ORACLE CONFIGURE TO ORDER SOLUTION

ORACLE CONFIGURE TO ORDER SOLUTION PROVIDES SUITE LEVEL SUPPORT FOR YOUR CONFIGURED BUISNESS. KEY FEATURES INCLUDE:

- Create and maintain assemble to order or pick to order configuration models in an intuitive modeling environment
- Capture configured product demand with an intuitive guided selling configuration session
- Plan and manage complex models and configurations across the supply chain
- Pre-configure popular configurations at any level, forecast and stock to reduce lead time on future orders
- Perform real time, accurate capable to promise on your configurations at the time of order capture, no matter how complex your supply chain
- Automatically create all data required for production or purchase of your configuration throughout the supply chain
- Automatically create jobs, flow schedules, purchase orders and internal requisitions directly from the sales order
- Monitor detailed order status throughout the production or purchasing process

In today's business environment, customers are demanding products that are tailored to their unique specifications. Successful companies must provide customized versions of products, at any volume and ship them from/to anywhere in the world. With Oracle's industry-leading Mass Customization solution, you can build or source complex, customized products by using Oracle Configurator, Oracle iStore, Oracle Order Management, Oracle Advanced Planning and Scheduling, Oracle Purchasing and the Configure-to-Order capability of Oracle Discrete and Flow Manufacturing. The Oracle Configure to Order Solution is part of the Oracle E-Business Suite, an integrated set of applications that are engineered to work together.

Overview of Configure to Order (CTO)

To succeed in today's business environment, your enterprise must quickly bring new products to market, respond to changes in demand, and make and deliver high quality, low cost products. Oracle's CTO Solution empowers your enterprise to thrive in this environment by providing a comprehensive mass customization solution for any engineer-to-order, build-to-order, assemble-to-order, and purchase-to-order environment. Your sales representatives or the customers themselves can quickly record customer requirements over the Internet and tailor complex product and service configurations to meet those needs. With Oracle configure-to-order features, you can streamline configuration management and deploy an efficient build-or-purchase-to-customer-demand solution with the shortest possible fulfillment cycle times.

Leverage Product Development
Model Structure Definition
Bring customized products to market quickly and efficiently by leveraging a centrally maintained configuration model during the product development process. The full integration of Oracle Inventory, Oracle Bills of Material and Oracle Configurator provide an integrated configure-to-order model definition and single set of product structures that support all Oracle Applications.

Use Oracle Bills of Material to define model and option bills of material. Your bills of material can be pick-to-order (PTO) models whose options are pick-from-stock items as well as assemble-to-order (ATO) models that use flow or discrete manufacturing for assembly, or purchasing for procurement. The model bills of material can have automatically included items, optional items, groups of optional

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items and other models. Planning percents are used to estimate product and option mixes.

Figure 1: Indented Bill of Material for a Custom Laptop ATO Model

Model definitions also include specifying discrete and flow routings (if applicable), lead times, and costs that are then used in downstream processing to create unique configuration item routings, and calculate lead times, and costs.

Your model bill of material can specify option dependent events in the model item routing, and based on the customer's configured order, the configured item routing will have the appropriate events.

The same model structure may be used in Oracle Configurator Developer to create an interactive selling application that allows people with minimal or no training to produce error free orders for one of a kind products.

Capture Configured Product Demand

Customers today want to shop, configure, and order customized products and services with the click of a button anywhere, and at anytime, via the Internet. Oracle's CTO Solution leverages Oracle Configurator, Oracle iStore, Oracle Sales Online, Oracle Order Management Applications, and Oracle Advanced Planning and Scheduling to enable this process:

- create and manage sales opportunities
- deploy interactive selling sessions to capture customer requirements and map them to a set of products, systems and/or services
- create configured quotes
- convert configured quotes into error free orders for order fulfillment
- promise accurate delivery dates
- price based on discounts and promotions
- fulfill using workflow enabled order processes

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Guided Selling and Error Free Orders

With Oracle Configurator, customers can configure complex custom products and services that meet their needs. Through an interactive guided selling session, customer requirements are gathered and mapped to a set of product options. As the customer provides information, follow-on questions and options are focused to include only the choices that fulfill customers' requirements. During the configuration session, the interactive engine provides real-time feedback, ensuring that valid solutions are provided.

