SIMATIC IT Preactor software is a family of production planning and scheduling products that improve the synchronization of your manufacturing processes, providing greater visibility and control. This enables you to increase resource utilization and on-time delivery while reducing inventory levels and waste.

SIMATIC IT Preactor APS is a highly customizable capacity planning and scheduling package.

Summary

- Secondary constraint group functionality
- Capable-to-promise (CTP) order inquiry
- Data filtering and highlighting improvements
- New operation properties tool
- Improved shift calendar storage and handling
- External data mapping
- Open data protocol (OData) sources
- Includes latest version of Microsoft Report Viewer 2015
- Configuration enhancements

Benefits

- Enhances order inquiry capabilities for accurately promising orders
- Improves modeling of additional constraint groups
- Enhances integration with SIMATIC IT Unified Architecture Discrete Manufacturing
- Improves integration with third-party products and shift data
- Provides powerful new data visualization tools
- Creates feature-rich visual reports and dashboards

What’s new in SIMATIC IT Preactor APS 2016

Featuring improved order inquiry, integration, reporting and visualization

Professional, and improved in SIMATIC IT Preactor AS Ultimate. The software now includes a standard secondary constraint group table that allows the grouping of like constraints such as tools or fixtures. In SIMATIC IT Preactor AS Standard, a group from this table can be assigned to each operation, allowing the scheduling engine to make a selection from the constraints based on their current availability. The items in the group can be ranked to reflect usage preferences. In SIMATIC IT Preactor AS Professional, two groups can be assigned to each operation, and in SIMATIC IT Preactor AS Ultimate, many additional references can be added to the constraint groups table.

Capable-to-promise order inquiry

The order inquiry functionality of SIMATIC IT Preactor has been enhanced to take into account the availability of materials and, if required, produce subassembly and purchase orders. This enables the system to give a more accurate CTP date for inquiries.

The system can now hold information about produced parts and purchased materials, enabling the functionality to calculate accurate production times for subassemblies and take into account lead times and reorder quantities for purchased items.

In a SIMATIC IT Preactor AS Ultimate system, the built-in logic can be extended and altered. This allows alternative logic to be used when creating the orders required to meet the demand from the inquiry.
What's new in SIMATIC IT Preactor APS 2016

Data filtering and highlighting
An essential part of interacting with a scheduling system is the ability to quickly identify and select the data that you want to work with. This requirement has driven improvements so data can be filtered and highlighted on the planning board in SIMATIC IT Preactor 2016. For rapid, ad hoc filtering across multiple fields and values, the editor window supports multiple selection of values. In addition, an advanced filtering tool has been added to allow the creation of complex composite filters, which can be saved for rapid re-use. The user then has the option of automatically applying these filters as highlights, which enables their use for scheduling operations. This creates a powerful tool for both day-to-day usage and prototyping automated scheduling rules. As part of these changes the ability to show additional operation information has been added to the unallocated operations window.

New operation properties tool
The operation properties tool is the new interface for controlling the look of the bars and the data represented by them in a Gantt chart. The bar colors, pattern and text can all be defined with the resulting changes instantaneously applied to the overview. In addition to the previously supported modes of bar coloring, random color assignment or color derived from a field, there are several new modes that allow coloring from a predefined theme and fixed colors. There is also the capability to assign a color range on the basis of a numerical field. This option turns the bar color into a powerful visual tool for spotting trends and outliers in the data. Another major enhancement is any valid field from a related table can be used to color the bars or the text displayed on them, with no requirement for software configuration.

Improved shift calendar storage and handling
There are a host of new integration possibilities for users due to changes to the underlying way that calendar information is held in SIMATIC IT Preactor. Now all of the calendar information for equipment, operators and tools are held in standard SIMATIC IT Preactor tables, thus the full functionality of the integration features of SIMATIC IT Preactor are available for use with them. This has simplified and expanded the process of importing and exporting calendar information and enabled the use of application programming interfaces (APIs) to programmatically interact with the calendar information. These changes have improved performance characteristics when loading and committing the calendar data in some remote database scenarios.

There are also changes in the way shift calendar data is handled by the scheduling engine. By changing the loading of calendar information from a static, upfront process to a dynamic, on-demand process, improvements have been made in both memory usage and system load times. These improvements are particularly noticeable in complex, high-data volume scenarios.

External data mapping
SIMATIC IT Preactor APS 2016 software brings a new approach to integrating with third-party systems for improved maintainability and ease of use. Known as external data mapping, this approach allows for data from third-party systems to be consumed by SIMATIC IT Preactor, even though that data is clearly owned and maintained in the third-party system. All the conventional integration approaches remain, such as scripted imports.

Applicable to all advanced planning (AP) and advanced scheduling (AS) products, external data mapping builds on existing integration techniques, adding new options for system integrators and giving clearer demarcation for users. Third-party data can also be embellished with additional information in SIMATIC IT Preactor. For example, if you carry an inventory of equipment in a database, that can be mapped to SIMATIC IT Preactor and none of that mapped data can be altered. However, information that may be absent (such as run rates) can still be owned by and maintained in SIMATIC IT Preactor.
Open data protocol data sources
SIMATIC IT Preactor APS 2016 includes the ability to use open data protocol (OData) sources as a provider. This can be used for both conventional import and external data mapping, and allows for data surfaced through a representative state transfer (RESTful) API to be consumed directly into SIMATIC IT Preactor. This new integration technology is accessible from the familiar integration wizard already present in SIMATIC IT Preactor. Once the data source is selected and configured, the data mapping steps are identical to the familiar process used for existing import and export scripts.

Microsoft Report Viewer 2015
SIMATIC IT Preactor APS 2016 also includes the latest version of Microsoft Report Viewer software in the sequencer window. This allows the creation and viewing of reports built using Microsoft Report Builder 3, which adds several new features, such as sparklines, data bars, indicators and maps. For users and implementers accustomed to extending and building their own reports, the parts feature allows the re-use of report elements across multiple reports. This accelerates the process of creating reports and deployment.

Encryption
Also new in SIMATIC IT Preactor APS 2016 is the capability to encrypt sensitive data held in the SIMATIC IT Preactor database. The fields to be encrypted can be configured by the users or system implementers. Encryption can be applied to any data, however, the primary purpose of this functionality is to allow the encryption of user credentials held in the system, enabling access to, and interface with, secure systems.

Configuration enhancements
SIMATIC IT Preactor APS 2016 offers a number of functional enhancements targeted at the SIMATIC IT Preactor AS Standard and SIMATIC IT Preactor AS Professional user, including:

- The capability to model overall resource efficiency
- The inclusion of priorities in the trace chart window and the weighting rule
- The extension of material control functionality in SIMATIC IT Preactor AS Professional to allow linking to many operations with the same operation number and different names

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