. Workplace, operation or material are now made non mandatory fields, however the data consistency is checked before creating the ticket. Data validation is done for valid pair of workplace/operation and operation/material.

The workplace/operation/material selector popup works like a single selection combobox where on clicking a row, the popup is closed and selected row is processed as respective value of workplace/operation/material field. If a value is present in field of workplace/operation/material, the selected row would be preselected in the combobox and on click of selected row implies the deselection of value and the respective workplace/operation/material field gets selected with empty value.

The combobox popup also have a search field to narrow down the popup entries. It works as regular string search. Sample screenshot of operation selector popup is given below.



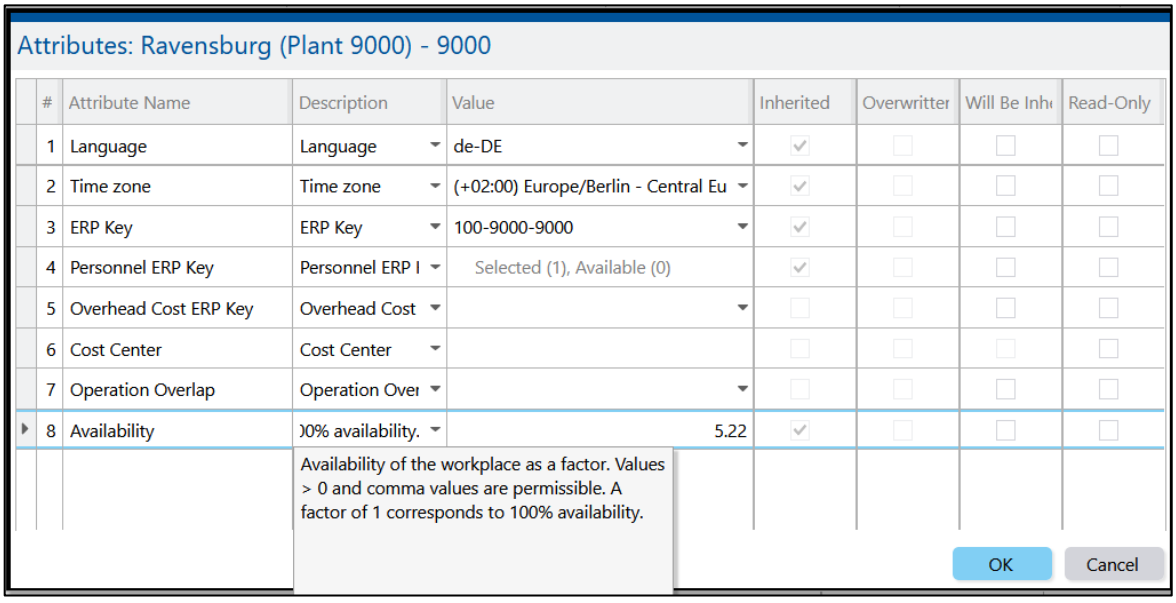
DPB – Extension with Workplace Availability

Affected module	Affected area	Status
Workbench	Configuration	Changed

Master Data - Workplace hierarchy (ORG)