Figure 2: Oracle Configurator guides the customer to the best selection

Oracle Configurator supports multiple sales channels from a single, centrally maintained configuration model. Oracle Configurator is integrated with Oracle Sales Online, Oracle TeleSales, Oracle Quoting, Oracle Sales Contracts, Oracle iStore, and Oracle Order Management. Oracle Configurator can also be integrated with custom, web-based applications.

Accurate and Real-Time Capable to Promise

Win more business by providing customers accurate, real time information on global product availability. Oracle's CTO Solution leverages Oracle Order Management and Oracle Advanced Planning and Scheduling (APS) to provide you with sophisticated, fast, accurate, and flexible order promising for your PTO and ATO orders - including multilevel global supply chain Available to Promise (ATP), Capable to Promise (CTP), and Capable to Deliver (CTD). Your model configurations can be sourced from one or many internal or external facilities, and can be restricted based on the specific options chosen by the customer. After product options are selected, global order promising will first check to see if the ordered configuration matches an existing configuration in the system. If it does, it performs capable to promise checks to choose the best source, and get an estimated product availability date based on the matching configurations supply and capacity. If no match is found, or no supplies exist for the matched item, the capable to promise checks are performed off the model and options selected. This gives you the flexibility to pre-build popular configurations, or use up excess inventory caused by previous order cancellations.

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Interactive Pricing

Oracle Order Management and Oracle Configurator provide prices for models, option classes and options during the configuration session. As you choose your options, the discounted price of the option is displayed and included in the total price of the configured product. This enables you to immediately see the effect in the total discounted price of the different options you choose. Updated discounted option level pricing coupled with Oracle Order Management's multidimensional pricing data model provides maximum pricing flexibility for customized products.

Workflow Enabled Configuration Order Fulfillment

Achieve maximum process flexibility with workflow enabled configuration order fulfillment. The configure-to-order process is Oracle Workflow-enabled, allowing you to include configure-to-order operations in a workflow definition. The configure-to-order process is broken down into modular activities that are defined in a workflow according to specific business rules. This flexibility allows you to streamline your configure-to-order process to fit your specific business operations by including only the operations required by your business needs.

Reserving On-hand Configurations

With Oracle Order Management you can check for matching configurations online during order entry or during the autocreate configurations process, and reserve any available inventory to the current sales orders. This enables you to satisfy new sales order demand with existing inventory and reduce excess inventory by reserving matched configurations.

Real-time Order Fulfillment Status

With the Supply to Order Workbench, customer service representatives can see detailed order fulfillment status for configurations, assemble to order and drop ship items. The workbench displays what type of supply has been created for the line, what the current status is, when it is expected to be available to ship, etc. Users can drill down to details of the supply document such as purchase order number, supplier and buyer or job number and current operation.

Figure 3:Supply to Order Workbench displays detailed order status

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Plan and Manage Across the Supply Chain

Oracle Configure to Order leverages Oracle Supply Chain Applications to optimize global supply chain performance for customized products. Oracle Advanced Planning and Scheduling (APS) is a comprehensive, Internet-based planning solution that can rapidly and significantly improve supply chain performance. Oracle APS supports mixed mode manufacturing so you can plan more efficiently by planning for all manufacturing methods simultaneously. You can plan make-to-stock, make-to-order, assemble-to-order, and configure- to-order products simultaneously.

Forecasting through Model BOM

Forecast any planned item, anywhere on your bill of material, including models, options, and mandatory components. Use a global forecast to create a single, consolidated view of your global demand for your sourced configurations, and then allocate that forecast to specific shipping organizations. Sales order demand for configurations automatically consume forecasts for models, option classes, options and mandatory components.

