Opcenter™ Execution Discrete 4.4, which is part of the Xcelerator portfolio, the comprehensive and integrated portfolio of software and services from Siemens Digital Industries Software, is designed to help you satisfy the most common needs of industries. You can do this specifically where macro areas are dedicated to executing sequential discrete manufacturing functions to produce the desired product. These include:

- Automotive tier suppliers
- Aerospace and defense tier suppliers
- Energy and utilities
- Industrial machinery and heavy equipment
- White goods and home appliances
- Complex parts manufacturing and assembly

By using Opcenter Execution Discrete you can leverage specialized out-of-the-box (OOTB) functions for complex assembly manufacturing and job shop environments (high complexity, low volume) and automated repetitive manufacturing industries (configurable products, high volume).
Features

Display files in PLMX Viewer in 3D
Using Opcenter Execution Discrete helps you display PLMX files in 3D to perform your job with greater ease and precision. Operators can attach these files to a workorder operation and use 3D for visual insight on how to perform a certain task. For example, you can display a certain object in 3D to focus on the exact point of its surface where a hole should be drilled or where a rivet should be inserted. However, operators will need to perform additional implementations to fully exploit the functionality.

Enhancements to the high automation landing page display
We have made the following enhancements to the high automation landing page display:
- Set the percentage of the overall screen width that will be occupied by the document preview
- Determine which header bar fields are visible

Header bar field visibility on the operator landing page
In the same manner as the high automation landing page, you can determine which header bar fields are visible on the operator landing page.

Document app adoption
Opcenter Execution Discrete 4.4 includes document management functionality provided by Opcenter Execution Foundation. You can use Opcenter Execution Discrete 4.4 to leverage existing documents that have been imported into the system and associated with entities in previous versions of the product, and automatically migrate them to the document app.

Additive manufacturing powders in containers
In the additive manufacturing (AM) features of Opcenter, you can now load powder batches into dedicated powder containers that connect to 3D printers. This allows you to move the entire content of the container to the 3D printer. Previous functionalities, such as replenishing the powder batch quantity, now apply also for batches loaded in containers. In addition, you can track the identifier of the container used during previous 3D printing operations and view the related history on the powder genealogy page.
Screwing operation management
Using Opcenter Execution Discrete 4.4 can help you manage screwing operations to send values to the automation layer and receive the corresponding results in cases where the integration is correctly configured, so you can accurately trace the related data during production execution. You can also use screwing tools when executing workorders. A dedicated task on the operator landing page enables you to activate the screwing tools so they can monitor the result of the operation. In addition, it is possible to see the values collected on the genealogy page and on the workorder history.

Bill-of-materials and notes improvements
Another new feature in Opcenter Execution Discrete 4.4 is the traceability indicator. This indicator tells you if the material is serialized. You can now navigate the technical drawings or documents related to material directly from the bill-of-materials (BOM) by clicking on the document icon. You can now see the related notes on the document preview.

Product configurations
Using the product configurations allows you to customize and produce the product based on the enterprise resource management (ERP) order details. Each product configuration is related to a final product type and final product family to better categorize the output of a production line. Once created, you can define these product configurations by associating them with either two structures, the bill-of-features (BOF) or the BOM. You can then use the system to validate these structures to produce the final product type and for the associated ERP orders to be valid and scheduled. The product makes it possible to set validity checks for the BOF and BOM making up the product configuration associated with the final product type. Setting validity checks means freezing the structures of that specific product configuration. Then if the system validates them, you can use them to produce the final product.

Production flow control
With the new production flow control diagrams, you can use business logic during production to define a set of relevant business milestones and connect them through transitions for a specific final product type associated with the material tracking unit (MTU). You can create milestones and associate them with the following to perform a transition:
• Checks: preliminary conditions that must be satisfied to allow the MTU to enter a milestone
• Attributes: executing the business logic once the MTU enters a milestone
• Actions: executing non-transactional operations after the MTU has completed the transition from a milestone to the following one
During production execution, you can check which milestones of the production flow control diagram are available for the MTU to declare milestones according to priorities and manually perform the corresponding transitions according to production needs.

In addition, the system automatically tracks the outcome of checks, attributes and actions executed at runtime when a transition between milestones is completed.

**Inspection master plans and inspection orders**

You can now perform inspection not only during the execution of a work order, but anytime customers need it. Siemens made this possible by introducing the underlying platform and adopting Opcenter Execution Discrete, equipped with inspection master plans and inspection operations. You can use Opcenter Execution Discrete 4.4 to generate these inspection orders and execute them at runtime.

Inspection orders are based on the manufacturing context, specifically the produced material or the piece of equipment producing it. You can use the triggered quality inspections to manage any of the supported quality characteristics (attributive, variable and visual) as well as any sampling frequency (100 percent time-based and part-based). If the system is properly configured, nonconformances of type quality are automatically raised in the case of failures traced during the inspection.