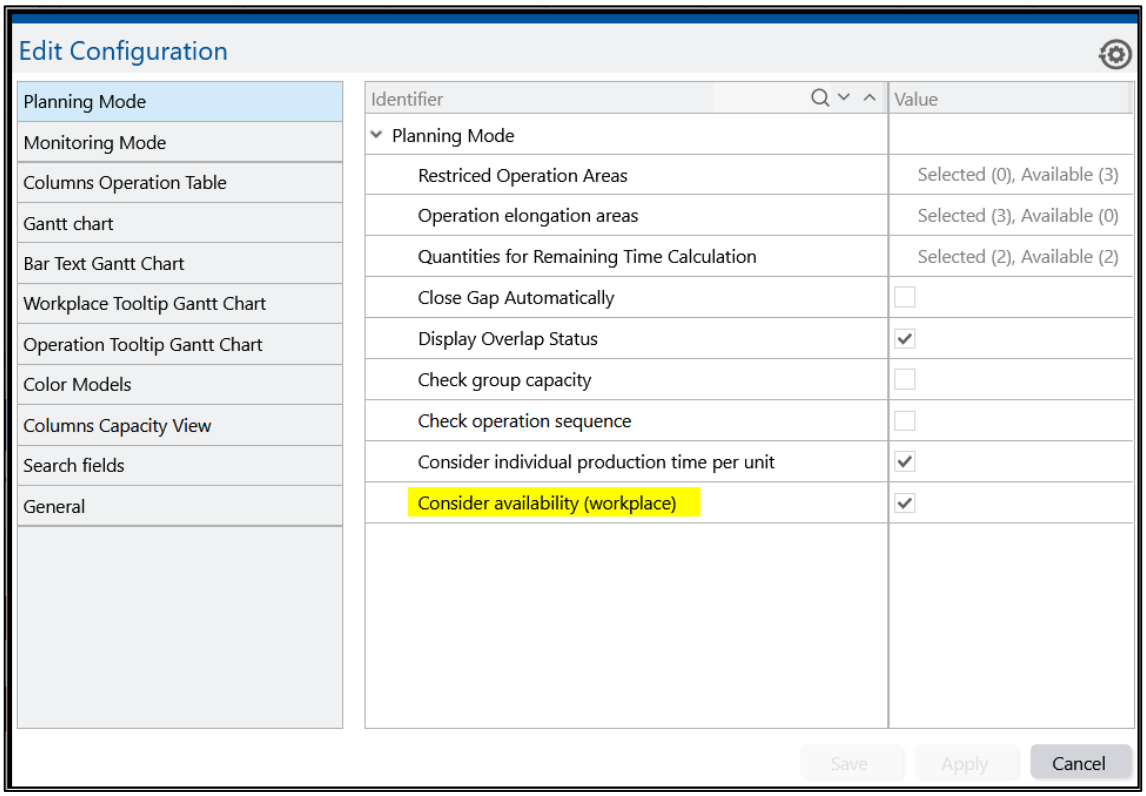
The availability factor is a workplace dependent attribute. It is configurable in the **ORG workplace hierarchy** and follows the usual rules of hierarchy attributes. If not, explicit set it defaults to 1.0, meaning 100% of availability.

The value is a fractional number and must be >0 (greater than 0). For example: an availability of 0.25 means the workplace does have an availability of only 25%. In contrast, an availability factor of 2 defines that availability is twice as high.



Digital Planning Board

The consideration of the availability factor is a planning relevant configuration. It has to be enabled to get effective.



Consideration within DPB

The availability is impacted accordingly with each planning action, if applicable. The following applies:

- The factor is considered only for the production time of an operation, not for the setup time.
- Selected operation elongation areas within the DPB cfg are not relevant, as the factor is only wp dependent.
- Calculation principle: (RemainingQty * TimePerUnit) / availability-factor.
- The availability factor never applies if an operation is assigned to a wp-group.
- The availability factor is also considered with creation of an operation split (source and split), if applicable.

Force Common

Tomcat Hardening 10.7 and 10.18

Affected module	Affected area	Status
Forcam FORCE	Apache Tomcat	Changed

Disable Session Facade Recycling in Tomcat

Tomcat supports the notion of session facade recycling. This means, a session-specific facade object can be retained for later reuse in separate sessions for performance reasons. With this change facades are not reused anymore by any Tomcat installed through Forcam FORCE.

Print Final web.xml During Tomcat Start

Tomcat supports configuring application settings both via web.xml and annotations. If annotations are in use, by default no output is provided in the Tomcat log highlighting the actual effective configuration used at runtime. With this change the effective configuration is printed to the Tomcat log to for forensic purposes.

ⓘ Results are written to the catalina.log file under tomcat/log.

Support for New MongoDB Version

Affected module	Affected area	Status
Forcam FORCE	MongoDB	Changed

As Mongo DB Version 4.2 is not supported any more. It is now upgraded to Mongo DB 5.0 version. More information in the Technical Release Notes 5.12.20.

FFSetup

Removal of org.hibernate.criteria API

Affected module	Affected area	Status
FFWorker	SFT	Changed

In preparation of the upgrade to Java 17 the deprecated org.hibernate.criteria API, which will be not supported with Java 17 anymore, has been removed. More information in the Technical Release Notes 5.12.20.

Appendix

Abbreviation/Term	Meaning
API	Application Programming Interface
DB	database
SFT	Shopfloor Terminal
UI	User Interface