Two Level Master Scheduling

Oracle Advanced Planning and Scheduling lets you plan production at the model level. During the planning process the actual demand for each of the configurations that make up the model is aggregated and compared to the production plan to derive the uncommitted portion of the production plan. Planning percentages drive requirements down to options, included items and mandatory components. The forecasted demand and the actual orders are managed by Oracle Advanced Planning and Scheduling.

Advanced Forecasting

Oracle Demand Planning, a component of Oracle's APS solution, adds a new dimension to your capability to accurately project future demand and improve forecasting of your ATO and PTO models. Using state-of-the-art statistical techniques, you can generate your future forecasts based on your current forecasts, sales bookings and shipments.

Constraint Based Supply Chain Planning and Optimization

Oracle Advanced Supply Chain Planning, a component of Oracle's APS solution, provides next generation manufacturing and supply chain planning tools to better manage your configure-to-order environment. You can use constraint based planning to generate feasible plans that respect all of your material and capacity constraints. This ensures that all of the specific components and option dependent resources needed to satisfy the unique configurations required by your customers are available. Seamless integration with Oracle Order Management enables you to quote accurate delivery dates in seconds, or to determine the status of a customer order in real time based upon the current production and inventory status.

Build or Procure To Demand

Oracle's Configure to Order Solution streamlines configure-to-order fulfillment with workflow-enabled technology and allows you to optimize your production

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environment with innovative mixed mode manufacturing. With Oracle Applications you can efficiently fulfill your orders using discrete manufacturing, integrated flow manufacturing, internal requisitions, or purchasing.

Matching Existing Configurations

Minimize duplication of configuration item data and leverage existing configuration items that match configurations requested on new orders. The AutoCreate Configuration Item program checks for a matching configuration item, and if it finds one, assigns the existing matching configuration item to the sales order instead of creating a new configuration item.

Automatic Creation of Configured Item, Bill of Material, Routing and Lead Time

When the configured order is booked and scheduled, the configuration item, configured bill of material and routing (if applicable) are automatically created if no match was found. Depending on your business requirements, you can optionally automatically calculate lead-time, cost rollup, and purchase price roll-up for your configured item.

Flow Manufacturing for Configurations

Lower cycle time and inventory using innovative Lean Manufacturing techniques provided by Oracle Flow Manufacturing. With Oracle's CTO Solution and Oracle Flow Manufacturing you can easily deploy flow manufacturing techniques to build unique configurations. Flow manufacturing is a "pull" based system that manufactures to customer demand by enabling mixed model production on balanced assembly lines. It utilizes sequenced schedules instead of work orders to drive production. Oracle Flow Manufacturing lets you build your assemble to order items and configurations with the highest efficiency and the shortest possible manufacturing cycle time.

Workflow enabled order fulfillment automatically progresses a customer order from booking to production scheduling. After the configuration item, bill of material and flow routing are created, a flow schedule can be automatically generated, or it can be sequenced along with other orders using Flow's advanced sequencing engine. Sub-assembly configurations can sequenced to the parent line using feeder line synchronization, or to your supplier using outbound sequencing. Operators on the shop floor can use the Flow Workstation to see the details of the flow schedule and the configuration, enabling a "paperless" shop floor, even for complex configurations. When schedules are completed using Flow Manufacturing's work order less completion, all components and resources are backflushed and the assembly is automatically reserved to satisfy a specific sales order.

Discrete Manufacturing for Configurations

Use Oracle's Discrete Manufacturing solution along with Oracle's workflow enabled order fulfillment process to automatically open and reserve a manufacturing work order to assemble unique configurations from components based on your configured sales order. Sub-assembly work orders, flow schedules, internal requisitions or purchase orders can also be automatically created as part of this process. As work orders move through the routing, components are issued to the work orders, and

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resource and manufacturing overhead are charged. Inventory is automatically reserved for the sales order upon completion of the work order.

Operators on the shop floor can use the Manufacturing Execution System for Discrete to see a dispatch list of all configurations they need to build, drill down to the components and work instructions required to build the configuration, clock in and clock out to record actual time, and record exceptions enabling a "paperless" shop floor, even for complex configurations.

Oracle Production Scheduling provides a state-of-the-art production scheduling system that improves resource utilization and order fill rates while increasing the working efficiency of the scheduler.

Purchasing Configurations

Outsource any level of your configuration to a supplier, and use the iSupplier Portal to quickly and efficiently share configuration details. Use Oracle's Purchasing solution along with Oracle's workflow enabled order fulfillment to automatically open and reserve a requisition to purchase unique configurations from your supplier or contract manufacturer based on your configured sales order. This requisition can be automatically converted into a release against a blanket purchase order, or a new purchase order. Details of the configuration can be communicated quickly and easily through the iSupplier Portal, or via e-mail, fax, EDI or XML.
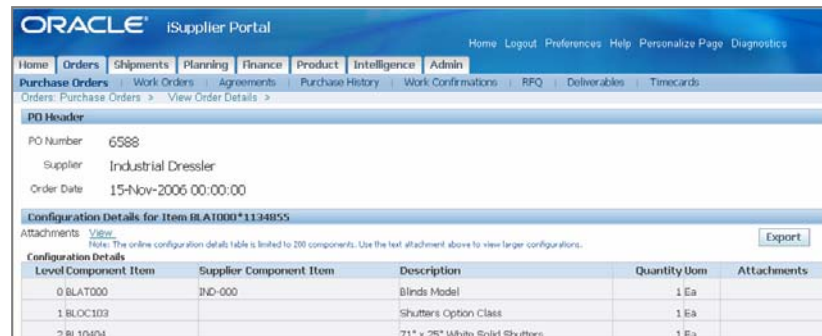

Figure 4: Configuration Details from the iSupplier Portal

Transferring Configurations

Use Oracle's workflow enabled order fulfillment process to automatically open and reserve internal requisition to request your unique configuration from another organization within your enterprise.

Mixed Fulfillment or Supply Chain Fulfillment

Use Oracle's Advanced Planning and Scheduling to create supplies for your configurations in complex supply chain environments. For models that have many levels of configurations, and where each level is sourced from one or more organizations or suppliers, Oracle's Advanced Planning and Scheduling solution is used to optimize selection of the fulfilling warehouse or supplier based on constraints, and then transfer demand across organizations.

Project Assemble to Order and Pick to Order

The integration of Oracle Order Management, Oracle Work in Process, Oracle Flow Manufacturing and Oracle Project Manufacturing supports propagation of project

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Oracle Configure to Order Solution provides:

- Comprehensive, suite wide support for configured businesses.
- Create unique, guided selling applications to ensure the configuration is right before production starts
- Promise orders with unprecedented accuracy,
- Reduce the order to ship time with automatic data and supply creation processes

RELATED PRODUCTS

The following products are part of Oracle's Configure to Order Solution:

- Configurator
- Order Management
- Quoting
- iStore
- Global Order Promising
- Discrete Manufacturing
  - Work in Process
  - Quality Management
  - Project Manufacturing
  - Inventory
  - Bills of Material
  - MRP
  - Cost Management
- Manufacturing Execution System for Discrete
- Production Scheduling
- Flow Manufacturing
- Flow Sequencing
- Advanced Planning and Scheduling
- Purchasing
- iSupplier Portal

and task numbers on the configured model, options, and included items. For ATO, the Final Assembly Schedule, Flow Schedule, Internal Requisition or Purchase Order automatically references the project and task number from the configuration line item in Oracle Order Management.

Oracle E-Business Suite—The Complete Solution

Oracle E-Business Suite enables companies to efficiently manage customer processes, manufacture products, ship orders, collect payments, and more—all from applications that are built on a unified information architecture. This information architecture provides a single definition of your customers, suppliers, employees, products—all aspects of your business. Whether you implement one module or the entire Suite, Oracle E-Business Suite enables you to share unified information across the enterprise so you can make smarter decisions with better information.

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